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Poster Session A, Monday, October 8, 11:30 a.m – 1:00 p.m., Essex Ballroom

A1
Fit Happens: Longitudinal Impact of an Intensive Metabolic Monitoring Program in a First-episode Psychosis Clinic

Michael Francis[1,2], Mhammed Ali[2], Kristen Ratliff[1], Linda Boxdorfer[1], Andrew Visco[2], Jennifer Vohs[2], Bethany Leonhardt[1,2], Ashley Overley[1], Megan Gaunnac[2], Nikki Mehdiyoun[2], Emily Liffick[1], Alan Breier[1,2]

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Background: One of the largest drivers of poor health outcomes in those with schizophrenia is metabolic syndrome, which includes phenomena such as hyperlipidemia, hypertension, obesity, and diabetes mellitus. Due to factors such as sedentary lifestyle, poor diet, and medication side effects, individuals with schizophrenia are at high risk of developing metabolic syndrome.
Methods: The study took place at the Prevention and Recovery Center (PARC) for early psychosis, the state of Indiana's first and only center dedicated to treating individuals with first-episode psychosis (FEP). Between 12/19/2014 and 08/31/2017, 171 individuals with FEP were enrolled in Fit Happens, a longitudinal metabolic monitoring and treatment program. Patients underwent baseline metabolic screening including weight, waist circumference, lipid panel, hemoglobin A1C (HbA1C), and blood pressure. From that point on, patients participated in metabolic monitoring and treatment according to the Fit Happens protocol.
Results: Patients enrolled in Fit Happens demonstrated longitudinal stability in some metabolic parameters, including blood pressure and hemoglobin A1c. However, there was a progressive increase in weight, body mass index, and waist circumference.
Conclusion: Results indicate that the Fit Happens program may be effective for addressing some metabolic issues associated with the early phase of psychosis, though not all. Additional research is needed to study effective interventions for metabolic dysfunction in FEP populations. An overview of the Fit Happens program will be offered and observations for future directions discussed.

Topic Area: Comorbid Conditions

A2
Effects of Autistic Traits on Recovery in First-episode Psychosis: A Preliminary Analysis

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Autistic traits have been known to complicate diagnosis and treatment for individuals with first episode psychosis (FEP). To the best of our knowledge, there are no prior studies examining this relationship in an Asian population. A FEP sample on follow up with the Early Psychosis Intervention Programme (EPIP) in Singapore was examined for autistic traits as measured by the Autism Spectrum Quotient 10 items (AQ-10). Trajectory of recovery are indicated by changes in both Positive and Negative Syndrome Scale (PANSS) and Global Assessment of Functioning Scale scores between baseline and at 12 months follow up. As hypothesized, preliminary analyses (N = 134) revealed that individuals with higher AQ-10 score predicted for higher PANSS scores at 12 months ($\beta = 2.059$, $p = .031$). Higher AQ-10 score were also correlated with poorer functional improvement at 12 months ($\beta = -5.177$, $p = .101$). This was however not statistically significant possibly due to lack of power as data collection is still ongoing. Nevertheless, these findings replicate previous studies in demonstrating the importance of addressing autistic traits in a FEP population. Future research can explore the potential of using the AQ-10 as a screening tool to help identify autistic traits in individuals with FEP. A thorough assessment for autism spectrum disorder (ASD) should be arranged for individuals who meet the AQ-10 cut-off point. The needs of individuals with autistic traits and ASD should be examined, while service gaps should be addressed by collaborating with neurodevelopmental services to provide the necessary support and intervention with the aim of improving outcomes in these individuals.

Topic Area: Comorbid Conditions

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A3
Early Intervention for Transitional Aged Youth with Concurrent Mental Health and Substance Use Disorders: Program Development, Implementation, and Evaluation

Gretchen L. Conrad[1,2], Nicholas Schubert[1], Andrew B. Lumb[1], Jen Daley[1], Sibel Erturk[1], Mallory L. Campbell[1], Kyle McBride[1], Amelia Nelson[1], Timothy D. Moran[1,2]

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Transitional Aged Youth (TAY; aged 16-25) are more likely to have mental health and substance use disorders, and to receive first diagnoses of severe and chronic mental health disorders than any other age group. This represents a unique opportunity for early intervention on a broad scope of mental health and substance use problems. Historically, TAY faced significant barriers accessing developmentally appropriate services, and a need for more services addressing their unique needs still exists. The Transitional Aged Youth Service was developed to address these service gaps in Eastern Ontario, Canada. Development and implementation were informed through a regional needs assessment, including a survey of 134 community programs (72% response rate), and focus groups with community partners (n = 22) and with youth and family members (n = 8). The TAY Service provides long-term, multidisciplinary care for moderate-severe concurrent disorders. Clients (n = 102) completed self-report measures upon intake and at multiple follow-ups. Clinical information was collected via chart review. Results reveal a high burden of concurrent disorders among clients. Preliminary outcome data shows improvements in mental health and drug use severity (ps < .05). Clients show a high level of engagement as demonstrated by high attendance rates, averaging 76%. Community agencies with established partnerships report high levels of satisfaction with the services and relationships, which have resulted in increased system capacity. High referral-rates confirm the need for these services. Findings highlight the importance for early intervention and integrated concurrent disorders treatment for TAY, and for developing inter-agency partnerships to improve system capacity to meet service demands.

Topic Area: Comorbid Conditions

A4
A Success Story–Living with Comorbid Conditions

Torri Shack[1]

[1]*Tangible Movement–Non Profit*

I've struggled with depression and addiction since I was 14 years old. I have attempted suicide multiple times in my life, as an adolescent and as an adult. I have spent years battling a horrible eating disorder and gender identity issues At one point I was homeless living out of my car as a result of my depression and addiction. These last few years I've worked hard to put my life back together. My career in the health and wellness field has given me purpose. My purpose is to share my experience, strength and hope to help other individuals who may be struggling with the same issues. It's time for me to pay forward the gift of life that has so freely been given back to me. It's my goal to expand my scope and take my efforts worldwide to end the stigma associated with mental illness.

Topic Area: Comorbid Conditions

A5
Treatment Orders for Early Psychosis Youth Including Treatment for Comorbid Severe Substance Use Disorder (SUD): A Case Series

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Introduction: About 60% of patients with first-episode psychosis (FEP) have a comorbid substance use disorder (SUD), persisting in about 2/3 of them. Comorbid SUD is associated with unfavorable outcomes (hospitalizations, psychotic symptoms, unemployment, etc.). Could court treatment orders (CTO) including mandatory inpatient treatment for SUD be a path towards recovery for the minority of FEP patients with severe SUD (having a major impact on their psychotic illness) who do not respond to motivational approaches and harm reduction strategies?

Objectives: To study the impact of CTOs that include inpatient treatment for SUD on the evolution of FEP with severe comorbid SUD.

Methods: Longitudinal study by chart review of the 20 FEP (out of the 480 FEP of the entire cohort) who were obliged to participate in an inpatient treatment for SUD as well as psychosis treatment. Measures of functioning, mental health service use, aggressiveness and the SUD course were collected before and after the mandatory SUD treatment during the patients' follow-up (2.3-6.4 years).

Results: After the CTO, improvements in quality of life, functional and social outcomes and a reduction, of aggressive episodes, substance use and acute healthcare services use, were observed for the majority of patients.

Conclusion: The use of CTOs which include treatment for severe comorbid SUD in FEP, seems to improve outcome. Further research with sturdier study designs are warranted to deepen understanding of the possible contribution of this approach in the treatment of severe comorbid SUD in FEP, and to investigate its ethical aspects.

Topic Area: Comorbid Conditions

A6
Socioeconomic Deprivation and Blood Lipid Levels in First-episode Psychosis: Implications for Cardiovascular Risk

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Patients with psychosis-spectrum disorders (PSD) have increased rates of cardiovascular disease, which significantly contribute to their excessive rates of morbimortality. Moreover, a widening mortality gap between PSD patients and the rest of the population suggests that current pharmacological therapies –such as statins– have been ineffective. Recent conflicting meta-analytical evidence shows that first-episode psychosis (FEP) patients have lower blood lipid levels when compared to age-matched unaffected controls, implying lower cardiovascular risk. Other determinants of health might explain such high rates of cardiovascular disease. Since socioeconomic deprivation significantly predicts higher odds for cardiovascular disease and PSD, we sought to determine the influence of social and material deprivation on blood lipid levels in a FEP cohort. We tested the effects of neighborhood-level social and material deprivation (census data) on blood lipids, while controlling for age, sex, levels of physical anergia and exposure to medication in a hierarchical regression model. Social, but not material deprivation, predicted significantly lower levels of total cholesterol (low risk) but low HDL as well (high risk). While counterintuitive at first, similar results have been observed in animal models of psychological stress and lipid metabolism. These models suggest that stress functionally impairs the HDL-dependent reverse transport of cholesterol and hepatic clearance, which is independent of total cholesterol levels, thus promoting atherosclerosis by a different mechanism. The high levels of psychosocial stress observed in FEP patients could potentially explain why conventional cholesterol-lowering therapies have failed to have an impact on their cardiovascular morbimortality. Different preventive interventions might be needed.

Topic Area: Comorbid Conditions

A7
Neurocognitive Functioning and Quality of Life in Patients with and without Deficit Syndrome of Schizophrenia

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[1]*Institute of Mental Health Singapore*

Deficit syndrome of schizophrenia is a subtype of schizophrenia characterized by primary and enduring negative symptoms. Due to the paucity of studies examining QOL together with neurocognitive functioning in DSZ, we aimed to examine subjective QOL and neurocognitive impairments within schizophrenia patients with (DSZ) and without deficit syndrome (NDSZ). Based on existing evidence and clinical impressions, we hypothesized that DSZ would have poorer self-rated QOL and more impaired neurocognitive functioning and predict both outcomes. Overall, 344 subjects (175 patients with NDSZ, 58 patients with DSZ and 111 healthy controls) were evaluated on severity of psychopathology, QOL and a smaller subset of 199 subjects (104 NDSZ, 27 DSZ, 68 healthy controls) underwent neurocognitive assessments. Multivariate analyses were used to determine differences in outcomes between subject groups and predictors of clinical measures. Both DSZ and NDSZ had significantly worse QOL compared with healthy controls. DSZ had more extensive cognitive deficits compared with healthy controls and performed worse on semantic fluency task compared to NDSZ. Multiple linear regression analysis found that DSZ, shorter duration of illness were associated with poorer QOL whereas fewer years of education, lower premorbid intelligence were associated with poorer overall neurocognitive functioning. The poorer QOL, greater extent of neurocognitive deficits especially semantic fluency associated with DSZ behoves the need for greater attention during clinical evaluation and treatment planning of this subgroup of individuals with schizophrenia.

Topic Area: Diagnosis and Phenomenology

A8
The Construct Validity of the Inventory of Psychotic-like Anomalous Self-experiences (IPASE) as a Measure of Minimal Self-disturbance

Andrea Polari[1,2,8], Suzie Lavoie[1,2], Emily Li[1,2], David Cicero[3], Gaweda Lucasz[4,5], Thomas Whitford[7], Danny Koren[6], Jessica Hartmann[1,2], Barnaby Nelson[1,2]

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Introduction: The Inventory of Psychotic-Like Anomalous Self-Experiences (IPASE) is a self-report measure of minimal self-disturbance. The aim of the current report was to assess the IPASE construct validity by examining its convergent validity with the gold-standard measure of minimal self-disturbance, the Examination of Anomalous Self Experience (EASE), and its discriminant validity.

Method: A total of 46 participants were recruited from the Orygen Youth Health Clinical Program, a youth mental health service in northwestern Melbourne. Participants consisted of 21 ultra high risk (UHR) for psychosis individuals and 14 first episode psychosis (FEP) individuals. Eleven healthy control participants were recruited within the same age range as the patient groups (15-25 years). Participants were assessed with the EASE and the IPASE as part of a larger study examining the relationship between minimal self-disturbance and neurocognitive and neurophysiological variables in early psychosis.

Results: The IPASE correlated strongly with general psychopathology and positive psychotic symptoms, moderately with negative symptoms, and weakly with manic symptoms. The strongest correlation (r = .92) was apparent between IPASE and EASE total scores.

Discussion: These preliminary data indicate construct validity of the IPASE, demonstrating both convergent and discriminant validity. The IPASE may be suitable in contexts where it is not feasible to conduct a full EASE interview, i.e. assessment-heavy studies, such as large intervention trials, or as a screener instrument for more comprehensive assessment of anomalous subjective experiences but shouldn't replace the EASE to measure the construct of minimal self-disturbance, which requires considerable psychopathological sophistication.

Topic Area: Diagnosis and Phenomenology

A9
Changing the Scope … about DSM (5)

Marc Calmeyn[1], Dorien Nieman[2]

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Worldwide the DSM is used as a basis for morbidity statistics; reimbursement systems; intervention decision support in health care, education and welfare contexts; design of research; communication and teaching about mental health problems. The Superior Health Council of Belgium advise the Belgian government. It has installed a multidisciplinary expert committee to make a report on the problematic side of the use the DSM (5) in mental health care and possible alternatives. The expert committee consists of psychiatrists, psychologists, philosophers, sociologists and an expert by experience. This evaluation at government level is the first to be presented in the international professional community. The expert committee concludes that there are many epistemological concerns with classification in psychiatry, which are related to debates about their 'natural kindness' i.e. it is questionable that there are kinds of mental disorders much in the same way as there are kinds of chemical substances or species of animals. On the clinical level, societal and medical ideas about health and healthcare are changing. Health is not only composed of bio-psychosocial components, but also has an existential dimension: mental health problems challenge people's self-experience as well as their social position, which is often seriously hampered. The expert report committee describes new developments namely the recovery movement, clinical staging and diagnosis by means of clinical case formulations. All this is an appeal for changing the scope about psychosis, psychiatric classification, its epistemological fundaments and clinical use.

Topic Area: Diagnosis and Phenomenology

A10
Discrimination of Anomalous Self-experiences from Psychotic-Like Experiences and Dissociation: Relations with Self-processing and Schizotypal Personality

David Cicero[1]

[1]*University of Hawaii at Manoa*

Anomalous self-experiences are disturbances in the subjective experience of the self and have been shown to be related to the premorbid, prodromal, acute, and chronic phases of schizophrenia-spectrum disorders. Despite having a long history in psychopathology research, anomalous self-experiences are not explicitly represented in any major nosology of mental disorders. It is not clear from previous research whether anomalous self-experiences are distinct from other related symptoms such as psychotic-like experiences and dissociation. The current research aimed to examine whether anomalous self-experiences could be discriminated from psychotic-like experiences and dissociation using confirmatory factor analysis and examining differential relations with self-relevant information processing and negative and disorganized schizotypy. 761 nonclinical participants completed multiple measures of anomalous self-experiences, psychotic-like experiences, dissociation, self-relevant information processing, negative schizotypy, and disorganized schizotypy. A model with separate anomalous self-experiences, psychotic-like experiences, and dissociation factors fit the data well and fit better than models with only two or one factor. The anomalous self-experience factor as associated with self-concept clarity, self-esteem, self-liking, and self-competence, while the psychotic-like experiences factor was associated with negative schizotypy, disorganized schizotypy, ideas of reference, excessive social anxiety, suspiciousness and self-consciousness. Taken together, these results suggest that anomalous self-experiences, psychotic-like experiences, and dissociation are distinct constructs that are differentially related to self-processing and other symptoms of schizotypy. Future research may examine whether anomalous self-experiences should be added to nosologies of psychotic-spectrum disorders.

Topic Area: Diagnosis and Phenomenology

A11
Assessment of Rorschach Response between Patients with At Risk Mental State and Schizophrenia

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Objectives: At Risk Mental State (ARMS) is a remarkable concept of capturing the prodromal symptoms of those who could potentially develop psychosis or schizophrenia. Several lines of evidence suggest that an appropriate early intervention might ameliorate the onset and severity of schizophrenia. Therefore, identification of the specific biomarkers or psychological features should be informative to improve prediction and prognosis of who might develop a psychotic disorder. Here, we evaluated Rorschach profiles on the Rorschach test, which is widely used as a psychological test for psychosis, to compare quantitative tendencies between subjects with ARMS and first-episode schizophrenia (f-SZ).

Methods: We performed the Rorschach test in intelligence quotient (IQ)-matched 17 ARMS and 20 f-SZ patients. Subsequently, Rorschach profiles were statistically compared between patients with ARMS and f-SZ. This study was approved by the Institutional Review Board at the Nara Medical University.

Results: In the Rorschach Comprehensive System, patients with f-SZ had a significantly higher score on Whole (W) than patients with ARMS, likely providing that patients with f-SZ tend to make concerns easier to simplify. In addition, longitudinal course of ARMS was followed by medical record. Within ARMS group, no significant difference was observed in Rorschach variables between those who developed SZ and who have not developed SZ.

Conclusions: The present findings reveal that individuals with f-SZ might have, at least in part, a different psychological aspect relative to those with ARMS at a person's subconscious level, suggesting that the Rorschach test might be helpful to understand the clinical features of ARMS.

Topic Area: Diagnosis and Phenomenology

A12
The Early Screening for the Risk of Schizophrenia in Childhood

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Background and Aims: This study is a retrospective report of childhood neurobehavioral assessment in adult patients with schizophrenia and healthy controls using the CBCL to elucidate the subclinical characteristics of schizophrenic children and to find out indicators which predict later development of schizophrenia.

Methods: Schizophrenia outpatients in his/her twenties who fulfill DSM-IV-TR criteria were investigated. Normal healthy subjects were also examined as sex- and age-matched controls. By modified use of the CBCL as a retrospective assessment questionnaire, the parents of the patients and of control subjects rated their childhood (aged 6-8 years) behaviors.

Results: A logistic regression using the eight CBCL syndrome subscale T-scores adequately classified 86% of the population. Among the eight subscale T-scores, those of Withdrawn, Thought problems and Aggressive behavior were significantly associated with risk of schizophrenia, although any of these mean scores were not in clinical range. Concerning Aggressive behavior, patients showed a significantly lower score than controls.

Conclusion: The results suggest that subclinical neurobehavioral characteristics of schizophrenia already exist in the patients' childhood. The Combination Pattern of these subclinical characteristics would predict later development of schizophrenia. We introduce the early screening methods for the risk of schizophrenia using obtained logistic regression model.

Topic Area: Diagnosis and Phenomenology

A13
Short-term Outcome of First Episode Delusional Disorder in an Early Intervention Population

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Previous evidence suggests that delusional disorder has a later onset and better functional outcomes when compared to schizophrenia. However, these studies have not examined longitudinal outcomes in a first episode population, where confounding factors may be adjusted for. Therefore, a nested case control study was conducted within the National EDEN study; a UK cohort of 1027 first episode psychosis patients. Patients with a baseline diagnosis of delusional disorder (n = 48) were compared with schizophrenia (n = 262) at 6 and 12 months to determine changes in symptomatic and functional outcomes. Regression analysis was used to adjust for possible confounders. The results showed that delusional disorder patients had a shorter duration of untreated psychosis compared to schizophrenia but were similar in other baseline characteristics. At baseline, delusional disorder patients had lower Positive and Negative Syndrome Scale (PANSS) scores but higher Global Assessment of Functioning (GAF) scores compared to those with schizophrenia which persisted at 6 and 12 month follow up points. However, after adjusting for confounders the differences between the groups at 12 months remained significant only for PANSS negative, general and total scores. There were no differences in the changes in outcome scores between the groups. Therefore, while delusional disorder may present with less severe symptoms and better functioning than schizophrenia, the illness appears to have a similar trajectory in the short term.

Topic Area: Diagnosis and Phenomenology

A14
Prevalence and Outcomes of Young People with Concurrent Autism Spectrum Disorder and First Episode of Psychosis (FEP): A Cohort Study

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Background: Autism spectrum disorder (ASD) and Schizophrenia spectrum disorders overlap in a number of domains, including genetic and environmental risk factors and also how the two disorders can present clinically. However, there is limited information on the characteristics and outcomes of those with both ASD and psychotic disorders. This study aimed to: (i) examine the prevalence rates of ASD in a cohort of young people presenting with a FEP and (ii) to compare demographic and clinical characteristics between individuals with concurrent FEP and ASD, and individuals with FEP only.

Methods: This study included all young people aged 15 to 24 who presented with a FEP to the Early Psychosis Prevention and Intervention Centre (EPPIC) between 01.01.11 and 31.12.13.

Results: 544 young people presented with a FEP and 3.7% (n = 20) had a diagnosis of ASD. Individuals with a concurrent diagnosis of ASD and a FEP were more likely to be male (90% vs 59%) and less likely to have comorbid substance use issues (26% vs 60%). There was no difference in the type of psychotic symptoms that each group presented with or the severity of symptom, or rates of remission or relapse. Young people with ASD were more likely to have returned to education or employment by the time of discharge (75% vs 51%).

Conclusions: The current findings highlight some of the distinct characteristics of individuals with concurrent ASD and FEP. Further large-scale studies with control groups are required to better understand the aetiopathological and phenomenological specificity of this subgroup.

Topic Area: Diagnosis and Phenomenology

A15
Metacognition and Psychopathology: An Investigation of the Development of Metacognitive Processes and Their Implications in Psychotic Symptoms in Adolescents

Antonio Cozzi[1], Ruggero Brazzale[1], Yuri Maddalena[1], Lucia Brazzale[1]

[1]*Italian Public Mental Health Department–Veneto Region*

Background: Adolescence is a delicate time when youths deal with new developmental challenges. Among the typical changes of this phase, there is the development of cognitive and metacognitive processes and styles. This phase is crucial as it may show the onset of different psychological disorders. At this stage, first anxiety and depressive episodes are recurring, as well as other non-specific symptoms that may lead to Psychosis. While in scientific literature there is strong evidence that underpins the role of metacognitive features in Depression, Anxiety and Obsessive-Compulsive Disorders, recent studies support their implication also in psychotic symptoms and disorders. Most of these studies' limits is that they have been conducted on adult samples, focusing on structured psychotic syndromes.

Aims: The purpose of the present study is to examine the development of metacognitive components and their link to different clinical symptoms in youths. Our hypothesis is that metacognitive factors are already active in early psychopathology. Specifically, we expect that these metacognitive styles are linked to psychotic symptoms (hallucinations, paranoia, etc.) as well as to others (depression, anxiety, OCD symptoms). If our hypothesis is confirmed, it may lead to new early intervention pathways. Furthermore, we want to examine if there are specific socio-demographic features and life stressors influencing the development of metacognitive factors.

Methods: We administered clinical and metacognitive questionnaires investigating specific styles and processes – such as worry, rumination, intolerance of uncertainty etc. – in a large general sample of adolescents from 15 to 19 years old, recruited in different Italian schools.

Topic Area: Diagnosis and Phenomenology

A16
Self Perception Linked to Psychopathology in Adolescents

Lucia Brazzale[1], Yuri Maddalena[1], Antonio Cozzi[1], Ruggero Brazzale[1]

[1]*Italian Public Mental Health Department–Veneto Region*

Adolescence is an important phase of the human life when people go through radical changes (physical, emotional and behavioral) that corresponds to a profound transformation of the perception of the self and its individuality. Self perception can be described as the entirety of the emotions and thoughts addressed to your own self, that are objectified. This self perception begins its development throughout adolescence, culminating in a stable concept of the self during the adulthood. The numerous changes that take place during this delicate stage can potentially deviates from their normal course and become psychological issues such as depression, anxiety and behavioral problems. Sometimes they could also lead to some major disturbances like psychosis. As a consequence of this, many studies have been conducted around the concept of an integrated self that is used as a prodromal index of psychosis in early adolescence. The aim of this study is to investigate the self-perception on a population of high school students through the Self Perception Scale test that is going to be correlated with the psychopathological domain of the SCL-90. The basis hypothesis is that the enhancement of an integrated self-perception leads to a decrease in the psychopathological scores of the SCL-90 scales, particularly with the psychoticism scale. If the hypothesis is confirmed it could contribute to outline new treatment pathways aimed to strengthen and integrate the self-perception concept in adolescents and so to intervene precociously in the development of psychosis.

Topic Area: Diagnosis and Phenomenology

A17
Psychotic Symptoms are Selectively Associated with Mood Symptom Severity and Worse Outcome in Pediatric Bipolar Disorder

Peter Bachman[1], John Merranko[1], Itziar Baltasar Tello[2], David Axelson[3], Benjamin Golstein[4], Michael Strober[5], Mary Kay Gill[1], Jeffrey Hunt[6], Satish Iyengar[1], Neal Ryan[1], Martin Keller[6], Boris Birmaher[1]

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Presence of psychosis is associated with worse outcome among adults with Bipolar Disorder (BD). Among youth with BD, however, the clinical significance of psychosis is unknown. Understanding its prognostic value may help us make critical decisions regarding the allocation of limited treatment resources. Using data from the longitudinal Course and Outcome in Bipolar Youth (COBY) study (mean follow-up = 10 years, +/-12.45 mos), we compared bipolar youth with one or more psychotic symptoms during at least one study time point (PSY+, N = 137) to bipolar youth with no history of psychosis (PSY-, N = 239) on measures of clinical outcome. Compared to PSY- youth, PSY+ youth display: more severe mania and depression ($p < 0.02$), higher anxiety ($p = 0.006$), more hospitalizations ($p < 0.001$), more past abuse ($p = 0.012$), more suicide attempts and ideation ($p < 0.001$), and more self-injury ($p = 0.038$). Age, IQ, sex, and pubertal status does not differ between the groups, nor does family history of psychosis, nor do measures of aggression, irritability, or impulsivity. When PSY+ youth are sub-divided into those endorsing psychosis at one time-point (N = 91) versus two or more time points (N = 46), the latter display higher anxiety ($p = 0.003$), and more suicide attempts ($p < 0.001$) and ideation ($p = 0.006$), suggesting dose-dependent associations. Among youth with BD, psychotic symptoms – even those reported only once over years of follow up – are associated with worse mood symptoms and worse outcome on other selected measures. We conclude that psychosis does indeed index more severe pediatric BD, and that a particularly high level of care may be necessary to prevent hospitalization and suicide.

Topic Area: Diagnosis and Phenomenology

A18
Behavioral and Non-behavioral Health-related Comorbidities are Higher Pre-diagnosis in Patients with Schizophrenia than in Non-schizophrenia Comparators: Analysis of a Large Commercially Insured Population in the United States

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Schizophrenia is associated with numerous comorbidities, yet little is known about their frequency prior to diagnosis. To address this knowledge gap, this US-based retrospective study examined comorbidities in patients with schizophrenia 5 years (0–1, >1–2, >2–3, >3–4 and >4–5 years) prior to diagnosis (index date), compared with non-schizophrenia matched comparators. Claims data from the HealthCore Integrated Research Database were used to identify newly diagnosed patients with schizophrenia (ICD-9: 295.x, ICD-10: F20.x) aged 15–54 years. The schizophrenia and comparator cohorts included 6,732 and 26,928 patients, respectively. The mean Elixhauser Comorbidity Index during the year prior to index was higher for patients with schizophrenia (2.10) than matched comparators (0.47; $p < 0.001$). For all pre-index periods, the frequency of non-behavioral health-related comorbidities, including dyslipidaemia (10.0–16.9% versus 8.1–10.9% of patients), hypertension (8.3–17.2% versus 5.8–9.0%) and ischaemic heart disease (1.1–2.0% versus 0.5–0.8%), was higher in patients with schizophrenia than matched comparators, respectively. There was a greater difference in behavioral health–related comorbidities, including bipolar disorder (schizophrenia: 14.2–32.0%; comparators: 0.4–0.7%), depression (schizophrenia: 18.4–42.3%; comparators: 3.9–5.1%) and anxiety disorder (schizophrenia: 13.2–29.4%; comparators: 3.9–5.3%). Up to 5 years prior to diagnosis, patients with schizophrenia have a higher frequency of both behavioral health– and non–behavioral health–related comorbidities compared with matched comparators. This study improves our understanding of the overall health status of clinically high-risk patients who go on to develop schizophrenia. Funding: Boehringer Ingelheim.

Topic Area: Diagnosis and Phenomenology

A19
Computational Psychiatric Nursing Research: Scaling up the Prediction of Psychosis by Natural Language Processing

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The prevention of serious mental illness is an urgent public concern due to the burden and cost that mental illness brings to the individuals affected, their families and society at large. Language and speech are the primary data source that mental health professionals use to diagnose and treat mental disorders. This study aims to use machine-learning techniques to distinguish the speech of the patients with schizophrenia from that of healthy individuals to improve the early prediction of severe psychiatric illness.

Methods: Forty interviews with patients with first episode psychosis and public messages dataset were included in this study. We applied a well-recognized pre-trained word embedding model that Facebook Research trained on Common Crawl and Wikipedia listings. Word embedding is one of the most popular forms to represent natural language processing because it helps to optimize the accuracy of text data analysis. After the pre-trained word embedding model transfers texts into matrixes, the convolutional neural network is used to develop a classifier, which can distinguish patients from healthy individuals.

Results: 80% of each dataset is selected as a training set to train text classifier while the remaining dataset is used as test set. The preliminary results of both test sets achieve a correct prediction rate of 99%. The machine-learning speech classifier achieves to discriminate speech in patients from healthy individuals' daily conversations.

Conclusion: Machine learning technology makes it so the computational models can be trained to learn the features that can predict individuals who will subsequently develop psychosis. This line of inquiry will contribute to improved identification of individuals at risk for psychiatric symptoms as well as lead to development of targeted therapies.

Topic Area: Diagnosis and Phenomenology

A20
Creativity in Young People with Depression Considered at High or Low Risk of Future Mania: A Prospective, Comparative Study

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The association between bipolar disorder and creativity may be related to symptoms of the disorder itself or personality traits present before the onset. To further explore the relationship between creativity and clinical risk for bipolar disorder, creativity among individuals with a history of depressive disorder and varying risk for future (hypo-)manic episodes was assessed and compared. 38 participants completed the diagnostic process, including Structured Clinical Interview for DSM-IV Diagnosis, Hamilton Depression Scale and Young Mania Rating Scale. The early detection tools Bipolar Prodrome Symptom Interview and Scale-Prospective (BPSS-P), Early Phase Inventory for Bipolar Disorders (EPIbipolar) and Bipolar-At-Risk-(BAR)-criteria were used to assign participants into different at-risk groups. Assessment of creativity included Barron-Welsh Art-Scale (BWAS) and Creative Achievement Questionnaire (CAQ). Scores were compared between low- and high-risk groups for the development of bipolar disorder. Participants meeting BAR-criteria scored significantly higher on the BWAS than the non-BAR group ($p = 0.03$). EPIbipolar groups did not differ significantly in creativity scores. Participants with mood swings, especially when associated with increased activity and euphoric features, had significantly higher BWAS-scores compared to individuals without mood swings ($p = 0.04$). Mean CAQ-scores did not show significant differences between groups. Other risk factors like disturbances of sleep and circadian rhythm, substance abuse, anxiety, ADHD and behavioural disturbances in childhood or adolescence had no effect on BWAS- or CAQ-scores. Generalisability was reduced by the small sample size. There is evidence of increased creativity, but not of higher creative achievements, in persons at-risk of bipolar disorder. Mood swings are strongly associated with creativity.

Topic Area: Diagnosis and Phenomenology

A21
The Structure of Negative Psychotic Symptoms before and after Antipsychotic Treatment

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Background: Factor analytic studies consistently report two domains of negative symptoms: Expressive Deficits (ED) and Social-Amotivation (SA), but little is known about their stability in relation to medication. Research to date has focused on chronic and medicated samples. We examined whether this two-factor model of negative symptoms can be confirmed in medication naïve first episode psychosis (FEP) patients, and its stability following antipsychotic treatment.

Methods: The sample comprised 469 FEP patients recruited through Optimise Trial (Optimization of Treatment and Management of Schizophrenia in Europe). Confirmatory Factor Analysis (CFA) was performed on negative symptoms ratings, obtained prior to starting medication, by using the Positive and Negative Syndrome Scale (PANSS). Based on published research the following symptoms were included: Flat affect (N1), Emotional withdrawal (N2), Poor rapport (N3), Passive social withdrawal (N4), Lack of spontaneity (N6), Mannerisms and posturing (G5), Motor retardation (G7), G13 Avolition (G13), and Active social avoidance. (G16). The previously identified factors SA (N2, N4, G16) and DE (N1, N3, N6, G5, G7, G13) were entered as latent variables. Multiple indices were used to measure the goodness-of-fit (GOF): the Comparative Fit Index (CFI), The Goodness-of-Fit index (GFI), the Tucker-Lewis index (TLI), the Root-Mean-Square-Error-of-Approximation (RMSEA).

Results: The CFA indicated a good fit for two-factor model of negative symptoms. The GOF indices were: CFI = 0.98, GFI = 0.97, TLI = 0.97 and RMSEA = 0.06 (CI 90%: 0.04–0.08). Both SA and DE dimensions remained the same post-treatment.

Conclusion: Our results demonstrate that the two-factor structure is supported even in medication naïve patients with first episode psychosis, and is unaltered by medication.

Topic Area: Diagnosis and Phenomenology

A22
Gender Differences in Community Responses to Serious Mental Illness in Butajira, Ethiopia

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Considerable variation in the gender-specific prevalence of serious mental illness (SMI) has been reported among low- and middle-income countries (LMICs). In the rural setting of Butajira, Ethiopia, the male-to-female prevalence ratio of schizophrenia was reported to be 5:1. This qualitative study aimed to explore gender differences in community responses to individuals with SMI, and the extent to which sociocultural factors may explain the observed prevalence estimates in Ethiopia. Using purposive sampling, 39 in-depth semi-structured interviews were conducted with community members from Butajira, a rural district in South Central Ethiopia, between June and July 2015. Data analysis involved applications of grounded theory and axial coding to elicit cultural explanatory models of SMI from the community. Gender-specific experiences of individuals with SMI in rural Butajira were reported to vary due to the visibility of symptoms and varying levels of family support. Overall, respondents described how a community-wide awareness of female patients' vulnerability differentially isolates women with SMI, greatly affecting community-based health care providers' ability to identify and provide care to mentally ill women in the community. Our study findings suggest that in Butajira, various sociocultural factors subject women with SMI to a greater degree of social isolation relative to their male counterparts. Improvements for case detection methods in rural Ethiopia include the involvement of family members as they interact with women with SMI early on in the development of their symptoms and play an essential role in their path to mental health care.

Topic Area: Diagnosis and Phenomenology

A23
Factor Analysis of the Positive and Negative Syndrome Scale in Ethiopian Patients with Schizophrenia

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Schizophrenia is a psychiatric disorder affecting more than 21 million people worldwide. Although symptoms of schizophrenia are heterogeneous, they are often characterized as positive or negative with a few overlap. To assess these symptoms, clinicians use the Positive and Negative Syndrome Scale (PANSS). While the PANSS is currently the hallmark clinical scale to assess symptoms of schizophrenia, it has undergone multiple factor analyses which have produced models ranging from three to seven factors. We performed an exploratory factor analysis (EFA) on the PANSS screening assessments (N = 374) from a clinical trial in Addis Ababa, Ethiopia. The mean PANSS scores of the study sample were as follows: PANSS positive subscale 18.75±6.04, PANSS negative subscale 20.57±6.81, PANSS general psychopathology 36.64±10.59, and total PANSS 72.02±20.43. Results of our EFA show a five-factor model, which closely corresponds with the factors obtained in a pentagonal model describing negative, positive, cognitive/disorganized, anxiety/depression, and excited psychopathology. However, the factor that captures cognitive/disorganized symptoms also captures negative symptoms such as blunted affect, poor rapport, lack of spontaneity, motor retardation, and disturbance of volition suggesting that it may be difficult to ascertain cognitive/disorganized symptoms from certain negative symptoms in Ethiopian patients. Although the data from this study suggests a pentagonal model capturing the multidimensional symptomology of schizophrenia among Ethiopian patients, we cannot claim that the structure and parameters of the PANSS are similar to the ones used in Western settings. Therefore, it is crucial to validate psychometric instruments to account for cultural variances among different global populations.

Topic Area: Diagnosis and Phenomenology

A24
Psychotic Experiences in Childhood Predict Depressive Disorder and any Substance Use in Adolescence: Findings from the Brazilian High Risk Cohort (HRC) Study

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PE predict common mental disorder and any substance use in youth. However, few studies investigate these associations in the transition from childhood to adolescence. We report on data from the Brazilian High Risk Cohort (HRC), a school-based sample from two Brazilian cities. We evaluated 2,244 subjects (6-12 years old) using the Community Assessment of Psychotic Experiences (CAPE) and an adapted version of the Comprehensive Assessment of At-risk Mental States (CAARMS) by self-report and clinician ratings, respectively, at baseline. At 3-year follow-up, we evaluated common mental disorders by the Development and Well-Being Assessment (DAWBA), by parent- and self-report. We grouped mental disorders into four DSM-based categories: any depressive disorder, any anxiety disorder, any Attention Deficit Hyperactivity Disorder (ADHD), and any Oppositional Defiant Disorder or Conduct Disorder (ODD/CD). We evaluated any substance use (any alcohol, tobacco, and drug use) by parent and self-report. We used logistic regression models to evaluate dimensional and categorical childhood PE as predictors of the four DSM-based categories of mental disorders and any substance use in adolescence. Categorical (OR 1.77; CI95%1.12-2.79) and dimensional (OR 2.47; CI95%1.53-6.05) PE increased the risk of any depressive disorder at follow-up, after controlling for baseline mental disorders. Categorical PE (OR 1.91; CI95%1.42-2.58) predicted any substance use by parent-report, while dimensional (OR 1.30;CI 95%0.92-1.84) PE did not. Dimensional PE (OR 1.91; CI95%1.42-2.58) was a significant predictor for any substance use by self-report, whereas categorical PE (OR 1.20;CI95%0.87-1.66) was not a significant predictor. Our results support previous findings that PE are non-specific markers for psychiatric vulnerability during neurodevelopment.

Topic Area: Diagnosis and Phenomenology

A25
Investigation of the Relationships between Psychological Eating Behaviours with Anthropometric, Metabolic, and Psychiatric/ Functional Outcomes in Early Psychosis

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Background: Second-generation antipsychotics (SGA) are associated with weight gain. SGA can increase appetite, but few research examined the correlates of psychological eating behaviours in early psychosis individuals (EPI).

Objective: To analyze the correlates of psychological eating behaviours with anthropometric, metabolic, psychiatric/functional outcomes in EPI.

Methods: 29 EPI (18 men; mean age: 25.67 $\pm$ 2.95; mean BMI: 31.50 $\pm$ 6.91 kg/m^2) referred to a physical activity program were included. They completed the three-factor eating questionnaire assessing cognitive dietary restraint (CR), uncontrolled eating (UE) and feeling of hunger (FH). Body composition was evaluated with an anthropometric scale. Metabolic outcomes were measured with blood samples. Psychiatric/functional outcomes were assessed by interview with a research assistant.

Results: Flexible CR was correlated to lifetime highest weight reached (r = 0.54, p = 0.004), but also to waist circumference (r = 0.52, p = 0.002), BMI (r = 0.47, p = 0.01), and systolic (r = 0.48, p = 0.01). UE was highly correlated with FH (r = 0.62, p <0.001) and both, UE (r = 0.52, p = 0.004) and FH (r = 0.58, p = 0.001) were related to higher number of meals and snacks per day. Flexible CR and was associated with social functioning (SOFAS; r = 0.43, p = 0.02). No other association was found with psychiatric/functional outcomes. Rigid CR was negatively associated to fasting glucose (r = -0.40, p = 0.03). No differences between females and males.

Conclusion: Psychological eating behaviour may have a role in weight gain associated with SGA.

Topic Area: Eating Disorders

A26
Eating Disorder Services for Young People in Australia: Review of Service Availability and Barriers to Access

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The present service system for young people with eating disorders in Australia is significantly lacking in its ability to respond early and effectively. With only 22% of all young people experiencing eating disorders accessing services throughout their illness, it is critical that the service system is strengthened so young people can more easily access the care they urgently require. This project reviewed the latest evidence on eating disorders including epidemiology, psychiatric comorbidity, aeitiology, risk and protective factors, and early intervention. The current service landscape was investigated, focusing on available services and present barriers to access. This involved reviewing evidence and consulting with stakeholders within the field. Limited eating disorder services for young people exist and access is often restricted by workforce capabilities, cost, and stigma. Recommendations based on these findings were developed to guide Orygen's future work. The recommendations relate to future research opportunities, the translation of research to increase clinical workforce capabilities, and prospective collaborations. Eating disorders are extremely complex, requiring multidisciplinary care in a coordinated way. This study has revealed the need to reconsider the current service design, integrating eating disorder care and consequently improving access and availability for young people in Australia.

Topic Area: Eating Disorders

A27
Predicting Prognosis in Patients with First Episode Psychosis Using Auditory P300: A 1-year Follow-up Study

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Background: Although early intervention is crucial for favorable outcome in patients with schizophrenia, development of biomarkers for predicting prognosis of psychotic disorder still requires more research. This study aim to investigate whether auditory P300 predict prognosis in patients with first episode psychosis (FEP) during 1-year of follow-up period.
Methods: Twenty-four patients with FEP were examined with auditory P300 at baseline, and their clinical status were re-assessed after 1 year. Multiple regression analysis was used to identify factors predictive of prognosis in FEP patients during the follow-up period.
Results: In the multiple regression analysis, P300 amplitude at CPz significantly predicted later improvement of Positive and Negative Syndrome Scale (PANSS) total, positive and general sub-scores. Improvement of Global Assessment of Functioning (GAF) and Brief Psychiatric Rating Scale (BPRS) scores were predicted by baseline P300 amplitude at CPz.
Conclusions: P300 may be a possible predictor of improvement in symptoms and functional status, as well as overall psychiatric status in patients with FEP. Future study with larger sample and longer follow-up period is needed to confirm the findings of the current study.

Topic Area: Electrophysiology

A28
Attention to Praise and Criticism in People with Schizotypal Experiences Relates to Lack of Emotional Support: An Electroencephalography Study

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Background: People with schizotypal traits experience poor family communication, such as criticism. They have less-than-normal insula activity during a close relative's praise, implying a lack of reward from praise. This study aimed to determine whether the event-related potentials (ERPs) of early attention (P200 and P300) are greater during mood descriptors that are emotionally-matched to praise and criticism, than during a standard mood descriptor that does not emotionally match praise and criticism in people with schizotypy. The study aimed to test whether the amplitudes of P200 and P300 ERPs would relate to family expressed emotion.
Methods: Ten participants with high schizotypy performed an emotional oddball task while undergoing electroencephalography. Here, participants listened to standard praise, criticism and neutral comments. After each comment, a standard or an emotional mood descriptor appeared on a computer screen for 1 second. The mean and peak amplitudes of the P200 and P300 ERPs were measured during the mood descriptors. These amplitudes were correlated against participants' scores on the Level of Expressed Emotion scale.
Results: The mean and peak amplitudes of the P200 ERP were greater during emotional, than standard, mood descriptors. Greater P200 peak amplitude during positive mood descriptors that followed praise related to perceived level of expressed emotion–lack of emotional support.
Conclusion: People with high schizotypy attend to mood descriptors that are emotionally-matched to praise and criticism, more than to a standard non-emotional word. Greater P200 amplitude, implying early attention to praise, relates to less perceived emotional support from a close relative.

Topic Area: Electrophysiology

A29
Ethical Issues in Peer Support: Experience from a Family Peer Support Service

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Purpose: There has been an increasing emphasis on service users and family having more input in the design of mental health services. This is central to recovery focused services and concepts of peer support have emerged against this policy framework. Although peer support has many benefits, the introduction of such a model is not without its challenges.
Material and Methods: This paper considers ethical issues involved through the experience of introducing a family peer support service for psychosis within a statutory mental health service.
Results: The motivation for providing such a service and eligibility requirements must be clear, particularly with regard to recovery stage. Governance arrangements need to ensure that peer supporters maintain their unique and distinct perspective but that issues regarding accountability and risk are managed. Peer workers may feel they need to be paid in order for their work to be valued while others may feel this changes the nature of the peer relationship fundamentally. Training is essential, but there is little information as to what should be provided. A balance needs to be found between providing the peer with the necessary skills and support ensuring the role does not become overly professionalised. Family peer workers may work within the same service that their family member attends. Issues regarding ongoing care need to be discussed, should a peer worker's family member relapse.
Conclusions: Peer support is a potentially valuable and effective resource but ethical issues need to be worked out clearly in advance.

Topic Area: Ethical Issues

A30
Ethical Issues in Long Term Cohort Studies

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Purpose: Long term clinical observational studies are a valuable source of information about the course and outcome of a disorder. Study procedures such as tracing and the use of historically collected data raise a number of ethical issues.

Material and Methods: In this paper, we report on ethical considerations that arose during a 20 year follow up of a first episode psychosis cohort.

Results: Consent procedures have become more sophisticated over the last 20 years and consent taken historically could not have anticipated the many potential uses/courses that a research study can take. In that regard, a layered consent procedure is a good development. Tracing (over such a long period) needs to be carefully planned so that information regarding a person's previous history and diagnosis remains confidential during the tracing procedure.

Conclusions: Ethical concerns in such studies often relate to the obligations of health professionals to acquire and apply scientific knowledge—ultimately aimed at improving the outcome of a condition—while respecting individual rights. Potential societal benefits must be balanced with risks and potential harms to individuals; such as the potential for stigmatization or invasions of privacy. Minimizing risks and potential harms and maximizing potential benefits are particularly important in epidemiologic studies of populations who may be difficult to engage in research or considered vulnerable.

Topic Area: Ethical Issues

A31
Stigmas toward Psychosis-related Clinical Features and Depression in General Publics with Different Characteristics

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Mental health campaigns intended to educate the general public how to recognize early signs of psychosis; in the meanwhile, we did not know if people will inadvertently generalize their stigmas towards schizophrenia to subjects with subthreshold psychotic symptoms. A cross-sectional survey using a structuralized questionnaire, comprised by 4 case vignettes describing attenuated psychosis syndrome (APS), schizophrenia, depression, and psychotic-like experiences (PLE), followed by 2 sets of questions using 4-point Likert scale with 19 and 21 items, respectively, to measure discrimination and prejudices, was employed. Participants were laypersons invited after their attending talks about mental health topics and their close others. Their demographics were also collected. A total of 239 subjects (average age 36.1 years old and 144 females (62.3%)) completed this survey. A gradient of stigmas, highest toward schizophrenia, followed by APS/depression, and lowest toward PLE was apparent across gender, all age groups and education levels. Regarding stigmas toward individual clinical states, in general, participants who were younger and had higher education revealed a trend of lower prejudice and discrimination, though not all reached statistical significance. Interestingly, people who have visited psychiatric hospital for purpose other than treatment showed a higher, but not lower, discrimination, except no difference toward PLE. It is comfortable to find our lay respondents being able to differentiate the severity of PLE from APS and schizophrenia, especially younger and higher education groups. For better implementation of educational programs, more is to explore about mental health literacy and stigma in people with special backgrounds and personal experiences.

Topic Area: Ethical Issues

A32
Health Care Professionals' Views of Communicating Adolescents' Heightened Risk of Psychosis in Clinical Practice - Ethical Aspects in Early Intervention

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Aim: The purpose of this study was to describe the health care professionals' experiences regarding the communication about the risk of psychosis in clinical practice and their views of ethical aspects.

Methods: The study was conducted as a qualitative theme interview of health care professionals (n = 11) in early intervention teams in Helsinki metropolitan area. The group interviews were carried out in April and May 2016. The data were analyzed by using inductive content analysis.

Results: According to the analysis the main categories of communication of adolescents' risk of psychosis are 1) sharing information through a dialogical process, 2) ensuring the adolescent's and the family's understanding about the risk of psychosis, 3) balancing communication depending on the client's ability to adapt to the information and 4) supporting the adolescent's and the families participation to care. The results show that in the ethical sense the benefit of early communication is obtaining the soothing knowledge that the issue at hand is merely about the risk of psychosis and it can be influenced through reducing the stress and improving the functional ability. The harm of the communication is the risk of stigma, overemphasizing the risk status and the side-effects of medication. Furthermore, protecting the rights of the adolescent and the family requires moral courage and ethical awareness of the health care professionals.

Conclusions: The communication of the risk of psychosis plays a vital role in the early intervention and ethical awareness should be emphasized in clinical practice.

Topic Area: Ethical Issues

A33
Early Intervention for Everyone? Two Reviews of Cross-Cultural Issues in UHR Cohorts and DUP Retrospective Studies

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Aim: Early management of psychosis has become both a research and policy priority. In Western countries, psychotic disorders appear more prevalent in migrant and minority ethnic groups than in native or dominant groups. Moreover, disparities exist in health conditions and access to care among immigrants and minority ethnic groups, compared with native-born and majority groups. Appropriate early detection tools are necessary for the different groups.

Methods: This poster provides a synthesis of two published reviews assessing transcultural issues in early intervention research. The first review included prospective UHR cohort studies that used the Comprehensive Assessment of At-Risk Mental States (CAARMS). The second one included retrospective studies of the duration of untreated psychosis (DUP).

Results: In the first review, UHR cohort studies that used the CAARMS, transcultural data (native language, ethnicity, place of birth, migration) are rarely collected, and inadequate ability to speak the dominant language is a common exclusion criterion. When they are included, the CAARMS scores differ between some minorities and the native-born majority group. In the second review, studies of the DUP showed similar biases.

Conclusions: Both reviews demonstrate barriers to the access to participation in early intervention research for migrants and ethnic minorities. This selection bias may result in lower validity for the CAARMS among these populations and thus in inadequate intervention programs. Along with targeted studies, minorities' access to participation in studies should be improved through 3 tools: interpreters at recruitment and during participation in the study, a guide to cultural formulation and transcultural data collection.

Topic Area: Ethical Issues

A34
Preliminary Findings from Washington State's New Journeys Program for Youth Experiencing First-episode Psychosis

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Background: Washington State's New Journeys program is a multidisciplinary early intervention model designed to treat young people experiencing first-episode psychosis. We present descriptive and treatment outcomes from the second year of the New Journeys first-episode psychosis program.

Methods: Descriptive statistics were used to analyze demographics and clinical characteristics of participants (N = 66) at intake, recruited from three New Journey sites in Washington State. Psychiatric outcome measures were assessed during the first six months of program enrollment using generalized estimating equations (GEE) and the Wilcoxon signed-rank test.

Results: Of the participants enrolled in New Journeys, a plurality (48%) were white and 43% were Hispanic. At intake, 45% of participants reported being enrolled in school and 4% were working. Eighteen percent of participants reported using alcohol, 27% reported using cannabis, and 34% smoked cigarettes. Almost half of participants reported moderate or higher levels of depression (43%) and anxiety (41%). Participants reported significantly lower levels of anxiety (β = 4.02; $p < 0.01$), depression (β = 3.64; $p < 0.01$), and psychotic symptoms (β = 5.19; $p<0.01$) during the first six months of enrollment in New Journeys. Participants also reported significant improvements in quality of life (β = 4.13; $p < 0.05$) and were more likely to be employed ($Z = -3.32$; $p < 0.01$). There were no significant changes in substance use during the first six months of treatment.

Conclusion: Program participants experienced improvements in psychiatric symptoms, quality of life, and vocational functioning, indicating that New Journeys has a positive impact on the lives of youth experiencing first-episode psychosis. Alcohol, drug, and tobacco use are potential targets for future program improvement.

Topic Area: First Episode Psychosis

A35
Using Digital Media Advertising in Early Psychosis Intervention

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Objective: Identifying and engaging youth with early stage psychotic disorders in order to facilitate timely treatment initiation remains a major public health challenge. While advertisers routinely use the internet to directly target consumers, limited efforts have focused on applying available technology to proactively encourage help seeking in the mental health community. This study explores how one might take advantage of Google Adwords in order to reach prospective patients with early psychosis.

Methods: A landing page was developed with the primary goal of encouraging help seeking individuals in New York City to contact their local early psychosis intervention clinic. In order to provide the best opportunity to reach the intended audience, Google AdWords was utilized linking over 2,000 manually selected search terms to strategically placed landing page advertisements. The campaign ran for 14 weeks between April 11th and July 18th 2016 with a total budget of $1427.

Results: The ads appeared 191,313 times and were clicked on 4,350 times at a per-click cost of $.33. Many users took additional help seeking steps including obtaining psychosis specific information/education (n = 1,918 / 44%), completing a psychosis self-screener (n = 671 / 15%) and contacting the Early Treatment Program (n = 57 / 1%).

Conclusions: Digital ads appear to be a reasonable and cost effective method to reach individuals who are searching for behavioral health information online. More research is needed to better understand the many complex steps between online search inquiries and making first clinical contact.

Topic Area: First Episode Psychosis

A36
Gender Differences in First Episode Psychosis Patients

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The clinical heterogeneity of psychotic disorders is well established in literature. Gender differences in schizophrenia and first episode psychosis have been the subject of several studies but further understanding of such differences could be an important contribution to an increasingly personalized approach to patients especially in the earlier stages of psychotic disorders. The goal of this study is to characterize gender differences in a group of inpatients admitted to a First Episode Psychosis Unit. 71 patients admitted to our unit between 2016 and 2017 were included in this study (41 males; 29 females). Sociodemographic data, duration of untreated psychosis, substance use, duration of admission, family history and other clinical data were collected from records. There was a statistically significant gender difference in average age (Male average age 26,63; Max. 51; Min. 14; SD 9/Female average age 40,52; Max. 72; Min. 20; SD 15; p<0.001); marital status (Single males 78%/Single females 41%; p = 0.04); tobacco use (Males 61%/Females 10%; p < 0.001); cannabis use (Males 76%/Females 21%; p < 0.001); cocaine use (Males 20%/Females 3%; p = 0.04). In the remaining variables there weren't statistically significant differences between genders. Olanzapine and risperidone were the most frequently selected oral antipsychotic drugs as initial treatment in both genders. Our results are consistent with some of the available data from other studies although significant differences were noted. Further studies exploring differences between clinical profiles of first episode psychosis patients are important to improve the care provided to these patients.

Topic Area: First Episode Psychosis

A37
Nutrient Deficits and Clinical Correlates in First Episode Psychosis: A Systematic Review and Meta-Analysis

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Background: Meta-analyses of blood nutrient levels in schizophrenia to date have focused on individual nutrients, and only considered patients with long-term conditions. Therefore, we conducted a systematic review and meta-analysis of all published studies comparing blood levels of vitamins and/or mineral in first-episode psychosis (FEP) to healthy control samples.

Methods: Electronic databases were searched from inception to July 2017 for all studies examining blood levels (i.e. serum, plasma or whole blood) of nutrient levels in people with FEP compared to healthy controls. Our systematic search identified 28 eligible studies, examining blood levels of six vitamins and ten dietary minerals, across 2,612 individuals. Random effects meta-analyses compared nutrient levels in FEP to healthy controls. Clinical correlates of nutritional status in FEP samples were systematically reviewed.

Results: Compared to healthy controls, individuals with FEP had large, significant reductions in blood levels of vitamin B9/folate (N = 6, n = 827, g = -0.624, 95% C.I. = -1.176 to -0.072, p = 0.027), Vitamin-D (N = 7, n = 906, g = -1.055, 95% C.I. = -1.99 to -0.119, p = 0.027) and Vitamin C (N = 2, n = 96, g = -2.207, 95% C.I. = -3.71 to -0.71, p = 0.004). Systematic synthesis of clinical correlates showed that lower levels of both folate and vitamin D were associated with poorer mental health in FEP.

Conclusions: Deficits in vitamin D and folate, previously observed in long-term schizophrenia, appear to exist from illness onset, and are associated with more severe symptoms. The extent and importance of these deficit suggests that routine screening for potential deficiencies should be considered. Furthermore, the potential benefits of nutritional interventions targeting these deficits in FEP should be explored.

Topic Area: First Episode Psychosis

A38
Clinical Remission in First Episode of Psychosis: Results from a Cohort in Northern Italy

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Background: Early interventions services (EIS) for psychosis are not uniformly available in Italy. From 2012, Region Emilia Romagna has funded a program to deliver EIS, embedded within a network of community mental health services.

Method: Health records of the EIS (2013-2016) were analyzed. Inclusion criteria were: residence in Region, age 18–35, presence of non-organic, affective or non-affective psychosis within two years of onset, fluency in Italian, no comorbid severe intellectual disability. Clinical remission was defined as Health of Nation Outcome Scale (HoNOS) score < or = 8.

Results: Of 689 patients in EIS, 460 (66.7%) had 6-month HoNOS assessment. Of those, 70% were male, mean age was 23.8 (SD = 5.1), and 421 (91.5%) were diagnosed with non-affective psychosis. Median duration of untreated psychosis (DUP) was 5 months (range = 0-72). At 6 months, HoNOS total score was significantly reduced by 35.6%. The 6-month remission rate was 33.7%. In the unadjusted analysis, past psychiatric treatment, single status, unemployment, comorbid personality disorder, longer DUP, and higher HoNOS baseline scores were associated with lower clinical remission. In the multivariate analysis, only comorbid personality disorder (OR = 0.51, p = 0.03), longer DUP (OR = 0.97, p = 0.02), and baseline HoNOS scores (OR = 0.86, p<.0001) remained significant.

Discussion: This study reports promising results of a regional network of EIS, with shared data elements allowing benchmarking across sites. Patients at EIS showed significant clinical improvement at 6-month assessment. Targeted interventions should also address comorbid personality disorder. Overall, early detection is essential to increase the rates of clinical remission through decreasing DUP and clinical severity at admission.

Topic Area: First Episode Psychosis

A39
What the (?!@#) Happened? Creative Strategies to Engage Youth in a First Episode Program: Interactive Psychosis Workbook

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Objectives: Emerging literature has emphasized the importance of creating youth friendly environments as an integral component of early intervention in first episode psychosis. To this end, the Prevention and Early Intervention Program for Psychosis (PEPP), in London Ont, Canada, has developed an interactive workbook for clients to promote engagement with the treatment team and to empower youth to be active agents of their care.

Methods: An interdisciplinary development team of clinic staff was formed, and areas of focus were derived through a consensus procedure to determine critical areas of care. An approach utilising both infographics and interactive task-completion was used to create a workbook for daily use in the Early Intervention setting. We describe the major elements of this workbook in the results section below and display samples for the audience.

Results: The workbook is comprised of the following chapters: Mental health, Health behaviors, Vocational skills, and Interpersonal skills. At present, we are planning to conduct pre-launch focus groups to determine the attitudes and beliefs clients hold over the utility and accessibility of information in the workbook. We are also planning to make this booklet available for other first episode teams, in an editable format for local adaptation.

Conclusion: While challenging, creating a youth friendly service within a hospital environment must be considered when developing early intervention programs. This interactive workbook could become a valuable tool to encourage participation among early psychosis patients' and will provide invaluable health information for the journey towards recovery.

Topic Area: First Episode Psychosis

A40
Psychological Mechanisms of Childhood Trauma to Suicidality in Early Psychosis

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Several studies have found the relation between childhood trauma and suicidality in psychosis. However, the psychological mechanisms from childhood trauma to suicidality are not well understood. The aim of this study was to explore the translation mechanism of the childhood trauma (ChT) to suicidality in the early psychosis. The sample comprised of 306 patients with early psychosis who were enrolled in the Korean Early Psychosis Cohort Study, a prospective naturalistic observational cohort study. ChT, suicidality, negative schema and rumination were evaluated with the Early Trauma Inventory Self Report-Short Form, Columbia Suicide Severity Rating Scale, Brief Core Schema Scales and Brooding Scales. In addition, depression, empathy and psychopathology were also evaluated. All the variations were assessed at baseline. Structural equation model and phantom approach were conducted to analysis the pathway from childhood trauma (ChT) to suicidality. We found negative schema play a vital role in the relation between childhood trauma and suicidality. Our findings suggest that targeting negative schema in the people with early psychosis who exposed to childhood trauma will be an effective strategy for reducing suicidality events. This study was supported by a grant of the Korean Mental Health Technology R&D Project, Ministry of Health & Welfare, Republic of Korea (HM14C2608).

Topic Area: First Episode Psychosis

A41
Identifying Research Priorities for Early Intervention and the First Episode of Psychosis: Views from Service-users, Carers and Healthcare Professionals

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Prioritising research in strategic funding decisions is rarely a democratic process and the vast majority of mental health funding provides for basic research as opposed to practice-oriented research. Priorities are generally decided at strategic governmental level, excluding the views of people who use research evidence such as service-users, carers and healthcare professionals. Including these stakeholder views is likely to increase the acceptability of research and substantially reduce waste. Consequently we aimed to develop practice-oriented research priorities for early psychosis decided by service-users, carers and clinicians. We conducted a UK national survey (http://www.vip.bmh.manchester.ac.uk/) in two rounds which was distributed among EIP networks, affiliated professional organisations and user involvement groups and research departments covering 34.6% of England NHS Trusts in major cities and the environs. To date there are 211 responses and we have identified 130 iterative questions for the first survey arising from 81 responses primarily from service-users and carers. Emerging themes include stigma and discrimination, recovery and trauma-focused care, environmental antecedents to psychosis, reducing delay, evidence for phase specific treatments, and evidence for non-EIP non-pharmacological interventions, self-management and iatrogenic effects. To ensure these priorities are currently unanswered by research, searches of four main databases will be conducted by an independent Information Specialist. Unanswered questions will be ranked by steering group members and key service-user, carer and clinicians will further prioritised to a list of 10 using a nominal group technique. The final priorities will inform the research agenda to better support service-users and carers dealing with a first-episode of psychosis.

Topic Area: First Episode Psychosis

A42
Understanding the Treatment Decision-making Needs of Emerging Adults with Early Psychosis

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Despite the increasing availability of coordinated specialty care (CSC) programs for early psychosis in the United States, many emerging adults never derive clinical benefit due to high rates of service disengagement during the first several months of treatment. To promote the best long-term outcomes, there is a critical need to identify strategies that facilitate adequate early engagement (i.e., help-seeking, appointment attendance, engagement in treatment processes). Decision support interventions have been shown to increase service engagement, yet are lacking for emerging adults participating in CSC. A requisite step in expanding the array of decision support tools available to this population is to better understand emerging adults' decision-making needs and how these relate to their engagement in CSC. During this presentation, Dr. Thomas will discuss preliminary results from a qualitative study designed to achieve this aim. A purposive sampling design, stratified by level of service engagement (i.e., below average, average, above average), will be used to understand the range of individuals' viewpoints, ideas, and preferences regarding treatment decision-making during the first six months after enrollment in a CSC program. Decision points of particular difficulty as well as barriers and facilitators to decision-making will be reported. Between-group differences in qualitative themes across service engagement, demographic, and clinical groups will be explored and discussed. This study will inform the development of a peer-delivered decision support intervention; as such, implications for this intervention will be highlighted.

Topic Area: First Episode Psychosis

A43
Recovering Quality of Life in Outpatients with First-episode Psychosis

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There is a dearth of literature on wellbeing as an outcome, measured through the perspective of service users. The present study thus aimed to investigate recovering quality of life (ReQoL) and its sociodemographic correlates among a sample of outpatients receiving treatment at an early psychosis intervention programme in a tertiary mental health institution in Singapore. The ReQoL-10 is a relatively new self-rated 10-item measure that has been designed specifically for use in a mental health setting, as compared to conventional QoL scales. Participants (n = 150) presented with a primary diagnosis of first-episode psychosis and completed a questionnaire containing the ReQoL-10 measure and sociodemographic information. The age of the sample ranged from 16 to 41, with a mean (SD) of 27.1 (6.15) years. The ReQoL-10 scores ranged from 12 to the maximum 40 with a mean (SD) of 28.7 (6.95), and the instrument demonstrated good internal consistency (Cronbach's alpha = 0.89). No missing or pattern answers were observed. Multiple regression analyses demonstrated that age (B = 0.247, p = 0.008) and being female (B = 2.461, p = 0.029) significantly predicted ReQoL scores, after controlling for other sociodemographic variables. While females do have better prognosis than males, a possible explanation for the effect of age is that older adults with a first psychotic episode may be better equipped to cope with the onset of the illness. The ReQoL measure should also be included in future studies to provide an additional dimension to the understanding and operationalization of recovery.

Topic Area: First Episode Psychosis

A44
A Preliminary Exploration of the Relationship between Subjective and Objective Aspects of Recovery in a First Episode Psychosis Sample

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The emergence of the recovery movement has led to a paradigm shift in what the concept of "recovery" means for individuals with severe mental illness. In particular this has led to a definition of recovery, referred to as subjective recovery, which includes more than objective outcomes (i.e. symptom remission) including living a fulfilling life despite the continued presence of symptoms or other manifestations of mental illness. This shift has particular implications for individuals with first episode psychosis (FEP) as interventions are developed to target a comprehensive definition of recovery. There has been increasing emphasis on intervening early in the course of psychosis, yet little is known about subjective recovery in FEP, including how aspects of subjective recovery may be related to objective markers of functioning. This phenomenon has been examined in prolonged samples, suggesting that as recovery occurs, different elements of objective markers are related to subjective recovery. This remains unexamined in FEP. The current study examines subjective and objective markers of recovery in an FEP sample at five time points (BL: N = 60; 6 mos: N = 46; 12 mos: N = 53; 18 mos: N = 39; 24 mos: N = 30) during involvement in coordinated specialty care services to assess 1) outcomes of subjective and objective recovery over time and 2) the relationship between these different aspects of recovery. Results show different aspects of objective functioning are related to self-reported subjective recovery at different time points, suggesting a complex relationship between objective and subjective factors of recovery in an FEP sample.

Topic Area: First Episode Psychosis

A45
Creating Innovative Solutions for First Episode Psychosis Treatment: Developing Strategies to Enhance Family Member Engagement in Treatment

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Purpose: Since the release of the Recovery after Initial Schizophrenia Episode (RAISE)-ETP results in 2015, the US has appropriated funds to develop first episode psychosis programs in every state. This poster describes results from a survey of one of the CSC program models, NAVIGATE, which was evaluated positively in the RAISE initiative. The aims of the survey were 1) to describe the characteristics of NAVIGATE teams in the US and 2) to understand how programs are engaging family members in treatment.

Methods: This survey will assess the implementation of NAVIGATE programs in the US and evaluate the common barriers to the engagement of family members in treatment. Program data collected includes information about the location of the program, program enrollment criteria, number of and participants screened and enrolled. In addition, program directors are asked questions to describe barriers to engaging family members in treatment and strategies they used to overcome those barriers.

Results: Forty-one NAVIGATE programs have been identified and contacted. Of the 28 programs that have responded, 18 were in urban areas, 6 were in suburban areas, and 4 were in rural areas. Reports of family engagement at the sites ranged from 69% in suburban locations to 44% in urban locations, and 18% in rural locations. Common themes will be ascertained, including barriers and facilitators to engaging family members in treatment.

Conclusions: Results from this survey will provide an overview of the dissemination of the NAVIGATE program. Recommendations could inform the engagement of family members in treatment.

Topic Area: First Episode Psychosis

A46
Negative Symptoms in First Episode Psychosis (FEP) Predict Antipsychotic Treatment Failure: A Natural Language Processing (NLP) Electronic Health Record Study

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Background: Negative symptoms contribute towards substantial disability in people with schizophrenia. However, less is known about their impact compared to other symptoms in first episode psychosis (FEP). We sought to investigate how psychosis symptom clusters are associated with clinical outcomes in people with FEP using a large electronic health record (EHR) dataset.

Methods: Data were obtained from pseudonymised EHRs of 1,835 people with FEP in South London. Five psychosis symptom clusters (positive, negative, disorganisation, mania and depression) were identified using CRIS-CODE NLP software. Data on subsequent hospital admission and the number of unique antipsychotics prescribed in the 5 years following presentation were obtained. Their relationship with psychosis symptom clusters was analysed using multivariable negative binomial regression with age, gender and ethnicity as covariates.

Results: Mania (IRR 6.37, 95% CI 3.24 to 12.5) and positive symptoms (3.87, 1.98 to 7.58) were more strongly associated with increased hospital admission than disorganisation (1.68, 0.46 to 6.15), depression (1.55, 0.71 to 3.39) or negative symptoms (1.51, 0.51 to 4.48). Negative symptoms were more strongly associated with increased antipsychotic treatment failure (4.49, 2.35 to 8.59) than mania (3.65, 2.42 to 5.52), positive symptoms (3.35, 2.22 to 5.06), disorganisation (2.64, 1.23 to 5.68) or depression (2.18, 1.36 to 3.49).

Conclusion: Increased mania and positive symptom burden predict greater hospitalisation than negative symptoms. However, negative symptoms are more strongly associated with increased antipsychotic treatment failure. These findings illustrate that although mania and positive symptoms result in increased hospitalisation, negative symptoms are less responsive to antipsychotic treatment.

Topic Area: First Episode Psychosis

A47
Familial Predisposition for Psychiatric Disorders in Early Onset Psychosis in a South African Setting

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There is limited literature on the association of family history of psychosis in early onset psychosis (EOP) with literature mainly based on adult studies with mixed results. We aimed to determine the association between family history of psychosis (FHP) or any family history of mental illness (FHM) (in first degree relatives) and clinical features in first episode EOP. Forty-five adolescents with first episode EOP were assessed by clinical interview and the following tools: PANSS, Symptom Onset in Schizophrenia (SOS) inventory and WHO ASSIST for substance use. They were compared to 45 gender- and age-matched controls with incident non-psychotic mental illness. EOP adolescents and controls did not differ in prevalence of either FHP or FHM. Adolescents with non-psychotic mental illness (controls) were significantly more likely to have a family history of non-psychotic mental illness (EOP = 13%; controls = 47%, p = 0.001). Among EOP adolescents, a positive FHP was associated with a lower family income (p = 0.020), lower mean PANSS positive score (p = 0.009), but not with age of presentation (p = 0.112), age of onset (p = 0.639) or duration of untreated psychosis (p = 0.853). An exploratory analysis for gender and FHP suggests that male EOP adolescents with FHP had significantly lower PANSS positive symptoms (p = 0.003). Results are varied and suggest need for larger studies in multi-cultural contexts to better understand implications of FHP and FHM on development of EOP.

Topic Area: First Episode Psychosis

A48
Is Sport an Untapped Resource for Recovery from First Episode Psychosis? A Call to Action

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Concentrated functional recovery efforts post first-psychotic episode are critical to manage both positive and negative psychotic symptoms, mitigate side-effects of antipsychotic medications, and promote long-term recovery We present the potential utility of sport-based life-skills interventions to support the functional recovery of young people who have experienced first episode psychosis (FEP). This argument is based on our recent narrative review of literatures on (i) first episode psychosis recovery and (ii) life-skills training through sport, that highlights the conceptual (and limited empirical) links between the two. We show in that review that the important components of an individual's recovery following a psychotic episode are physical activity, opportunities to build life-skills, and social connectivity. A review of the sport and life-skills literature suggests that sport can be a powerful platform from which to teach life-skills, foster social connectivity, and promote physical activity within vulnerable populations. Despite these links, mental health interventions that combine both life-skills training components and physical activity in a context that promotes social connectivity are scarce to none. We suggest that sport-based interventions could be an opportunity to foster functional recover by providing life-skills training, social connectivity, and physical activity opportunities in one intervention to individuals recovering from their first psychotic episode. We urge a call to action for the development and implementation of such interventions, and provide empirically-based recommendations for intervention development.

Topic Area: First Episode Psychosis

A49
Mapping of Early Intervention Programs for Psychosis in France

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Background: Early intervention programs (EIP) developed in many countries have been demonstrated effective in the treatment of psychosis. A recent report from the London School of Economics (2016) highlighted the delay of France in this area, despite the latest development of some EIP.

Methods: This study aimed to draw up a comprehensive inventory and a description of existing or planned EIP in France in 2017. To be included, initiatives had to offer an early, intensive and multidisciplinary approach with at least 0.5 dedicated full-time equivalent staff (out-patient setting was a secondary criterion). Inventory was achieved through many contacts among physicians/psychiatrists, healthcare facilities or administrative institutions. An online declarative survey was administered covering structure of attachment, dedicated team, funding, targeted population, activity in 2016, partners, difficulties and prospects.

Results: Between March and July 2017, 37 EIP were identified in France and overseas: 18 operational, 8 being established, and 11 under discussion. The operational programs were located throughout the country with a few regional disparities. They all operated with multidisciplinary teams (mean of 4.3 dedicated full-time equivalent staff), including at least one psychiatrist and one nurse. 12/18 programs offered case management, with a mean caseload 10:1. All programs included 15 to 35 year-old patients.

Discussion: A real dynamic has been launched in France. This evaluation will help to improve visibility and promote the development of new programs.

Topic Area: First Episode Psychosis

A50
20 Years on from a First Episode Psychosis: Does Clinical Recovery Status Influence Personal Recovery Meaning? The Qualitative Findings of iHOPE-20

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Purpose: In contemporary mental healthcare, the concept of 'recovery' has become ubiquitous. Recovery has emerged as a structuring principle in service philosophy and mental health policy globally. As the service user perspective is integral to defining personal recovery, qualitative research can help establish if clinical recovery status impacts personal recovery meaning. Within the First Episode Psychosis (FEP) literature, there is a dearth of very long term follow up research that explores recovery qualitatively.

Materials and Methods: Twenty participants were purposefully sampled from a FEP incidence cohort (Irish Health Outcomes in Psychosis Evaluation–20 year follow up: iHOPE-20). We conducted semi-structured interviews exploring personal recovery meaning with 10 people who met full functional recovery criteria and 10 who did not. Thematic Analysis was performed using an exploratory, inductive, and essentialist approach.

Results: While there was concordance between groups in how personal recovery was conceptualised; substantial variation was also found. Participants described personal recovery as managing the impact of unusual beliefs/perceptions; being perceived as capable and of value; engaging with life and self-transcending; and formulating a personal understanding of their psychosis experiences. Some recovery facets identified by the 'non-recovered' group were deemed unimportant and inaccessible to the 'recovered' group (e.g. the meaning in life derived from psychosis) and vice versa (e.g. self-actualisation achieved through professional success).

Conclusions: Findings have implications for policy and clinical care. Different aspects of personal recovery may need to be emphasised at each treatment stage in FEP; depending on an individual's priorities and their recovery trajectory.

Topic Area: First Episode Psychosis

A51
Implementation of Early Intervention for Psychosis Services across the Province of Quebec, Canada: Successes and Challenges

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Background: Over the past 20 years, 18 Early Intervention Services (EIS) have been implemented across the province of Quebec without local guidelines. The 2015-2020 Mental Health Action Plan of the Quebec Ministry of Health and Social Services (QMHSS) aims to develop EIS all regions. In 2017, the QMHSS published its EIS reference framework setting the provincial standards and invested $10'000'000 for the development of 10-15 new programs. Strategies to support the implementation of evidence-based programs for early psychosis are proposed. The "Association Québécoise des Programmes pour Premiers Episodes Psychotiques" (AQPPEP) offers mentoring, regular specialized training and continuous education (webinars, courses, conferences). Basic training organized by both the MHSS and National Center of Excellence in Mental Health (NCEMH) is also available. Challenges arise in the scalingup of other programs, which have administrative and organizational differences, and practices that sometimes diverge from EIS guidelines' core principles. Programs in non-urban areas need to adapt the EIS model developed in academic urban contexts to their reality (spread-out catchment areas, lower population density, thus affecting the team size and composition) which limits the intensity of follow-up and the availability of some specialized psychosocial interventions. Adaptations for the younger population is required.

Conclusion: Continued training, mentoring and networking of clinicians and researchers, as well as the support from local and provincial deciders will help EIS attain and maintain the best standards. The synergy of collaboration between AQPPEP's practicing community, the NCEMH and the QMHSS should provide optimal conditions to wide implementation across Quebec.

Topic Area: First Episode Psychosis

A52
Patient Preferences in Recent Onset Schizophrenia

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Introduction: A person-centered approach is paramount in schizophrenia management. Patient's priorities and perceptions can influence concordance with treatment. PIER is a first episode psychosis service for over 1 million people (aged 16-64) within Leicester, Leicestershire and Rutland (UK).

Objective: To identify preferred treatment goals of patients recently diagnosed with schizophrenia within PIER.

Methods: As part of a multinational study (5 centres, 100 participants), patients under the care of PIER, aged 18-35 years with a diagnosis of schizophrenia within the last 5 years were surveyed. All participants had at least one hospital admission and were prescribed antipsychotic medication for at least 6 months prior to participation. Participants evaluated the importance of 13 treatment goals, satisfaction with PIER and medication preferences.

Results: Across 19 participants, the average age was 24.5 years, 58% male and 52.6% diagnosed within 2 years. Preferences were most favourable for: reduced instances of restlessness or urges to move, improved ability to think clearly, increased ability to take care of self, reduced anxiety and reduced frequency of disease symptoms. 78.9% rated PIER as "very supportive" and no dis-satisfaction (0%) was expressed with current treatment. 73.7% of participants reported preference for oral medication compared to long-acting injection. 42.8% of those who preferred oral medication did so to avoid injections. In the global study (Bridges, et al 2017) 61% of participants reported preference for oral medication.

Conclusions: Awareness of patient preferences for medication may moderate clinician's treatment choice. Future research should explore further areas to facilitate patient engagement.

Topic Area: First Episode Psychosis

A53
Feasibility and Validity of Screening for Early Psychosis in a Primary Care Setting

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Reducing the duration of untreated psychosis is critical in early psychosis care, given its significant impact on outcomes. The primary care physician is among the most frequently reported first healthcare contact on the pathway to treatment for psychosis, but direct referrals from primary care to specialty psychosis care are uncommon. In this ongoing study, the feasibility and validity of screening for psychosis using the Prodromal Questionnaire – Brief questionnaire will be evaluated. Across five primary care clinics, clients aged 18-30 referred to integrated behavioral health services are invited to complete the screening questionnaire on an electronic tablet, followed by a comprehensive assessment of their psychosis symptoms using the Structured Interview for Psychosis Risk Syndromes. To date, sites have been trained in screening and referral procedures and have conducted screening for a median period of 9 weeks (range 8 – 18 weeks), during which 39 screens have been conducted. Fifteen participants scored above the PQ-B cutoff score of 20, of which 11 have completed follow-up clinical assessments. Of these, six (54.5%) participants have been identified as meeting the criteria for either first-episode psychosis or the clinical high-risk syndrome. If effective, screening for psychosis in primary care with a direct referral pathway for positive screens may represent an important step forward in significantly reducing the duration of untreated psychosis caused by delays in receiving appropriate care once in contact with health services.

Topic Area: First Episode Psychosis

A54
Evaluation of the Impact of Long-acting Antipsychotic use in a Canadian First Episode Psychosis Clinic: A Mirror Study

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First Episode Psychosis patients are more responsive to antipsychotic medications with 87% response rate in the first year and at lower doses. However, high medication non-adherence or partial adherence rates in this population reduce the effect of treatment and increase risk of relapse. Thus, the use of long-acting injectable (LAI) antipsychotics is recommended as an important treatment option. A mirror study, which compared one year periods pre and post LAI administration in the same patients was used to evaluate treatment impact. Data were collected through a retrospective chart review for all patients with a schizophrenia spectrum diagnosis and treated with any LAI in a First Episode Psychosis clinic in Ottawa, Ontario from June 2012 to June 2017. Forty patients met inclusion criteria; patients were mainly white (62.5%), male (68%), completed high school (61.1%), received disability support (45%), living with their parents (89%) and average age of 23 years (SD = 4.3). The most common reason for starting LAI was poor and partial compliance with oral forms (67.5%). Following the LAI treatment, hospitalization ($p<0.0001$) and length of hospital stay ($p = 0.004$) decreased significantly. There were no significant differences in ER visits and rating medical scales including PANSS, GAF, and CGI scores before and after LAI treatment. The results support that LAI treatment may prevent recurrence of and reduce the risk of hospitalization. The main limitation of this study was the small sample size and lack of rating scale outcomes prior to LAI start for some of the eligible patients.

Topic Area: First Episode Psychosis

A55
Inventory of Family Intervention Practices during a First Episode Psychosis (FEP): Overview and Challenges for the Service Offer in Quebec

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In Quebec, young adults and families coping with a first episode psychosis (FEP) can count on proximity services and other services that are more specialized in mental health. These services are mainly offered by family associations belonging to the Réseau avant de Craquer and by some twenty FEP clinics that are part of the Association québécoise des programmes pour premiers épisodes psychotiques (AQPPEP). In 2017-2018, a study was conducted to make an inventory of the family intervention practices in Quebec. The three following objectives were targeted by the study: (1) describe the current service offer to which families have access during the early stages of a psychotic disorder; (2) document the family intervention practices specifically during a FEP; (3) analyze how the current service offer fits with the family care model proposed by Mottaghipour and Bickerton (2005). At the end of the data collection process, 26 family associations and 9 FEP clinics had completed the online questionnaire (N = 35). Data analysis helped to map out the family intervention practices and identify the inherent challenges for both types of practice settings surveyed. The discussion elements address what is similar and different in terms of the service offer, as well as the support and need for training of care providers in Quebec. The presentation aims to present the inventory of practices and discuss the challenges of family intervention during a FEP in Quebec.

Topic Area: First Episode Psychosis

A56
Social Functioning and Quality of Life and their Disparate Correlates in Early Phase Psychosis

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Positive outcomes in early phase psychosis (EPP) are the target of many treatment modalities and defined in a number of disparate ways. Correlates and predictors of positive outcomes have also been measured via numerous methods, sometimes with inconsistent findings. In the present investigation, we examined the relationship of both social functioning (Social Functioning Scale) and quality of life (Quality of Life Scale) with a number of correlates thought to be related to these outcomes: depression, clinical insight, symptoms, neurocognition, and social cognition. Eighteen individuals within five years of psychosis onset were administered a battery of assessments targeting each domain. Increased depression was associated with poorer social functioning ($r = -.547$, $p = .02$) and quality of life ($r = -.535$, $p = .02$). Poor insight ($r = -.523$, $p = .03$) and more symptoms ($r = -.703$, $p = .001$) both negatively impacted quality of life, while better neurocognition ($r = .585$, $p = .01$) and social cognition ($r = .480$, $p = .04$) had a positive impact on quality of life. Although preliminary and more research is indicated, these data may suggest that integrative interventions should target disparate correlates of outcome measures in order to impact both social functioning and quality of life during EPP. Additional data, assessment of specific subscales of outcome measures, and implications of the findings will be presented and discussed.

Topic Area: First Episode Psychosis

A57
Factors That Hinder Care Seeking Among People Experiencing First Episode Psychosis

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Objective: Early engagement in evidence-based treatment for psychosis can improve outcomes but service providers need to understand and address the reasons people experiencing first episode psychosis (FEP) avoid or delay care. The goal of this study was to describe reasons care seeking might be postponed, from the points of view of patients, caregivers, and health care professionals.
Methods: Twenty-two patients who had received an initial psychosis diagnosis and ten caregivers were interviewed about their FEP experiences and pathways to care. Additionally, 15 administrator or clinician key informants with responsibility for psychosis services in 5 integrated health systems were interviewed and asked to describe how identification and treatment engagement of patients with FEP could be improved. All interviews were transcribed, coded, and analyzed together using thematic analysis.
Results: Some individuals did not perceive psychotic experiences as concerning because they were familiar. Among those who were concerned, the desire to make sense of their experiences and avoid detection or stigma, caused some to conceal symptoms or isolate themselves. Caregivers who observed withdrawal often attributed it to typical adolescent behavior, which led to treatment delays. Patient privacy protections also led to delays among young adults.
Conclusions: To attract individuals to early psychosis services, outreach and engagement programs need to help individuals and caregivers recognize their experiences as opportunities for care, and design and market services that promote sense-making, offer hope, and reduce stigma and system-level privacy-related barriers to care engagement.

Topic Area: First Episode Psychosis

A58
The Relationship between Premorbid Adjustment and Emotional Intelligence in First Episode Schizophrenia

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Research shows that individuals with schizophrenia exhibit deficits in emotional intelligence (EI), which may impair social functioning. This study addresses the relationship between indicators of social maladjustment during childhood and early adolescence and later deficits in EI observed in first-episode schizophrenia. This study included 119 participants from the NIMH Conte Center studies of first-episode schizophrenia (ages 14-40): 40 who met DSM-IV criteria for a first episode of schizophrenia (SZ), 22 with another psychotic disorder (OP), and 57 age-and-sex matched healthy controls (HC). After baseline diagnostic and symptom assessment interviews, the Cannon-Spoor Premorbid Adjustment Scale (PAS) and the Managing Emotions Scale of the Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT; an index of EI) were administered. Those with SZ had the lowest EI scores on the MSCEIT, scoring lower ($p<.05$) than the HC participants. OP subjects scored mid-way between the SZ and HC groups, although not significantly different from either SZ or HC. PAS scores reflecting maladjustment (i.e. higher scores) during childhood and early adolescence were negatively associated with MSCEIT scores for all subjects combined ($p<.001$) and the SZ group alone ($p<.05$), but not for the OP or HC groups. Individuals experiencing a first episode of schizophrenia scored worse than mentally healthy individuals on a measure of EI. Poor scores on the managing emotions scale of the MSCEIT were associated with poor childhood and early adolescent adjustment among individuals with SZ. Findings from this study suggest that premorbid social maladjustment may predict deficits in EI in the first episode of schizophrenia.

Topic Area: First Episode Psychosis

A59
Enhancing Timely and Accurate Identification of First Episode Psychosis through Systematic Diagnostic Training

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Purpose: Timely identification and treatment improve outcomes for individuals experiencing first episode psychosis (FEP). Coordinated Specialty Care (CSC) has been demonstrated to be most effective for individuals with primary non-affective psychotic disorders (PNPD). Studies also found diagnostic challenges in identifying PNPD, especially among adolescents, resulting in misdiagnosis and enrollment of non-eligible individuals to CSC programs. Given limited availability and higher costs of CSC compared to typical care, trainings that enhance accurate diagnosis of FEP are paramount. While use of structured interviews (e.g., Structured Clinical Interview for DSM-5) may be optimal, the necessary training may be impractical across large care systems. We describe our systematic approach to addressing diagnostic and eligibility challenges across OnTrackNY teams (New York State's CSC program) and outcomes.
Methods: Our systematic process for diagnostic training included: (1) review of eligibility evaluation documentation (EED) of 93 actively enrolled participants across eight teams to identify areas of diagnostic challenges and (2) development and delivery of a six-module diagnostic training based on identified challenges to all teams.
Results: Pilot review of EED found 19.4% (N = 18) of 93 enrolled participants were non-eligible. Common reasons for non-eligibility were: substance-induced psychosis, primary mood disorder, personality disorder, PTSD, and subthreshold symptoms. After a six-module training, review of EED among the same eight teams for participants enrolled within the past month (N = 24) found 100% of these participants eligible.
Conclusion: Though our study cannot determine validity of diagnoses, understanding assessment challenges combined with targeted training may be useful to improve the evaluation process of FEP teams.

Topic Area: First Episode Psychosis

A60
Implication of Attention-deficit and Hyperactivity Disorder in the Appearance of Early Psychosis: Socio-demographic and Clinical Characteristics

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Recent studies show a relationship between symptoms of Attention-deficit/Hyperactivity Disorder (ADHD) during childhood and subsequent psychotic disorders. Moreover the first episode of psychosis (FEP) is typically preceded by a prodrome with deficits in attention. There are only 2 previous studies in FEP that evaluate the presence of ADHD in these patients and their impact on clinical presentation. The objective of our study is to examine the prevalence of ADHD in a sample of 130 patients with an incipient psychotic (IP) disorder, treated at the Early Intervention Service of Reus, aged between 14 and 28. The Structured Diagnostic Interview of ADHD in adults (DIVA) was administered. The data were analyzed using SPSS version 20,0 for Windows. Sample consisted in 97 FEP and 33 ARMS. Mean age of sample was 24.36, 63.84% were men and 37.39% of subjects met criteria for ADHD. In the FEP subgroup 32.97% fulfills diagnostic criteria for ADHD (versus 51.72% in ARMS, 51,72% of men), 90.32% of men. There was a greater prevalence of ADHD in the ARMS sample compared with FEP. Those with childhood ADHD, showed significantly higher rates of cannabis use and greater prevalence of neurodevelopmental delay compared with patients without ADHD. The FEP-ADHD group scored significantly higher in the positive and negative scales of Positive and Negative Syndrome Scale compared with the FEP-alone. Our 37.39% prevalence rate of childhood ADHD in FEP and ARMS was in the higher range of that reported in previous studies. This suggests the necessity of further studies to clarify the association between all of them.

Topic Area: First Episode Psychosis

A61
The Use of Community Arts Initiative to Facilitate Recovery: A Co-productive Strengths Based Approach in a Mental Health Setting

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In recent years, there has been burgeoning interest in the arts and healthcare agenda. This paper draws on a qualitative study to explore the impact of the concept of co-production in a community arts initiative, where art as a medium was used to initiate advocacy for the mental health community. This study examines how such initiatives may facilitate some key elements of the 'recovery approach' in people with mental health needs. 19 project participants with early psychosis, aged between 20 – 43, were joined by facilitators comprising of youth volunteers and artists to engage in the co-productive process. Artwork, themed 'Uncovering strengths', were collaboratively completed across 5 weekly workshop sessions, concluding with an artistic showcase. Evaluation was done during and upon completion of the art project. This included structured questionnaires completed by participants and feedback by facilitators. Engagement in art itself was recognised as psychologically therapeutic in facilitating self-expression, self-discovery, achieving sense of purpose and meaning. The co-productive, strengths-based approach avoided over-emphasis on the outcome and brought focus to the process of art-making. This appeared to enhance feelings of self-validation, esteem, acceptance, hope and empowerment. Along with the benefits of strengthening participants' community networks and social capital, themes of trust and reciprocity were elicited from participants. The inclusive environment provided safe avenues to challenge perspectives of themselves and the internalised attitudes from social stigma. These indirectly build their capacity to self-advocate. Despite the study's limitations, findings do suggest usefulness of co-productive, strength-based community arts initiatives in facilitating internal recovery.

Topic Area: First Episode Psychosis

A62
Development of a Smartphone App for First Episode Psychosis: The PIER App

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Interventions incorporating ICT (Information and Communication Technology) are usable and acceptable to people with psychosis and therapeutic use of ICT in psychosis may provide greater patient choice and control (O'Hanlon et al. 2016). 69% of younger patients with first episode psychosis own internet-enabled mobile device (Lal, 2015). Evidence exists for high satisfaction and engagement, using smartphones to enhance care of schizophrenia patients (Firth and Torous, 2015). The aim of developing the PIER App was to: (a) Help people understand their experiences, manage any ongoing difficulties, recover and minimise chance of potential relapse, (b) Help patients learn about their treatment and prognosis, using current technology and (c) Empower patients, carers, members of the public and healthcare professionals with appropriate information, knowledge and support following diagnosis. The App was developed through input from multidisciplinary staff in an early intervention in psychosis service, the PIER Team, in Leicester, UK, in conjunction with the Leicestershire Health Informatics Service. The app is a "one-stop" resource for information and advice, It consists of videos and patient stories, bringing together links to various reliable online sources; aimed at patients, carers and healthcare professionals. The app is free to download, worldwide, from the Google Play Store and the Apple App Store. This is the first stage in the app's development with further iterations planned, to add interactivity including monitoring changes in mood and symptoms. There are challenges; e-mental health may not be acceptable or helpful for everyone and there are funding and clinical governance considerations in further development.

Topic Area: First Episode Psychosis

A63
A Literature Review of the Effectiveness of Community Treatment Order with First Episode Psychosis Population

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Context: Community treatment order (CTO) effectiveness is still questioned and recent studies showed no significant patient benefit. First episode psychosis (FEP) patients are known to have poor adherence to treatment which has been associated with poor prognosis. CTO can be a tool to improve adherence, but it is also a coercive method. Therefore, we need clear evidence of CTO's patient benefit.
Objectives: To review the literature on the effectiveness of CTO and determine if these previously published studies can be generalised to FEP.
Methods: Systematic literature review using PUBMED and PsycINFO electronic databases as well as grey literature and manual research. The criteria for studies selection were: adult population, severe mental illness and measures of CTO effectiveness. The different legislations of the jurisdictions where the studies were conducted were explored.
Results: Since CTO in the different jurisdictions are very different in terms of treatment definition and content, duration, as well as means to apply the CTO, because of some methodological flaws and different patient's characteristics, previous results on CTO effectiveness are for most, not generalizable to the FEP population. An Australian study on FEP reports that CTO are frequently used (19,2%) and that FEP patients under CTO share similar characteristics with patients with severe and persistent mental illness under CTO.
Conclusions: Although previous studies raise relevant questions about CTO's effectiveness, CTO are very dependent of the local jurisdiction. Moreover only one Australian study looked at the use of CTO for FEP, therefore further studies should be conducted on this population.

Topic Area: First Episode Psychosis

A64
A Description of the Community Treatment Order Use among First Episode Psychosis Population

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Context: Although early intervention for psychosis reduces duration of untreated psychosis and improves outcome, and despite high prevalence of poor adherence to treatment, studies on the use of community treatment orders (CTO) among first episode psychosis (FEP) as a mean to improve treatment adherence is sparse.
Objectives: In the context of early intervention for psychosis services, to describe: 1) the frequency of CTO utilisation, 2) the timing (from admission) when a CTO is requested, 3) the reasons why CTOs are requested, 4) the evolution of CTO utilisation over 10 years.
Methods: Descriptive prospective longitudinal 5 years study (from 2005 to 2016) in two urban EIS affiliated to the University of Montreal describing the use of CTO in a cohort of 568 patients.
Results : CTOs are requested early in the follow-up in up to 20,8% of FEP, mainly during the first three years. The main reasons for requesting a CTO are to prevent: deterioration in mental status, decline in social functioning, harmful behaviours and homelessness. After an initial augmenting trend, there was a decline in CTO use from 2009, possibly because of earlier use of long acting injectable antipsychotic medication during the illness course, which could better prevent relapses or deterioration.
Conclusions : CTOs could be a tool to improve adherence to treatment, which is crucial for relapse prevention in FEP. Since it is a coercive method that limits the person's fundamental rights, more research is warranted on its impact on outcome and the characteristics of those requiring it.

Topic Area: First Episode Psychosis

A65
Three-year Longitudinal Study Exploring Metacognition and Function in First Episode Psychosis

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Background: Functional outcome in psychosis may be predicted by many factors including cognition, functional capacity, symptoms and, importantly, metacognition. Metacognition was recently demonstrated to mediate between cognition and functional outcome in First Episode Psychosis. Given previous research, metacognition may predict long-term functioning after first-episode. This study aimed to assess whether cognition, functional capacity, and metacognition in the early stages of psychosis may predict functional outcome later on.
Methods: 80 individuals with First Episode Psychosis were re-contacted after average of 36-months later (range: 26-45 month follow-up). 26 participants completed measures for neurocognition, metacognition (Metacognitive Assessment Interview), functional capacity, functional outcome (hours spent in structured activity per week), and psychotic symptoms at baseline and follow-up.
Results: Firstly, regression analyses demonstrated neurocognition, functional capacity and metacognition at baseline significantly predicted functional outcome at follow-up ($p<.011, .001, .005$). Next, regression analyses, with baseline functional outcome as a covariate, demonstrated metacognitive ability was a significant predictor of change in functional outcome from baseline to 36-month follow-up, $F(3, 25)$ 19.22, $p < .001$. This model explained 72% (adjusted $r^2 = .69$) of the variance in change functional outcome between baseline and follow-up. Therefore, good metacognitive ability at baseline predicted improvement in engagement of structured activity at 36-months. Including negative symptoms did not change the model.
Discussion: This highlights the importance of intervening to enhance metacognitive ability, over neurocognition or functional capacity, in order to improve functioning later on, and to target interventions to improve functioning in those with the poor metacognition in the early stages of psychosis.

Topic Area: First Episode Psychosis

A66
Describing the First Episode of Psychosis in Uganda

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The first episode of psychosis is a key period in the course of a psychotic illness as it is predictive of future outcomes. Literature from mainly high income countries has described associated risk factors for its onset and outcomes. There is however a dearth of literature from low and middle income countries on presentation, risk factors and outcomes of the first episode of psychosis. We describe preliminary findings of the first ever cohort of patients with a first episode of psychosis. This is an on-going study for a doctoral thesis taking place at the National teaching and referral psychiatric hospital of Uganda (Butabika Hospital). The participants are adults aged 18 to 60 years presenting with a psychotic episode without prior use of antipsychotic medication. Participants with HIV/AIDS and syphilis are excluded. Diagnoses are confirmed using the MINI. Data collection includes both clinical and biological parameters. Participants also have data collected on duration of untreated psychosis, substance use, quality of life and previous childhood trauma using standardized tools. Participants also have neurocognitive assessments performed using the MATRICS consensus cognitive battery. Samples of blood are drawn from each participant for immunotyping and genotyping. Enrollment is on going and stands at fifty participants. We will present preliminary data on diagnostic, sociodemographic, trauma exposure, substance use, cognitive, immunological, genetic and duration of untreated psychosis. We will also present preliminary outcome data on quality of life.

Topic Area: First Episode Psychosis

A67
Trajectories of Social Functioning among Japanese Patients with First-episode Psychosis: A 2-year Follow-up Study

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Objectives: Despite growing awareness, the evidence for the longitudinal course of social functioning in patients with first-episode psychosis (FEP) remains scarce, and factors associated with poor prognosis remain unclarified. This study aims to elucidate distinct trajectories and related factors of social functioning among Japanese patients with FEP.

Methods: Between July 1, 2008, and March 31, 2011, we enrolled 126 individuals with FEP from six regions of Japan (Miyagi, Tokyo, Toyama, Nara, Kochi, and Nagasaki) at six university, three general, and five psychiatric hospitals. We assessed their social functioning at baseline, 6, 12, 18, and 24 months using the Social Functioning Scale (Japanese version). In addition, group-based trajectory modeling was used to elucidate distinct trajectories. This study was approved by the Ethics Committees of all the institutions involved, and an informed consent was obtained from all the individuals.

Results: We identified four distinct social functioning profiles: high-increasing (12.6%), moderate-increasing (30.1%), moderate-stable (38.7%), and low-stable (18.7%). Individuals with higher PANSS negative score at the baseline and male gender were more likely to be classified in the low-stable trajectory.

Conclusions: This study highlights the heterogeneity in social functioning of FEP in the first 2 years after the onset. Although individuals with higher functioning at the baseline exhibited good improvement, those with lower functioning exhibited little improvement. Early identification of FEP individuals with impaired social functioning and intensive intervention in such individuals may be critical for the management of FEP.

Topic Area: First Episode Psychosis

A68
Factors Predicting Parents' Adaptation during a First-episode Psychosis (FEP)

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The objective is to identify the factors that predict how well parents will adapt when supporting their adult child experiencing a FEP. The study was conducted in Quebec City with 58 parents and stepparents who received services from a specialized clinic for treating psychotic illnesses in the early stages. Participants filled in four measuring instruments: Experience of Caregiving Inventory, Family/Professional Collaboration Scale, Well-Being Scale and Family Empowerment Scale. Based on the model being proposed, bivariate analyses and linear regression models were carried out to identify factors that predict how parents will adapt. The analyses allowed us to determine that the factors revealing the severity of the illness and the vulnerability of the young person predict the negative aspects of the parents' experience ($R^2 = 0.39$, $P \leq 0.000$), whereas the personal factors related to the parents themselves essentially predict the positive aspects ($R^2 = 0.51$, $P \leq 0.001$). The empowerment can be predicted by the combined effect of the positive aspects of the parents' experience and their coping strategies, more specifically those related to family intervention ($R^2 = 0.60$, $P \leq 0.001$), whereas the parents' social functioning is linked to their active participation in a family association ($R^2 = 0.14$, $P \leq 0.006$). This study contributes to how we think of parents' adaptation as it suggests a model that takes the positive aspects into account, associated with the role of support, along with family intervention strategies offered by social workers. Adaptation that is conceptualized using two dependent variables, empowerment and social functioning, allows to identify intervention targets that will be beacons of hope for both the parents and the young people with psychosis, while encouraging early intervention and partnership practices between services and family members.

Topic Area: First Episode Psychosis

A69
What Motivates Help-seeking Behavior?

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What motivates help-seeking behavior? Marlene Buch Pedersen1 Hanne-Grethe Lyse Nielsen1 Erik Simonsen2, 3 Julie Nordgaard1, 3 1Early Psychosis Intervention Center, Psychiatry East, Region Zealand, Denmark 2Psychiatric Research Unit, Region Zealand, Denmark 3Institue of Clinical Medicine, University of Copenhagen, Denmark Background Research indicates that a long duration of psychosis have negative effects on outcome. A central challenge in early detection continues to be how to motivate people experiencing psychotic symptoms to seek help. Help-seeking behavior reflects a complex decision-making process, initiated by recognition of a problem leading to the intentional action of seeking help. Yet, lack of insight into illness is a common phenomenon in psychosis, which impedes recognition of the psychiatric problem and thus help-seeking behavior. Knowledge of what motivates people to seek psychiatric help are paramount for strengthening help-seeking behavior.

Aim: To identify factors of relevance for motivating help-seeking behavior in first episode psychosis.

Methods: Qualitative, phenomenologically oriented interviews with 10 first episode psychosis patients were transcribed verbatim. The analysis adhered to the principles of thematic analyses and was carried out in a joint effort between the authors.

Results: We identified five themes were of importance in motivating help-seeking behavior: 1) an intolerable social situation; 2) some degree of insight in psychosis; 3) Identification of relevant help; 4) intimates suggested psychiatric help, and 5) double bookkeeping e.g., seeking psychiatric help though not believing to be sick.

Conclusion: The main motivation for help-seeking behavior was an intolerable social situation, and not the psychotic symptoms. Several had unsuccessfully sought help before, but they had not identified their problems as psychiatric in nature and consequently sought help from less relevant authorities. Our findings suggest that we need to broaden our focus on how to reach vulnerable people at risk of psychosis.

Topic Area: First Episode Psychosis

A70
Defeatist Performance Beliefs are Related with Psychosocial Functioning in Adolescents with Early-onset Psychosis: Preliminary Results

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Defeatist performance beliefs (DPB) are linked to negative symptoms and functional outcome in schizophrenia (Campellone et al., 2016). Adolescents with early-onset psychosis (Adol_EOP) have more persistent negative symptoms (Puig et al., 2017).

Objectives: (1) to examine DPB in Adol_EOP, (2) to study the relationships between DPB, symptoms and functioning.

Methods: 20 Adol_EOP (14♀, age = 16.00±1.84) and 14 healthy controls (12♀, age = 15.71±1.48), participants in a trial about CBSST in Hospital Clínic of Barcelona (baseline data). Inclusion criteria: EOP diagnosed between 9-18 years-old (schizophrenia, schizoaffective disorder, psychosis nos); within the 5 first years after disease onset; clinical stability. Exclusion criteria: IQ<70; substance dependence disorder; neurological disorders. Instruments: PANSS, Calgary Depression Scale (CDS), Children's Global Assessment Scale, Life Skills Profile–Adolescent version (Puig et al., 2013). DPB was extracted from the Dysfunctional Attitudes Scale–Spanish version (Sanz et al., 1993).

Results: EOP and control groups were homogeneous in age (t = -0.49, p = 0.634) and sex (X^2 = 1.130, p = 0.288). Socioeconomic status was lower in EOP (X^2 = 13.34, p = 0.010). EOP subjects had a predominance of negative symptoms (positive symptoms = 13.95±3.94; negative symptoms = 17.79±3.26). Mean score of CDS was low (4.95±5.52). EOP group had lower scores in all functional measures (t>6.78, p<0.001). EOP group had more DPB than controls (43.30±16.52 vs 30.86±13.36, t = 2.33, p = 0.026) and it was correlated with poorer life skills (r = 0.53, p = 0.023) but not with symptoms.

Discussion: Adol_EOP had higher levels of DPB. It was correlated with poorer psychosocial functioning but not with negative symptoms. DPB might have a different role in relation with symptoms in Adol_EOP. Acknowledgments: FAK.

Topic Area: First Episode Psychosis

A71
Experienced Stigma in First-episode Psychosis: A 1-year Follow-up Study

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Due to limited knowledge, experienced stigma and its relationship with symptoms, functioning, disability and life-satisfaction, was investigated across the first year of treatment in a large first-episode psychosis (FEP) sample. FEP participants (n = 115) in the TOP longitudinal study were assessed at baseline and 1-year follow-up. Experienced stigma was investigated with two items from the World Health Organization Disability Assessment Schedule 2.0 (WHO-DAS 2.0), assessing degree of problems 1. because of barriers or hindrances in the surrounding world, and 2. with living in dignity because of attitudes and actions of others. Clinical symptoms were measured with Positive and Negative Syndrome Scale (PANSS). Global functioning was measured with the clinician-rated Global Assessment of Functioning Scale-Split version (GAF-F). Subjective experience of disability was measured with the WHO-DAS 2.0. Life-satisfaction was measured with the generic "Satisfaction with life in general" item in the Lehman's Quality of Life Interview, brief version. At baseline 46% of the participants experienced stigma, significantly decreasing to 32% at 1-year follow-up, with 52% experiencing stigma at one or both timepoints. At 1-year follow-up the group with experienced stigma had significantly higher level of positive and depressive symptoms and subjective disability, as well as lower level of global functioning and life-satisfaction. Experienced stigma is common in FEP across the first year of treatment. It relates to clinical symptoms, functioning, disability and life-satisfaction, suggesting that experienced stigma is an important target in the early stages of treatment.

Topic Area: First Episode Psychosis

A72
Implementation of an Early Detection Team in First-episode Schizophrenia: A Danish Nationwide Register-based Study of the Effect of the TOP Project

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Aim: The TOP-project was implemented in one of five Danish regions (Region Zealand) in 2012. The intervention was a combination of an early detection team (called TOP) and an information campaign targeting the public. The early detection team was the first and only in Denmark. The aim of the project was to make people with signs of psychosis to seek help as early as possible. This nation-wide study examined characteristics and help-seeking behavior of patients with first-episode schizophrenia (FES) in the early detection region in comparison with other Danish regions.

Methods: We used data from the Danish National Schizophrenia register on all Danish patients diagnosed with FES during 2012 to 2015. We linked patient data to demographic and health care data drawn from official national registers. Binary logistic regression analyses examined the difference between the early detection region and other regions controlling for demographic characteristics and utilization of mental health care services and contacts to general practitioner (GP).

Results: Patients in the early detection region were younger (OR = 0.51; CI: 0.42-0.62; p < 0.000) than in regions without early detection teams. They were further more likely to be of Danish origin, and less likely to have been in contact with mental health services and GPs prior to FES.

Conclusion: The study suggests that implementing an early detection team in combination with an information campaign contributed to detecting patients with first-episode schizophrenia earlier than in regions without the early detection team. In addition, the results indicate different care pathways among patients in the early detection region.

Topic Area: First Episode Psychosis

A73
The Effectiveness of a Nutrition Intervention for youth with First-episode Psychosis: Results from a Step-down Program at Two-year Follow-up

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Severe mental illness is characterised by a 20-year mortality gap due to premature cardiometabolic disease. Dietary intake is an important and modifiable risk factor for cardiometabolic disease. Our prior work found that a 12-week intensive, individualised nutrition intervention improved dietary intake and, combined with a physical activity intervention, prevented antipsychotic-induced weight gain. This study reports the effects of a two-year Step-Down Program, following the 12-week intensive intervention. The Step-Down Program offered individualised dietetic consultations and practical group sessions. Energy intake, diet quality and discretionary food intake were measured by food frequency questionnaires in 67% of participants (n = 12) who were still engaged at 2-years. Diet quality remained significantly higher at the two-year mark compared to baseline [mean change = 2.9, 95%CI 0.8 to 5.8, p < 0.05]. This was predominantly driven by increased vegetable variety and amount [mean change = 3.1, 95%CI 1.6 to 4.6, p = 0.001]. Intake of discretionary food was 40% lower compared to baseline [mean change = -1,421 kJ, 95%CI -3,226 to 384, p = 0.02]. These dietary improvements were associated with sustained weight [mean change = 1.3 kg, 95%CI -4.0 to 6.6, p = 0.6] and waist-circumference [mean change = 0.1 cm, 95%CI -4.9 to 5.1, p = 0.9] neutrality at 2-years. A nutrition intervention delivered during the first two years of antipsychotic medication treatment improves dietary intake and contributes to the attenuation of antipsychotic-induced weight-gain as part of a larger lifestyle program.

Topic Area: First Episode Psychosis

A74
Family Involvement in the Lives and Treatment of Youth with First-episode Psychosis in Chennai, India and Montreal, Canada: A Mixed-methods Study

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Much remains unknown about what underpins the variations in the outcomes of psychosis across different sociocultural contexts. One factor that may contribute to better outcomes, particularly in contexts like India, may be the extent and types of family involvement. We conducted a mixed-methods study to examine family factors in first-episode psychosis (FEP) in Chennai, India and Montreal, Canada. In the quantitative arm, FEP patients, families, and clinicians at both sites completed questionnaires assessing family involvement and the factors influencing it. Across sites, most families were involved in treatment. However, significantly more patients in Chennai reported family involvement in treatment. Chennai families were likelier to accompany patients to appointments and give medication and appointment reminders. Stakeholders across sites also significantly differed in terms of their trust in healthcare systems and providers; insight; and attributions of responsibility for recovery. In the qualitative arm, focus groups with families at both sites explored definitions/views of "family", the perceived role of families, and the morality/motivations underlying caregiving. Families “being there” for their ill relative was an important theme across sites. While Chennai families largely described their involvement as executing treatment providers' recommendations, Montreal families described their role as complementary to, but distinct from, the treatment team's. Different moral languages around caregiving emerged, with greater emphasis on prescriptive roles and duty in Chennai and personal choice in Montreal. These findings highlight the role families play in supporting a loved one with FEP and yield insights on how sociocultural contexts influence family involvement and outcomes in psychosis.

Topic Area: First Episode Psychosis

A75
Influence of Trauma Exposure on Age of Onset and Cognitive Performance in First Episode Psychosis

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Individuals with childhood trauma are at risk of having worst positive symptoms, functionality and cognitive performance in first episodes of psychosis (FEP). However, trauma impact on the age of onset of psychosis is not found or inconsistent and its mediation in cognitive performance is still unknown. The present investigation studied the influence of trauma rate on the age of onset of psychosis and its association to cognition in FEP. A sample of 230 patients and 205 healthy controls between 9 and 45 years was used. The rate of trauma was registered with the Questionnaire of Traumatic Experiences, and a large number of neuropsychological tests were used to calculate the cognitive domains of premorbid IQ, processing speed, working memory, executive functions and social cognition. Contingency tables were used to compare trauma rate between early and adult-onset groups and spearman correlation coefficients for proving relation of cognitive domains with the rate of trauma. Early onset FEP patients presented a larger percentage of individuals who suffered traumatic events than adult onset FEP patients (66 % faced to 46.4%; Chi^2 = 5.69, p = 0.017) and their matched controls (32.5%; Chi^2 = 9.68, p = 0.002). Also, a higher rate of trauma exposure was related to a worst premorbid IQ performance in this group (r = -0.40, p = 0.025) but not in late onset (r = 0.07, p = 0.557). Trauma rate might therefore be related to the age of onset in FEP as well as to their premorbid IQ. These results could provide evidence that trauma is an epigenetic mediator in the relation gene-environment underlying psychosis expression.

Topic Area: First Episode Psychosis

A76
Baseline Data from a First-episode Schizophrenia Sample

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Objective: Schizophrenia is a complex disorder with diversity in clinical presentation. We aim to assess associations of symptoms in patients with first-episode schizophrenia aged 18-35 years in a naturalistic, observational study.

Methods: The patients are recruited from an early-intervention team (OPUS) in the North Denmark Region and assessed at baseline and end of treatment after two years. Baseline assessments are conducted within the first three months of inclusion in the early intervention team among patients with consent. The assessment battery consist of clinical interviews, tests and questionnaires, investigating both psychopathology (e.g. PANSS, GAF, CGI, Y-BOCS, CDS), cognitive and psychosocial functioning (WAIS, CANTAB, PSP), suicidality present and lifetime (CSSR-S), insight and meta-cognition (IPII, MAS-A, BCIS and Birchwood), drug attitudes (DAI-10), side-effects (UKU), trauma history (BTQ) and autistic traits (AQ).

Results: At present, 64 patients have been recruited. The mean age was 24.2 (SD 4.5), 56% of the sample were males and paranoid schizophrenia was the most common subtype (65%). IQ was in the normal range (92.7, SD 11.6). Global scores of functioning were low (mean GAF-F: 46; mean GAF-S: 42) and severity measured by the CGI was 4.3. The PANSS-total score was 67. The majority had a family history of mental disorders (68.5%). At the time of the IEPA conference, we will present baseline data of approximately 80 patients with first-episode schizophrenia as well as analyses of associations between symptoms and cognitive domains.

Topic Area: First Episode Psychosis

A77
Advocacy and Education: Knowledge Translation Activities in Response to Cannabis Legalization

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[1]*EPION (Early Psychosis Intervention Ontario Network)*

Background: Following Fall 2015 elections, the Canadian government fulfilled an election promise, tabling legislation to legalize and regulate cannabis. The Cannabis Act was passed by the House of Commons in November 2017 with legalization proposed by summer 2018. Research into cannabis use raises significant concerns regarding youth mental health, including the increased risk of psychosis associated with early regular cannabis use, the link to higher amounts of THC used by Canadian youth, and the risk of relapse with continued use after a first episode of psychosis. EPION (Early Psychosis Intervention Ontario Network) supports education, training, and networking among some 50 early psychosis programs in Ontario. Programs expressed concern as to how to prepare for impending legalization. EPION responded by arranging specific knowledge translation (KT) activities.

Purpose: This presentation describes the KT activities undertaken by EPION to inform policymakers and EPI programs regarding research knowledge linking psychosis and regular cannabis use among vulnerable youth. These activities included: a 'Cannabis and Psychosis' Think Tank involving some 185 clinicians, clients, families, and policymakers; an EPION position paper sent to the federal and provincial governments with recommendations regarding minimum age, prevention and harm reduction strategies; EPION representation at the provincial Attorney General's Stakeholder Roundtable, and the production of educational materials for youth, family members and clinicians emphasizing critical messages about the risks.

Conclusions: These KT activities will enable increased dissemination of research knowledge surrounding the association between cannabis use and psychosis among vulnerable young people, and help prepare EPI programs as legalization becomes reality.

Topic Area: First Episode Psychosis

A78
Association between Childhood Trauma and Inhibitory Control in South Africans with Early Psychosis

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Childhood trauma (CHT) is consistently linked to increased risk for schizophrenia, but the mechanisms by which this risk is conferred are unclear. Recent research indicates there may be multiple developmental pathways linking CHT to schizophrenia, including affective and cognitive routes. The current study seeks to clarify the potential role of response inhibition in the cognitive pathway between childhood trauma and the development of schizophrenia. Participants included forty South African individuals with first-episode psychotic disorders and forty age- and gender-matched non-psychiatric controls. These participants completed the Stop-Signal Anticipation Task (SSAT) as a measure of behavioral and brain imaging indices of response inhibition. CHT was measured with the Childhood Trauma Questionnaire (CTQ) and schizophrenia symptoms were measured using the Positive and Negative Syndrome Scale (PANSS). This study has two aims. First, we aim to replicate previous findings of increased CHT and impaired behavioral and neuroimaging indices of response inhibition in people with schizophrenia. Second, we aim to test behavioral and neuroimaging measures of response inhibition as mediators between CHT severity and symptoms of schizophrenia.

Topic Area: First Episode Psychosis

A79
Service User's Experience of a First Episode Psychosis (FEP) and a FEP Service: A Qualitative Study

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Aim: To examine subjective experience of a first episode psychosis and the experience of a specialised FEP service in order to inform service planning and provision in the future.

Methods: Semi-structured interviews were conducted with 10 service users either currently or previously treated by the FEP service. Data analysis identified emergent themes related to the experience of becoming unwell and the experience of a specialised FEP service.

Results: Five main themes were identified from thematic analysis of the data, including: (i) premorbid perceptions of mental illness; (ii) perceived stigma attached to mental illness; (iii) factors relating to delayed help seeking; (iv) positive experiences of the service; (v) negative experiences of the service.

Conclusions: There is a large body of evidence that demonstrates the importance of early intervention in FEP using evidence-based treatments that promote therapeutic engagement. The themes in our study reflect the complexities associated with meaningful therapeutic engagement. Our data also captures a variety of factors that result in delayed help seeking, such as perceived stigma from friends and family and a lack of trust in healthcare providers. Positive experiences resulted from positive interpersonal interactions with healthcare providers, involvement in treatment decisions and the perceived ability of healthcare providers in instilling hope for recovery. Negative experiences reflected early treatment experience where lack of communication, particularly regarding explanation of current symptoms and feedback were viewed to be inadequate, leading to decreased trust. Keywords: Qualitative research, thematic analysis, First episode psychosis, stigma, engagement

Topic Area: First Episode Psychosis

A80
Psychosocial Adversity and Cortisol Levels in Adolescents with Early Onset Psychosis: Preliminary Results

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Traumatic experiences in childhood would cause dysregulations in the hypothalamic-pituitary-adrenal axis (HHAa) and alterations in cortisol levels1. OBJECTIVES: assess psychosocial adversity (AP) in adolescents with early onset psychosis (Adol_EOP); evaluate the relationship between AP and cortisol levels Adol_EOP.

Methods: 15 Adol_EOP (11♀, age = 15.33±1.23), 10 healthy controls (8♀, age = 15.60±1.51), participating in CBSST trial in Hospital Clínic Barcelona. Inclusion criteria: EOP diagnosed between 9-18 years-old; within the 5 first years after the disease onset; clinical stability. Exclusion criteria: IQ<70; substance dependence disorder; neurological disorders. Instruments: CTQ scale (Childhood Trauma Questionnaire), determination of salivary cortisol at 08:00 a.m; BMI (Body mass index). Analysis: T-test, Chi-square test, Pearson correlation, partial correlation.

Results: EOP and control groups were homogeneous in age (t = -0.49, p = 0.632) and sex (X2 = 0.15, p = 0.702) but not in SES, lower in patients (X2 = 10.69, p = 0.030). PIP group had higher BMI (t = 4.61, p = 0.00) and higher scores in CTQ subscales of emotional abuse (t = 15.80, p = 0.01), physical negligence (t = 8.50, p = 0.007) and in their severity (t = 16.73, p = 0.00; t = 5.62, p = 0.026). Levels of salivary cortisol correlated positively with AP: emotional abuse (r = 0.52, p = 0.30), physical abuse (r = 0.78, p = 0.00) and severity (r = 660, p = 0.004), sexual abuse (r = 0.926, p = 0.00) and severity (r = 0.650, p = 0.005), physical negligence (r = 0.616, p = 0.008) and severity (r = 714, p = 0.001). These results were maintained controlling by SES and BMI.

Conclusions: Adol_EOP had higher and more severe AP, which was associated with current higher levels of cortisol, supporting a dysregulation of the HHAa.

Acknowledgments: FAK. 1. Lange C et al. Modulation of HPA axis response to social stress in schizophrenia by childhood trauma. Psychoneuroendocrinology. 2017

Topic Area: First Episode Psychosis

A81
Program Retention: An Exploratory Analysis of Patient Characteristics in a First Episode Psychosis Program

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Background: Treatment program retention and service engagement are clinical challenges of mental health treatment. Adolescent and young adults are at high risk for service disengagement, including those enrolled in first episode treatment programs with rates ranging from 20.5 – 40%. Exploring patient characteristics of individuals that are retained in treatment for an extended amount of time (>12 months) can help to provide insight into points of intervention for treatment providers.

Methods: Since the development of the coordinated specialty care program (CSC) at the Prevention and Recovery Center (PARC) for early psychosis, a first-episode psychosis (FEP) treatment program, 171 individuals were enrolled between December 2014 and August 2017. Baseline characteristics such as patient demographics, duration of untreated psychosis (DUP), family involvement, symptom severity, social and occupational functioning, substance use, previous treatment engagement, and subjective recovery were collected at enrollment. Patients were also assessed at quarterly intervals utilizing the same measures in addition to assessing patient engagement in treatment services. Patients were considered disengaged and closed out after 90 days of no contact unless the patient was transferred to another program, moved or collaboratively decided on closure with treatment team.

Results: Initial analyses indicate that the PARC CSC program had approximately 70% of clients retained in treatment for more than 6 months and without a gap in service more than 60 days. It appears that disengagement occurs more frequently within the first 6 months of treatment. Further analyses will explore patient characteristics of those who disengage in the first 6 months compare to those that have been engaged more than 12 months.

Conclusion: Results indicate that program retention and treatment engagement rates for the CSC PARC program are above rates in the literature (46.5%). Analysis of patient characteristics and profiles will be conducted to identify predictors of retention and engagement. Interventions to enhance engagement as well as future directions for program development will be discussed.

Topic Area: First Episode Psychosis

A82
Ethnic Differences in Clinical Presentation at First Hospitalization after Psychosis Onset

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Objectives: Some ethnic minority groups have an increased risk of developing a psychotic disorder, and often face negative and coercive pathways to care. However, it is less clear whether there are also ethnic differences in clinical presentation. Our objective was to assess whether there were differences across first-generation ethnic minority groups in clinical presentation at the first psychiatric hospitalization after psychosis onset.

Methods: We constructed a retrospective cohort of incident cases of non-affective psychosis occurring in Ontario between 2009 and 2016 using health administrative data. We followed this cohort for two-years and extracted data from the first psychiatric hospitalization record. The cohort was linked to data from Immigration, Refugee, and Citizenship Canada to ascertain migrant status and country of origin, and we compared symptoms, behaviour, and level of functioning between migrant groups and a general population comparison group.

Results: Migrants from the Caribbean, South Asia, East Asia, and Africa had more positive symptoms and fewer depressive symptoms, relative to the general population. Caribbean migrants were more likely to be perceived as a risk to others and had higher ratings on the aggressive behavior scale. All migrant groups had a lower prevalence of alcohol and substance use at first admission.

Conclusions: Our findings suggest that some first-generation migrant groups may differ in clinical presentation at the first hospitalization after psychosis onset. It is unknown whether the observed differences are due to delayed help-seeking, the perception of service providers, or true differences in clinical presentation across ethnic minority groups.

Topic Area: First Episode Psychosis

A83
Gender Disparities in First Episode Psychosis Programs

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Research on Schizophrenia Spectrum Disorders shows that there are essentially no differences in population occurrence rate between genders. However, when it comes to the treatment of these disorders men are more likely to be referred to a First Episode of Psychosis (FEP) program. Indeed, in one FEP program located in a county hospital of an urban area, the ratio is about 8:1 male to female engagement. Given that women are more likely to engage in treatment than men in the general mental health setting, why might there be a difference in FEP programs? The present study is a preliminary investigation on the gender disparities in FEP programs. Multiple hypotheses will be explored to explain the discrepancy including symptom expression of Psychosis between men and women and the potential for misdiagnosis among women. Research suggests that women tend to experience more affective symptoms compared to men and may be more likely to be diagnosed with a primary affective disorder rather than a Schizophrenia Spectrum Disorder. Alternatively, the relatively later onset of psychosis for women may prevent them from entering into a FEP program due to referral source biases or exclusion criteria of a FEP program. Results from one FEP program will be reported and discussed within the context of relevant literature.

Topic Area: First Episode Psychosis

A84
Cannabis and Psychosis in Youth: Revisiting Evidence from a 19th Century Population Study

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In nineteenth-century India, cannabis (Indian hemp) was socially acceptable and a considerable source of revenue across the British Empire for pharmacopeia and recreational use. However, concern regarding large numbers of asylum patients with 'Indian hemp insanity' led to establishment of the Indian Hemp Drugs Commission. Tasked with determining the health risks of cannabis use, the Commission carried out a detailed population study including all Indian asylums in 1892.

Methods: Historiographic review of the Indian Hemp Drugs Commission Report against current knowledge.

Results: In 1892, heavy cannabis use was associated with increased risk of psychotic symptoms and mental illness in 12.6% of diagnosed asylum patients (7.3% of all asylum patients). About two-thirds of cannabis-attributed presentations were children and young adults with also significantly higher relapse rates. Risk increased with early cannabis use and a family history of mental disorder. Cannabis-induced psychosis was initially noted to have a shorter trajectory and better prognosis, however longterm use was linked with poorer outcomes. Different cannabis preparations and strengths had different effects on users. Interestingly, infrequent cannabis use was felt to have some medicinal benefits.

Conclusion: This nineteenth-century population study found a dose, frequency and duration related effect of cannabis use on mental health, particularly psychotic symptoms in young. Predating modern neuroscience and psychopharmacology this detailed systematic population study made similar observations to contemporary science, cautioning against cannabis use in youth and the importance of primary prevention involving reducing access, minimal use, and avoidance of high potency cannabis in the reduction of 'Indian hemp insanity'.

Topic Area: First Episode Psychosis

A85
Finding the Missing-stimulus Mismatch Negativity (MMN) in Early Psychosis: Sex-moderated Alterations of MMN to Violations of an Auditory Gestalt

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The mismatch negativity (MMN) is an EEG-derived event-related potential (ERP) thought to specifically index auditory change detection and, more broadly, central auditory function. Patients with chronic schizophrenia exhibit robust MMN deficits, while MMN reduction in first-episode and early-phase psychosis (EP) is significantly less consistent. Traditional two-tone "oddball" MMN measures of sensory information processing may be considered too simple for use in EP in which pathology has not fully progressed, and a paradigm that probes higher order processes may be more appropriate for elucidating auditory change detection deficits. This study investigated whether MMN deficits could be detected in EP patients using an abstract "missing stimulus" pattern paradigm. EEG recordings of 13 EP patients (≤ 5-year duration of illness) and 15 healthy controls (HC) were collected. Preliminary analyses revealed MMN amplitude reductions in EPs, suggesting that these deficits are present very early in the progression of the illness. However, after splitting the EP group into male (n = 8) and female (n = 5) subgroups, we observed this difference was limited to males (male EP < female EP). Specifically, there was a statistical difference between groups at sites F3 (p = .013), FZ (p = .005), F4 (p = .015) and CZ (p = .011), as well as a significant difference in MMN latency (p = .038; males > females). These findings suggest that MMN-indexed auditory change detection is impaired in EP patients, but that biological sex may play a role in moderating the relationship between MMN and EP.

Topic Area: First Episode Psychosis

A86
Early Treatment for Non-UHR /Non-FEP Mental Health Problems in Patients Presenting with Psychosis or UHR

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Background: The TIPS/POP studies are ongoing Norwegian early intervention initiatives providing early access to appropriate care for individuals with first episode psychosis (FEP) and in Ultra-High risk states (UHR) by the use of multi-focal information campaigns and low threshold detection teams. In 2014 we investigated help-seeking delays and health system for 24 FEP patients who had presented to mental health care that year. Eight had previously been treated for non-FEP mental health problems in child- and adolescent care and 13 in primary health care. Only three were treatment naïve. Adverse life events were common in all. Findings gave rise to the suspicion that FEP patients may be characterized by a combination of non-specific mental health care problems in childhood or adolescence such as ADHD, self-harming, depression or anxiety, for which earlier treatment has been terminated before the emergence of UHR or FEP symptoms.

Aim: To develop and pilot a study in order to investigate the prevalence of earlier treatment episodes for mental health problems not captured by FEP or UHR definitions.

Methods: Patient files of 50 consecutive referrals to TIPS/POP (FEP/UHR) will be investigated assessed according to the following: Pathways to care (help-seeking and health system delays); Earlier treatment for any psychiatric problem; Adverse life events; Possible prodromal signs in earlier treatment if the patient is FEP; Signs of psychosis in earlier treatment. PANSS and SCID are used to evaluate diagnosis and severity of psychosis.

Results: Data collection is under preparation and preliminary results will be presented.

Topic Area: First Episode Psychosis

A87
The Notion of Cortical Reorganisation in Psychosis

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One of the few well-replicated features of schizophrenia is the demonstration of neuroanatomical abnormalities affecting cortical and subcortical grey matter (GM). The 2 predominant theories of psychotic disorders–neurotoxic and neurodevelopmental views–are largely built on the reported GM changes. When taking a critical view of reported GM changes in the literature, we find that 1. Contrary to the popular belief, pre-psychotic GM changes are surprisingly limited in space and magnitude. Instead, the greatest reduction in GM immediately follows the first psychotic episode (temporal constraint) 2. These post-psychotic GM changes have certain spatial predilections that are surprisingly non-specific to psychosis (spatial constraint) 3. GM increase must be co-occuring with GM loss (topological constraint) 4. GM changes scarcely, if ever, relate to the clinical course of psychosis (outcome constraint). When we consider all of these constraints together, we are left with very few parsimonious explanations for the anatomical course of schizophrenia. In this talk, I put forward the view that the GM changes in schizophrenia may not represent a deficit or decompensation process per se. A substantial amount of the observed GM changes are likely to be the result of a distributed, nevertheless inefficient, cortical reorganization response. Distributed cortical reorganization occurs as a part of a universal response to provocation. In this context, we should not be surprised that antipsychotic agents exaggerate this compensatory reorganization and intensify GM reduction.

Topic Area: First Episode Psychosis

A88
The OPUS Panel the Invisible Diagnosis in Real Life

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Background: The OPUS panel is an innovation that has grown out of practice and has proved strong and viable. The panel was founded in 2009 by a group of young people who have been in treatment in a Specialized Early Interventions (SEI) teams in Denmark. The panel consists of young people who have previously been patients and who are interested in bringing their experiences forward. The purpose of the panel is that they with their personal history and through dissemination about living with an invisible disease helps to broaden the knowledges about the diagnosis of schizophrenia, and reduce the stigmatization experienced by both patients and therapists in the area. In addition, increase the hope for current patients treated in SEI and affect the treatment culture. The OPUS panel has 70 members, including 5 relatives, of which 20 are active in turn. The panel is important as it supports recovery, hope and empowerment, and reduces stigmatization of mental illness in the public sector.
Aim: We want to explore and describe the panel as a bottom-up concept, and to investigate whether the OPUS panel serves as an important contribution to the anti-stigmatization, recovery and supplement to SEI treatment. Method: In a qualitative design, using a phenomenological frame, we will originate data from 20 in-depth semi-structured interviews with participants who in different ways have interface with the panel, and do observation of panel meetings.
Results: Collection of empirical data, analysis and will take place from ultimo 2018. Data will be presented in 2020.

Topic Area: First Episode Psychosis

A89
Impending Cannabis Legalization in Canada: Position of the Quebec Association for First Psychotic Episode Programs–AQPPEP

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The Canadian government plans to legalize cannabis in 2018 and sets the legal age at 18 to get and use cannabis. With an annual prevalence among the 15-64 years old of 10,7% in North America and 15,2% in the province of Quebec, cannabis is widely used, and its use had increased in Quebec by 3% from 2008 to 2014. Therefore, this decision raises several interrogations among psychiatrists in Quebec, since substantial evidence suggests that early onset of cannabis exposure could increase risk of psychosis with associated cognitive deficits and poor social outcomes. The government's rationale is to ensure production of better-controlled substances and to limit organized crime; however, legalization can open the door to trivialization of consumption of cannabis and possibly move the debate away from the real issues related to cannabis in vulnerable groups mainly among youth at a crucial period of their development. The impact of cannabis legalization remains controversial, as increased availability might lead to increased use with subsequent negative health-related problems but may also foster safer use. This sociopolitical context can provide opportunities for widespread psychoeducation on first-episode psychosis (FEP) and the impact of cannabis. Beyond psychoeducational activities and reduced-risk approach, AQPPEP suggests the implementation of programs targeting youth at risk for psychosis by the health authorities. Further research is warranted to document the impact of such a change on FEP prevalence and outcomes in the actual legal context.

Topic Area: First Episode Psychosis

A90
Cocaine and Cannabis Use Impacts Symptoms and Functionality in a Cohort of Antipsychotic Naive Patients at First Episode of Psychosis

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Cannabis and cocaine are the most common ilicit drugs used by psychotic patients. While cocaine did not show strong influence evidences on psychosis, cannabis is related to increased psychosis risk and lower age of first episode of psychosis (FEP). To verify the influence of this substances on psychosis, we investigated the impact of lifetime cannabis and cocaine use on symptoms and functionality in a Brazilian cohort of antipsychotic naive FEP individuals. Our sample comprised 175 FEP individuals diagnosed by the Structured Clinical Interview for DSM- IV (SCID) at a Brazilian emergency service. 99 of them were reassessed after 10 weeks. Symptoms were assessed with the Positive and Negative Syndrome Scale (PANSS) considering five dimensions: positive, negative, depressive, disorganized and excitement. Functionality was obtained by the Global Assessment of Functioning (GAF). The substance use was measured by the Addiction Severity Index (ASI-6). We performed multivariated linear regressions between the substance abuse variables and outcomes controlling for sex, age, income and Duration of Untreated Psychosis (DUP). 39.8% of the individuals reported cannabis use lifetime and 14.3% cocaine. All the cocaine users also reported cannabis use. We have not found any association between the cannabis use and outcomes. But, we found that cocaine use predicted worst excitement ($p = 0.017$, $R^2 = 0.150$, $\beta = 5.159$) and disorganized ($p = 0.023$, $R^2 = 0.182$, $\beta = 6.058$) symptoms at follow up. Our findings indicate that cocaine lifetime use has a higher impact on psychotic symptoms than cannabis. The early intervention on this issue may help this patients to have a better prognostic.

Topic Area: First Episode Psychosis

A91
Social Cognition and Interaction Training (SCIT): A Southern Approach to Improving Social Cognition

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Social Cognition and Interaction Training (SCIT) is a manual-based intervention program designed to improve social cognition and social functioning in people with schizophrenia spectrum disorders. Social cognition is comprised of three domains; emotion perception, attributional style, and theory of mind. Several studies have been done to demonstrate the feasibility and effectiveness of SCIT in both inpatient and outpatient participants diagnosed with schizophrenia. Few studies have been done to evaluate this intervention on the young adult population with first-episode psychosis (FEP) or with schizophrenia spectrum disorders. Chan et al. studied an extension of SCIT (modified for Chinese culture and appropriateness for the younger age group) to college students with schizotypal personality features, and found that SCIT may have a particularly positive effect. The Early Psychosis Intervention Clinic New Orleans (EPIC-NOLA) launched in August 2015 and within the first year established group therapy as a response to patients stated desire to increase social interaction. All staff were trained on the implementation of SCIT and a team of two therapists (male and female) implemented an extension of SCIT (modified for southern culture and appropriateness for the younger age group). Social cognition was measured at baseline and post-intervention. Measures included Hinting Tasks, Social Cognition Screening Questionnaire (SCSQ-A), and Ambiguous Intentions Hostility Questionnaire (AIHQ); participants also completed an anonymous survey about the overall experience of SCIT. Preliminary results show post-intervention improvement in social cognition; detailed results and a case study will be presented.

Topic Area: First Episode Psychosis

A92
Pilot Study of Group Worry Intervention for First Episode Psychosis

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Worry, defined as repeated negative thoughts about potential adverse outcomes, is common among individuals with psychosis and has been found to be a causal factor in the development of persecutory delusions (Freeman et al., 2015). Many of the underlying mechanisms of worry appear to be consistent across psychotic and emotional disorders, supporting the use of interventions targeting worry in individuals with psychosis (Startup et al., 2016). Freeman and colleagues (2015) adapted existing CBT protocols for worry for a population experiencing longstanding psychotic symptoms. The results demonstrated that the intervention was effective in reducing worry, persecutory delusions, and delusional distress. However, there has yet to be a published adaptation of the protocol for individuals experiencing a recent onset of psychosis. The current study aims to adapt the worry intervention for first episode psychosis (FEP) populations in a group setting. Participants recruited from an early psychosis clinic participated in a pilot study of an 8-week group intervention covering cognitive-behavioral strategies for managing worry, including worry periods, worry postponement techniques, mindfulness and relaxation, and problem-solving. Pre- and post-intervention data was collected on worry, anxiety, depressive symptoms, psychotic symptoms, and perceived recovery from psychosis. In addition, qualitative feedback from group members was gathered during a post-intervention focus group. Data from this pilot study will be presented and implications of these results discussed.

Topic Area: First Episode Psychosis

A93
The Role of Symptoms and Insight in Mediating Cognition and Functional Outcome in First Episode Psychosis

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[1]*University of Hong Kong*

Achieving functional recovery for patients with psychosis is still a challenge in clinical practice. A better understanding of the mechanism that leads to better functional outcome is crucial, especially in the early stage of psychosis. This study investigated how cognition, symptoms, insight affect functional outcome in a first episode psychosis cohort. One hundred and sixty patients, aged 15 to 64, were recruited from the Early Assessment Service for Young People with Psychosis, a territory-wide, 3-year early intervention service in Hong Kong from July 1, 2014, to June 30, 2016. The social functioning was measured by the Role Functioning Scale. Structural equation modelling (SEM) was used to examine the direct and indirect relationships between functional outcome and other latent constructs, which include cognition, symptoms (negative and general symptoms as measured by the Positive and Negative Syndrome Scale), insight (Scale to Assess Unawareness of Mental Disorder), and pre-morbid measures (education and duration of untreated psychosis). We identified symptoms and insight as mediators between cognition and functional outcome. There was a direct relationship between cognition and functional outcome, which became insignificant when insight and symptoms were added into the model. Symptoms and insight were significantly associated with cognition and was predictive of functional outcome. Interventions for improving functional outcome should also target on cognition, symptoms and insight of the patient after first episode psychosis.

Topic Area: First Episode Psychosis

A94
A Qualitative Study into Using Virtual Reality to Deliver Social Cognition Training to Those Diagnosed with First Episode Psychosis (VEEP Trial)

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Rationale: Social cognitive interventions have not been as thoroughly assessed in the beginning stages of psychosis, where the opportunity to improve outcomes is the greatest. Technological developments mean that there are more appealing methods of engaging with young individuals whom are less likely to access psychological interventions.
Methods: A single-arm non-randomised psychoeducation trial designed to target social cognitive deficits in a first episode psychosis population will be described. The 'Social Cognition and Interaction Training,' a form of group CBT was modified and implemented via an online virtual reality (VR) platform (Second Life ©), which can be accessed via a computer. Participants (N = 20) will attend treatment using an avatar, which will take place during 1 hour bi-weekly sessions for 4 weeks. The study will adopt a mixed methods approach. The qualitative data analyses will be presented here. Semi structured interviews will be conducted post intervention, with both participants who have completed the intervention and those who have dropped out. Participants will be asked about their prior digital expertise, experiences of VR, its applicability to everyday life, and the impact it has had on managing mental health. The data will be analysed using a thematic analysis method developed by Braun and Clarke (2006).
Results: The qualitative data analyses will be presented outlining the themes relating to the use of this technology as a method of delivering treatment.
Conclusion: This study will help to assess the acceptability and feasibility of utilising VR technologies in the treatment of social cognitive deficits in psychosis.

Topic Area: First Episode Psychosis

A95
Medication Acceptance and Refusal: A Case Study Analysis of Early Neuroleptic Medication Adherence

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Antipsychotic medication adherence is estimated to be below 50% during the first year of treatment at first-episode psychosis clinics. Treatment alliance, family and social support, symptoms resolution, and side-effects are factors which quantitative studies have identified as contributing to medication adherence. Qualitative studies have explored the experience of people taking antipsychotics. Several questions remain over people's initial decision to accept or refuse medication and their initial experience of taking medication. To address this gap, we used case studies to explore people's decision to accept or refuse medication and their associated experiences. Twenty-two in-depth interviews were conducted with people prescribed neuroleptics for a diagnosis of affective or non-affective psychosis, and five representative interviews were chosen for further analysis. Family impressions of mental illness and medication strongly affected initial choices around medications. People from cultural backgrounds with explanatory frameworks other than the Western model of mental health often refused medication when it was first offered. For those who accepted medication, family support was important to continuing to take medication, more so than the support of partners or friends. People experiencing side-effects, which affected their health, or social and professional lives, were more likely to stop taking medication. People were more likely to continue medication if symptoms or sleep were improved by medication. People appreciated doctors who were perceived to be responding to their concerns. Finally, clinicians should be attentive to concerns that people have about medication, whether due to cultural differences, side-effects, or interruption of their social and professional lives.

Topic Area: First Episode Psychosis

A96
Implementing Evidence Based Care for FEP: Benchmarking Components of Coordinated Specialty Care Against RCT's

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Background: The Recovery after Initial Schizophrenia Episode (RAISE) study was a landmark study that led to the creation of first episode psychosis programs across the US. Every state in the country received funding to implement coordinated specialty care programs, yet little is known about how these programs are faring. This poster provides general comparisons related to patient characteristics and service utilization across two teams, benchmarking against RCT's.

Methods: Data came from review of 30 Navigate patients between March 2017-February 2018. Data was gleaned from review of medical charts, demographic forms, patient self-report, and team member interviews. Participants ranged from 16-33, with a schizophrenia spectrum or unspecified psychosis diagnosis. Of the 30 patients, 26 were male, while 5 were female.

Results: Hospitalization and commitment rates were low, while support needs were high. 100% of engaged patients resided with family, and over 75% needed ongoing transportation support to get to treatment, and other activities. Over 50% of patients needed case management services (whether they had an assigned CM or not), and over 65% had other outside professional involvement. Further, results indicate high rates of appointment cancellation, yet high rates of sustained engagement across program components. Engaged patients articulated high rates of goal interest in the areas of school and work (86%), and demonstrated an 88% success rate in achieving one or more of their overall treatment goals. This data supports findings from RAISE that comprehensive care for first-episode psychosis can be implemented in U.S. community clinics with comparable results and fidelity.

Topic Area: First Episode Psychosis

A97
A Comparison of the Effectiveness of Various Psychotherapeutic Approaches to First-episode Psychosis in Terms of Recovery: A Systematic Review

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An exploratory systematic mixed-methods review was conducted, comparing the effectiveness of various psychotherapeutic approaches and psychological factors to first-episode psychosis (FEP) with an emphasis on symptomatic and functional recovery. The review builds on state-of-the-art findings in FEP research and critically assesses the rationale of existing clinical procedures. A broad search strategy led to the identification of 2238 research studies: 33 studies (published from 2000-2016) meeting inclusion criteria were examined in detail. Applied interventions were: cognitive-behavioral therapy (13), group interventions on the basis of family and community psychiatry (8), psychodynamic psychotherapy (5), a combination of various interventions within the integrated models of care (6) and another type of intervention (1). The mean age of the respondents was 24.3 years, males comprised 61 %. The effectiveness was assessed within the Three-dimensional model of outcome measurement by Rosenblatt and Attkisson. The included studies most frequently described the effectiveness of applied intervention in terms of clinical status (57%), functional status (25%), measures of life satisfaction and fulfillment (15%) and the least at measures of safety and welfare (3%). Based on a clinical consideration, particular factors of the most effective interventions were identified. These factors were organized into the table of recovery preconditions, which constitute an optimal approach to FEP. The results emphasize the indispensability of psychotherapeutic approaches in FEP treatment.

Topic Area: First Episode Psychosis

A98
Money Talks: The Influence of Monetary Reinforcement on Social Cognitive Performance in First Episode Psychosis

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Social cognition has gained widespread acceptance as a major contributor to functional outcomes in psychotic illness, yet limited research has examined the role of motivation in the context of this model. Cross-sectional research has reported significant associations between domains of social cognition and motivation, with correlations in the moderate range. Motivational difficulties in psychosis may undermine an individual's ability to put forth adequate effort on tasks of social cognition; however, the directionality of this relationship remains unclear. For the present study, individuals with first-episode psychosis (n = 35) and community controls (n = 35) were randomized to a reward condition in which they received $0.25 per correct response on the TASIT, a measure of theory of mind (ToM), or a non-reward condition in which they completed the TASIT without any feedback. A mixed-model ANOVA demonstrated a significant Group x Condition interaction, $F(1,65) = 6.96$, $p = .01$. Post-hoc analyses revealed that community controls showed no difference in their ToM performance across conditions, whereas first-episode patients who received monetary reinforcement displayed clinically and statistically significant improvement in ToM performance relative to those who did not receive monetary reinforcement. Results from this study suggest that social cognitive performance may underrepresent actual ability for patients in the early stages of psychosis. Moreover, ToM performance appears to be directly influenced by performance-contingent incentives, corrective feedback, and/or a combination of these factors. Future research is needed to identify the most salient motivational factor, and further disentangle what is driving performance differences between conditions, which seems to be uniquely observed in first-episode patients.

Topic Area: First Episode Psychosis

A99
Contextualizing 2 Year Clinical Outcomes for First Episode Services in a Community Agency in the Southern United States

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Specialized teams have demonstrated improved delivery of care to youth with recent onset psychosis. The Early Psychosis Intervention Clinic, New Orleans (EPIC-NOLA), the first comprehensive First Episode Services (FES) clinic in Louisiana, was modeled after one of the first specialized teams in the United States, the program for Specialized Treatment in Early Psychosis or STEP, a public-academic collaboration between the Department of Mental Health and Addiction Services (Connecticut's SMHA) and Yale University's Department of Psychiatry. EPIC-NOLA's hypotheses was that the STEP model of treatment for first episode psychosis transplanted to a community agency in New Orleans would meet established benchmarks in three domains; access, engagement, and clinical outcomes, within 2 years. Access was assessed by examining rapidity and measuring DUP 1 < 3 months and DUP 2 < 12 months. Engagement was measured overall by; patient contact with EPIC-NOLA at one year, adherence to family sessions and adherence to individual sessions. Outcomes were measured by the number of psychiatric hospital admissions in 1st year after enrollment in EPIC-NOLA. This presentation discusses modification of an FES service model (STEP) to meet an underserved community in southern United States, preliminary outcomes for patients who received FES services through EPIC-NOLA for a year or more (N = 54), and barriers to achieving aspirational outcomes in all domains.

Topic Area: First Episode Psychosis

A100
Childhood Medical History and Risk of Psychosis: A Retrospective Case-control Study

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Childhood adversity is a widely replicated risk factor for psychosis; however, few studies have specifically investigated if pediatric hospitalizations or emergency room (ER) accesses could represent risk factors for psychosis as well. The aim of this retrospective case-control study was to determine if a history of hospitalizations or ER admissions during childhood could increase the risk of psychosis onset in adult life. 168 patients with first-episode psychosis (FEP) and 85 healthy controls were included. Available digital records of hospitalizations and ER admissions were retrospectively retrieved. We found that Individuals who were hospitalized (OR= 3.213; 95% CI = 1.027–10.052) or admitted into ER (OR = 8.823; 95% CI = 2.491–31.245) were more likely to develop psychosis. Moreover the risk of psychotic onset increased as the number of hospitalizations (OR = 2.399; 95% CI = 1.076–5.347) or ER admissions (OR = 3.573; 95% CI = 1.590 – 8.030) grew. According to these results, it might be possible to consider children who access ER or who are hospitalized more than once at high-risk of developing psychosis in adult life.

A101
Exercise Your Way: A Preference-Based Physical Activity Intervention in Early Psychosis: Feasibility Trial (Preliminary Results)

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Introduction: Although physical activity (PA) is recommended, few early psychosis individuals (EPI) engage in PA because of barriers (e.g., motivation). We hypothesized that a PA program based on their preferences, associated with motivational counseling, would facilitate their adherence to a PA program. The purpose of the study was to determine the feasibility of such program and its impact on their participation in a PA intervention.

Methods: Open trial of a 3-month supervised PA intervention, biweekly, 45 minutes with counseling based on the transtheoretical model. Anthropometric measures (e.g. waist circumference), motivation to PA, psychiatric symptoms (PANSS), global functioning and satisfaction towards the intervention were measured at baseline and after 3 months.

Preliminary results: 16/45 EPI were recruited (72% women, 26 $\pm$ 4.4 years old, BMI: 28.3 $\pm$ 4.8 kg/m^2). 37.5% dropped out the intervention and compliance rate to the prescribed exercise intervention was 65%. 73% of participants were satisfied with the intervention, 80% found the intervention motivating to achieve more PA, 80% would continue the program, and 100% would recommend the intervention to a peer. Participants who dropped out the intervention (n = 6), compared to those who persisted (n = 10), perceived fewer benefits to PA (p = 0.02) and were more likely to have higher BMI (p = 0.06), or to use experiential motivational strategies (p = 0.06).

Discussion: Our preliminary results showed that preference-based training is feasible among EPI and is associated with high satisfaction rate.

A102
Treatment Resistance in a Chilean Cohort of Patients with First Episode of Psychosis

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Purpose: Antipsychotic treatment resistance in first episode psychosis (FEP) is an important problem with a paucity of reports. Our aim was to describe a cohort of Chilean patients who developed resistance after that FEP was diagnosed.
Methods: Analysis of clozapine prescription patterns, used as a real-world proxy marker for treatment-resistance, in a cohort of patients discharged from an Early Intervention ward in Chile. Sociodemographic variables and doses of clozapine were analysed. The initial prescription was divided in early onset period (within 1 year of treatment onset), medium-term onset (1 to 5 years of treatment), and late onset (>5 years). Survival analysis was performed using national databases of clozapine monitoring system.
Results: 230 patients were diagnosed with a non – affective FEP between 2008 and 2014. 42 patients (18.3%) started clozapine in the follow up. There was no difference in average age and gender between clozapine and non – clozapine users. Average dose of clozapine was 305 mg (SD 177 mg). Annual probability of being prescribed clozapine was 0.096 (95%CI0.06-0.013) within the early period (<1 year); 0.025 (95%CI 0.01-0.04) during the medium stage (1 to 5 years); and 0.006 (95%CI 0-0.004) at the late stage (>5 years). All – cause of clozapine discontinuation at 12 months was 4.8%.
Conclusions: Our results highlight that treatment resistance is frequently present from the onset of psychosis and is relatively common in a Latin American cohort. This would support the idea that some subtypes of TR psychosis are categorically distinct since beginning of the illness.

Topic Area: Psychopharmacology

A103
Paliperidone Palmitate: Continuation Rates and Patterns of Discontinuation Depending on the Starting Place of Treatment

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Objectives: The aim of this study is to describe the continuation rates after one and two and years follow-up in patients treated with paliperidone palmitate depending on the starting place of treatment.
Methods: This is a non-interventional study, in a naturalistic framework for a period of 2 years. It is a sample of 172 patients who started treatment with paliperidone palmitate. Maintenance rates were compared at one year and two years follow-up depending on the starting place of treatment.
Results: 92.6% of outpatient patients maintained the treatment at one year follow-up compared with 86% as inpatient beginning. No statistical differences (Log Rank (Mantel-Cox): 0.20). No statistically significant differences were found in the reasons for withdrawal. The mean number of days until withdrawal is greater in the outpatient setting (202.78 vs 115.14), but no statistical differences were demonstrated. Continuation rates at 2 years follow-up are 88.6% in outpatient beginning and 73.2% as inpatient. There were no statistical differences (Log Rank (Mantel-Cox): 0.21). No statistically significant differences were found in the reasons for withdrawal. The mean number of days until withdrawal is greater in the outpatient setting. No statistical differences were demonstrated.
Conclusions: The use of paliperidone palmitate allows higher continuation rates than those reflected in the literature and allows high retention rates in both an inpatient and outpatient settings. Retention rates in patients who started treatment in an outpatient setting are greater than those observed in patients who initiate treatment in an inpatient setting. However, no statistically significant differences were observed.

Topic Area: Psychopharmacology

A104
Times of Oral Supplementation in the Treatment of Aripiprazole Long-acting Injectable in Standard Clinical Practice

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Background: The aim of this study is to analyze the different patterns of oral supplementation in the use of aripiprazole LAI.
Methods: The sample consists of 72 patients treated with aripiprazole LAI. We measure oral supplementation time by gender, diagnosis, previous oral dose of aripiprazole, years of illness evolution and the place of treatment start.
Results: The average days of oral supplementation is 109.61 days. The percentage of patients with 15 or less days of supplementation is 47.2% (N = 34). Patients with previous oral dose of aripiprazole ≤20 mg required shorter times of oral supplementation (59.6% (N = 31) ≤15 days). Patients with previous doses between 20-30 mg need longer periods of supplementation (75% (N = 9)) >15 days). In contrast, 100% (N = 8) patients with oral doses above 30 mg needed overlap periods longer than 15 days. These results showed statistically significant differences (p = 0.02). Time of oral supplementation is lower in patients that starts aripiprazole LAI at Outpatient Unit (55.8% (N = 29) ≤15 days) than patients that start treatment at Impatient Unit (75% (N = 15) >15 days). These results were statistically significant (p = 0.019).
Discussion: Less than half of patients observed in this sample show overlap periods of <15 days. Patients with previous oral aripiprazole doses >15 mg tend to require more than 15 days of oral supplementation. Patients with >30 mg always require supplementation times above 15 days. Most of the patients that starts aripiprazole LAI at Inpatient Unit need longer periods of oral supplementation.

Topic Area: Psychopharmacology

A105
Early Administration of Aripiprazole Long-acting Injectable in Acute Inpatients with Schizophrenia Reduces Hospitalization Stay

Santiago Ovejero[1], Raquel Alvarez[2], Nora Palomar[1], Marta Migoya[1], Fanny Cegla[1], Laura Mata[1], Sergio Sanchez-Alonso[1]

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Objectives: A naturalistic study on the use of aripiprazole long-acting injectable (LAI) in acute inpatients with schizophrenia of two hospitals is presented.
Methods: In this study, 51 inpatients (30 men, 21 women) with schizophrenia were treated with aripiprazole LAI; in 1 patient this treatment was removed before discharge because of lack of efficacy. 49% of patients had a damaging drug consumption (56% of them consumed cannabis).
Results: The average hospital stay (HS) was 21 days. The HS was smaller when the dose of aripiprazole LAI was administered earlier (linear regression; r<.0001). When the dose of aripiprazole LAI was administered in the first week of admission the HS was 16.3 days, in comparition when administered over a week, 28.4 days (t test; p<.0001). At discharge, mean dose of aripiprazole LAI was 404 mg.
Conclusions: In this sample, aripiprazole LAI is an effective treatment for acute inpatients with schizophrenia and a short average HS is observed. The early use of aripiprazole LAI, in the first week of admission, reduces HS.

Topic Area: Psychopharmacology

A106
DREaM Study: Updated Analysis Characterizing Subjects with Recent-onset Schizophrenia or Schizophreniform Disorder

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The Disease Recovery Evaluation and Modification (DREaM) trial (NCT02431702) compares the effectiveness of treatment with paliperidone palmitate long-acting injection versus oral antipsychotics in subjects with recent-onset schizophrenia. This analysis characterized demographics and clinical characteristics of DREaM enrollees and compared similar data from the Recovery After an Initial Schizophrenia Episode (RAISE) study in subjects with first-episode psychosis. Characteristics were evaluated using descriptive statistics and study comparisons were evaluated using chi-square test and t-tests. As of January 2018, 222 subjects were enrolled in DREaM and 404 subjects were available from RAISE. Mean $\pm$ SD ages for the DREaM and RAISE studies were comparable (23.2 $\pm$ 4.5 vs 23.1 $\pm$ 5.1 years; P = 0.956); the proportion of males was similar (76% vs 73%; P = 0.320), as were the baseline CGI-S scores (4.1$\pm$1.0 vs 4.1$\pm$0.8; P = 0.179). More subjects in DREaM lived with family/friends compared with those in RAISE (87% vs 71%; P < 0.001). The majority of DREaM subjects had a schizophrenia diagnosis (76%) and were enrolled 12.4$\pm$7.4 months after their first psychotic episode, with 1.1$\pm$1.1 psychiatric hospitalizations. Histories of antipsychotic exposure, categorized as <6 months, 6-12 months, and >12 months, were 49%, 19%, and 21%, respectively. The Clinician-Rated Dimensions of Psychosis Symptom Severity scale showed that symptoms were most severe in the domains of "negative symptoms" and "delusions." Data on the fully enrolled study population will be available at the time of presentation. With few exceptions, the baseline demographics and characteristics of subjects in DREaM appear similar to those in the RAISE study and are representative of recently diagnosed patients with schizophrenia.

Topic Area: Psychopharmacology

A107
Real World Effectiveness of Antipsychotic Drugs in Patients with Schizophrenia: A 10-years Retrospective Study

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Discontinuation of antipsychotics in patients with schizophrenia has increasing attention as a representative treatment effectiveness of the medication. The objective of present study is to determine which antipsychotic medication is highly effective in a real-world clinical setting considering adjuvant pharmacotherapy over a 10-year follow-up period. A total of 2300 patients with schizophrenia were recruited at the Seoul National University Hospital, and participants received amisulpride, aripiprazole, clozapine, haloperidol, olanzapine, paliperidone, quetiapine, risperidone, ziprasidone for up to 10-years. Time-to-discontinuation of antipsychotic medications was analyzed using Kaplan-Meier survival analyses. Group differences were compared using log-rank tests. The most frequently used drugs were Risperidone, Aripiprazole, Olanzapine in the antipsychotic drug, Valproate, Lamotrigine, Topiramate in the anticonvulsant agents, Escitalopram, Sertraline, Milnacipran in antidepressants, Lorazepam, Clonazepam, Zolpidem in anxiolytics or sedatives, Propranolol, Benztropine, Trihexyphenidyl in antiparkinson drugs. About half of the patients discontinued taking antipsychotics before 1.5 years. Clozapine showed significantly longer time to discontinuations compared to other antipsychotic drugs. Aripiprazole also showed a lower incidence of discontinuation except for Clozapine and Olanzapine. Clozapine was found to be the most effective antipsychotics in terms of time to discontinuations. Aripiprazole is the most highly recommeded 1st line antipsychotics.

Topic Area: Psychopharmacology

A108
Changes in Clinical Contact after Initiation of 3-monthly Paliperidone Injection

Debasis Das[1], Alexander Davis[1]

[1]*Leicestershire Partnership NHS Trust, UK*

Long-acting Antipsychotic injections (LAI) have been used to improve concordance in Schizophrenia. Introduction of 3-monthly LAI (Paliperidone) proposes further improvement in adherence. Studies report LAI's reduce re-hospitalisation in schizophrenia patients. The impact of initiating 3-monthly LAI,on community contacts with the care coordinator, in the PIER team (a community based first episode psychosis service) was evaluated. Retrospective analysis of electronic clinical records was done, up to 6 months prior to starting LAI and 6 months post start date of LAI, looking at community contacts with patient's care coordinator and clinic reviews with psychiatrist. 11 eligible patients were included in the evaluation. 91% (10) patients were male. Average age was 28.5 years. Diagnoses were Schizophrenia (82%) and Psychosis NOS (18%). Trend towards reduction in the total number of community contacts with the care coordinator, six months after initiation of the LAI, compared to 6 months prior to the initiation of LAI was seen, although this was not statistically significant ($p = 0.46$). Trend towards reduction in total time spent with patient, in community contacts, during the same period observed, but not statistically significant ($p = 0.39$). No such differences were seen three months pre-and post-LAI. No difference in clinical contacts with psychiatrists was observed. Although not statistically significant, there was trend towards reduction, both in time dedicated to the patient by care coordinator as well as the number of community contacts. Further studies with larger sample size and longer duration may help better understand the implications, as this may have resource and cost ramifications.

Topic Area: Psychopharmacology

A109
Discontinuation Versus Maintenance Therapy with Antipsychotic Medication in Schizophrenia -Tailor: A Randomized Controlled Trial

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Purpose: The aim of the study is to investigate the effect of closely monitored discontinuation versus maintenance therapy with antipsychotic medication in patients with newly diagnosed schizophrenia and schizophreniform psychosis and with minimum three months remission of psychotic symptoms.

Materials and Methods: 250 patients will be included from the psychiatric early intervention program, OPUS, in two regions in Denmark. Inclusion criteria are: ICD-10 diagnosis F20 (except F20.6), F22 or F25, minimum three months remission of psychotic symptoms and in treatment with antipsychotic medication (except for clozapine). Patients will be randomized to either maintenance therapy or discontinuation with antipsychotic medication in a one-year intervention. The discontinuation group will be provided with a smartphone application to monitor early warning signs of psychotic relapse. All patients will be assessed at baseline, one, two and five years follow-up with regard to positive and negative symptoms (SAPS (Scale for Assessment of Positive Symptoms) and SANS (Scale for Assessment of Negative Symptoms)), cognition (BACS (The Brief Assessment of Cognition in Schizophrenia)), social functioning (GSDS (Groningen Social Disabilities Schedule)), recovery, quality of life (WHO-5), client satisfaction (CSQ (Client Satisfaction Questionaire)), side-effects of antipsychotic medication (UKU), sexuality (CSFQ (Changes in Sexual Functioning questionaire)) and substance use and alcohol (time line follow back).

Results: The study is currently running therefore no data is yet available.

Conclusion: The study will provide knowledge about safety and effects of discontinuation of antipsychotic medication in early phases of schizophrenia and thereby the risks and benefits of discontinuation versus maintenance therapy.

Topic Area: Psychopharmacology

A110
Are We Making Best Use of Clozapine? : A Review of the Psychopharmacological Treatment Pre-clozapine Initiation in Treatment Resistant Schizophrenia

Debasis Das[1], Victoria Baird[2]

[1]*Leicestershire Partnership NHS Trust, UK,* [2]*University of Leicester, UK*

Introduction: Where treatment resistant schizophrenia (TRS) is established, studies suggest there should be no delay in clozapine initiation. NICE Quality standards require adults with schizophrenia who have not responded adequately to treatment with at least 2 antipsychotic drugs to be offered clozapine.

Aim: To evaluate antipsychotic use and clozapine initiation in patients with treatment resistant schizophrenia in a first-episode psychosis service.

Methods: Clinical records of patients on Clozapine within the Psychosis Intervention and Early Recovery (PIER) service were examined, cross-sectionally, in September 2016 to find details of previous antipsychotic prescription and their duration of use. At the time of study, PIER provided a first episode service for 14-35 year serving a total population more than 1 million.

Results: Nine patient cases were identified. An average of two antipsychotics were tried (mean = 2.7) pre-clozapine initiation. Each antipsychotic was tried for around five months (mean = 5.15 months) before switching to another antipsychotic. Length of time from acceptance into the PIER service for treatment to initiation of clozapine ranged from 1 month to 36 months. The median time elapsed pre-clozapine was 14.5 months. In over half of the cases (n = 5) clozapine was offered as a treatment option far earlier in the course, but for various reasons not used. Professional's attitudes appeared to have impact upon patient decision to initiate clozapine.

Conclusion and Recommendations: 1. For patients with TRS consider clozapine earlier in treatment. 2. Professional education and increased awareness amongst non-medical professionals about clozapine use should be promoted.

Topic Area: Psychopharmacology

A111
Clozapine use in a Latin-American Cohort of First Episode Psychosis

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Purpose: Clozapine is the first-line treatment for treatment-resistant (TR) psychosis. However, there is widespread evidence of delays in treatment initiation (average 5 years) and underutilization. Reports of clozapine use in first episode psychosis (FEP) patients are scarce. Characterizing further this population could contribute towards an earlier and more widespread use of clozapine in young patients.

Methods: We performed a cross-sectional study on patients from an outpatient Early Intervention in Psychosis program in Chile. Data included sociodemographic characteristics, clozapine use (doses, time of initiation), and standardized clinical and functional status. FAST (Functional Assessment Short Test), SS-DSM5 (Symptom Severity Scale of the DSM5 for Schizophrenia), and MG (Morinsky Green Adherence Questionnaire) were applied to participants.

Results: We included 83 patients (mean age 21.68 years), most with non-affective psychosis (81.23%). We used clozapine treatment as a proxy for treatment resistance. 34 patients were on clozapine treatment (41% of all sample). Compared with patients that used other antipsychotics, clozapine users had longer duration of untreated psychosis (4 vs 12 months, $p < 0.05$) and higher severity scores (SS-DSM5 mean 7.2 vs 10.87; $p<0.01$). Mean dose of clozapine was 348.57 mg (median 300 mg). Median time to initiation of clozapine was 22 months (SD 11.32) since beginning of disease and 6.43 months (SD 11.25) from start of follow up in our program.

Conclusions: There was a high rate of treatment-resistance in our FEP cohort. The shorter delay in clozapine initiation and higher prescription rate found are results that needed it compared to international reports.

Topic Area: Psychopharmacology

A112
Problematic Gambling Associated with Aripiprazole: Design of a Nested Case-control Study in a FEP Cohort Using a Systematic Pharmacovigilance Approach

Olivier Corbeil[1], Stéphanie Corbeil[1], Ann-Sophie Breault[1,2], Guillaume Chalifour[1,2], Marc-Andre Roy[2,3], Marie-France Demers[1,2]

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Aripiprazole, either its oral or long acting injectable formulation, is widely used among patients attending first episode psychosis programs (FEPP). Both Health Canada (2015) and the FDA (2016) emitted a safety alert warning the population about compulsive behaviors associated with this agent including gambling, shopping, and hypersexuality. While psychosis itself is associated with an increased risk of developing problematic gambling, it remains unclear whether or not antipsychotics, particularly ones with partial agonist properties such as aripiprazole, also increase the likelihood of developing or aggravating gambling problems. In this poster, we will present the design of a retrospective nested case-control study using a pragmatic pharmacovigilance approach in a Quebec city FEPP (Clinique Notre-Dame des Victoires). All new cases of problematic gambling in the last 2 years will be identified and reviewed, notwithstanding which antipsychotic the patient was on and will then be compared to control patients matched for age, gender and duration of treatment. The Naranjo instrument, a reference pharmacovigilance scale that estimates the causal relationship of adverse drug reaction, will be applied to each case and will allow the determination of the antipsychotic's imputability, as well as the evaluation of the strength of this association. This approach, combined to the longitudinal follow-up, will provide direly needed information concerning the association between aripiprazole and problematic gambling. In doing so, the results will shed light on new information to take into account when choosing the adequate antipsychotic regimen or providing appropriate monitoring for a given FEP patient.

Topic Area: Psychopharmacology

A113
Problematic Gambling Associated with Aripiprazole: 7 New Case Reports in a FEP Cohort and a Review of Already Published Cases Using a Systematic Approach

Olivier Corbeil[1], Stéphanie Corbeil[1], Ann-Sophie Breault[1,2], Guillaume Chalifour[1,2], Marc-Andre Roy[2,3], Marie-France Demers[1,2]

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Aripiprazole, either its oral or long acting injectable formulation, is widely used among patients attending first episode psychosis programs (FEPP). Both Health Canada (2015) and the FDA (2016) emitted a safety warning about compulsive behaviors associated with aripiprazole including gambling, shopping, and hypersexuality. While psychosis itself is associated with an increased risk of developing problematic gambling, it remains unclear to what extent antipsychotics, particularly ones with partial agonist properties such as aripiprazole, may increase the likelihood of developing or may aggravate gambling problems. In this poster, we report a systematic approach using Naranjo Scale to review 7 new cases of problematic gambling associated with aripiprazole in a Quebec city FEPP. The same approach was applied also to cases published so far. The Naranjo, a reference pharmacovigilance scale, assessed the causal relationship of adverse drug reaction (ADR) and rates the intensity of this link. In addition to providing detailed descriptions of 7 new cases in young patients, we emphasise the importance to have access to longitudinal clinical patient's follow-up and to various informants' sources (health care providers, family members) to better estimate causal relationship between a drug and an ADR, particularly in problematic gambling in which covert behaviors are frequent. We were able to demonstrate a stronger link according to Naranjo Scores in our cases than in those published, in whom limited information was available to rate the Naranjo Scale. Our observations pave the road to a longitudinal nested case-control study using a systematic pharmacovigilance approach that is currently underway.

A114
Impact of Long-acting Antipsychotics as Initial Treatment in First Episode Psychosis Populations with Substance Use Disorder Comorbidity

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Introduction: Substance use disorder (SUD) is highly prevalent in patients with first episode psychosis (FEP) and associated with poor adherence and worst treatment outcomes. Although relapses are frequent in FEP, current literature concerning the usage of long-acting injectable antipsychotics (LAI-AP) is scant. Moreover, available studies often exclude patients with SUD.
Objectives: Determine the impact of LAI-AP as first intention treatment on psychotic relapses or rehospitalisations in FEP with comorbid SUD (FEP-SUD).
Methods: Naturalistic, longitudinal, 3-year prospective and retrospective study on 237 FEP-SUD patients admitted into two early intervention services in Montreal between October 2005 and April 2012. The patients were divided based on the medication introduced as first intention, either oral antipsychotics (OAP, n = 206) or LAI-AP (n = 31). Baseline characteristics were compared with ANOVA and a Kaplan-Meier survival analysis was performed on relapse and rehospitalisation.
Results: Compared to the OAP group, patients in the LAI-AP group presented worse prognosis factors (e.g., history of homelessness). However, the LAI-AP group presented a lower relapse rate (67.7% vs 76.7%) and higher relapse-free survival time (694 vs 447 days, p = 0.008) and a trend for reduced rehospitalization rates (48.4% vs 57.3%) and hospitalization-free survival time (813 vs 619 days, p = 0.065). Of those receiving OAP as first intention, 41.3% were eventually switched to LAI-AP and displayed the worst outcome in relapse and rehospitalisation. **Conclusion:** LAI-AP should be strongly considered as first intention treatment of FEP-SUD patients since this pharmacological option reduces the risk of relapse and rehospitalisation even in the individuals with poor prognostic factors.

Topic Area: Psychopharmacology

A115
Rationale of an Observational Clinical Trial Focused on Guided Dose Reduction of Antipsychotic Treatment for Patients with Remitted State of Psychosis

Chen-Chung Liu[1]

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Whether good responders of early psychosis intervention can stop antipsychotic medication warrants careful deliberation. Randomized control trials (RCT) showed increased risks of relapse if discontinuing antipsychotics; neither intermittent treatment nor dose reduction was recommended; whilst some longitudinal observational studies (LOS) suggested medication discontinuation not parallel to poorer functioning. Methodological issues may explain such discrepancies, as these two approaches were conducted differently in many aspects, rendering possible biases toward over-presenting worsening in RCT yet underreporting symptom fluctuations in LOS. A window of opportunity to get better outcomes under lower doses was opened by the finding that lower dopamine occupancy could be enough for stable patients. Also inspired by the metaphor of mathematician Cantor's Ternary Set, theoretically we can delete a fraction of a line reiteratively to make the sum of the remaining fragments approximate to zero but the number of those fragments being infinite. A hypothetical compromised approach "guided dose reduction, but not aiming at discontinuation" was proposed to initiate an observational clinical trial. For patients with remitted state of psychosis, we provide them with sufficient instructions, precautions, monitoring and education, not just the schedule, but more importantly the rationale, of dose reduction. We believe by inviting patients to take more autonomy in management of their illness and treating the role of antipsychotic as an insulator to elevate thresholds of their psychosis-proneness, patients can be less vulnerable to develop full-blown psychosis while being triggered by potential risk factors. Our goal is to optimize the risk and benefit ratio of antipsychotic treatment.

Topic Area: Psychopharmacology

A116
DJ's Choices: A Family Matter: An Approach to Help Family in Supporting Their Love One with Treatment Adherence

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Family support is known to improve adherence. However, there are very few clinical tools specifically adapted for families to support their relatives in treatment adherence. We have previously (2010) developed an original program to guide health care providers (HCP) to facilitate patients' groups on adherence support that integrates psycho educational, cognitive-behavioural and motivational approaches. While this program, entitled "The DJ's choices", was originally created for HCP to facilitate discussions with patients, we have since developed a French (2014) and then an English version (2018) aimed at families, "DJ's choices; a family matter". This video material was developed around patients' and parents' testimonies and supported by HCPs' inputs. It promotes shared decision making in choosing an antipsychotic. It is accompanied by a booklet containing comprehensive information adapted for families. Six chapters review basic notions on the illness, relapse prevention, treatment efficacy and side effects, influences of self and family' believes, stigma and perceptions on initial medication acceptance and long term adherence. Use of video testimonies of patients or family members to witness their own experience with treatment and their struggle with non-adherence as well as youth friendly presentation and adapted accessible content may contribute to facilitate discussions in families. This initiative gathered a multi-disciplinary team including social workers, psychologists, nurses, occupational therapist, doctors and pharmacists from our early-intervention team who shared approaches to acknowledge patients' and families' perception as well as tips around medication adherence in order to promote and support the importance of family in medication treatment adherence.

Topic Area: Psychopharmacology

A117
Subthreshold Psychotic Symptoms before a First Episode: Do they Play a Significant Role in Service Engagement?

Jean-Gabriel Daneault[1,2], Anika Maraj[2], Rachel Rosengard[2], Anne Crawford[2], Sally Mustafa[2], Martin Lepage[2], Srividya Iyer[2], Ashok Malla[2], Jai Shah[2]

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Most patients experience subthreshold psychotic symptoms (STPS+) before onset of first episode psychosis (FEP), while a significant portion do not (STPS-). These pre-onset states are associated with differential outcomes over treatment. However, we lack explanations for why outcomes might vary between these two groups. In this analysis, we explored whether dimensions of service engagement might explain these differences. 303 FEP participants were included in a time-to-event analysis with Cox proportional hazards regression models. STPS status, sociodemographic and early clinical variables were tested as predictors of medication adherence over 24 months. We also examined other dimensions of engagement (alliance, attendance, adherence to treatment, and preparation) using exploratory and confirmatory factor analysis with data from 179 FEP participants to identify underlying factor structure. Composite scores were compared between STPS+ and STPS- groups over time. Overall, 75.5% of participants were non-adherent at some point. Adherence was poorer in FEP participants who had experienced STPS+, although with no difference in the mean time to nonadherence. Greater severity of positive symptoms (HR 0.987), stronger alliance (HR 0.970) and involvement of relatives (HR 1.803) were significant predictors of poor medication adherence. However, predictors of medication nonadherence differed between STPS+ and STPS- subgroups. Using multidimensional service engagement data, a two-factor structure for engagement was identified: alliance and availability. In contrast to medication adherence, these two factors were not different between STPS+ and STPS- subgroups. FEP programs should continue to emphasize the development of therapeutic alliance and involvement of relatives to optimize medication adherence and improve outcomes.

Topic Area: Psychopharmacology

A118
Clozapine Use in an Early Psychosis Intervention Program: Clinical Recovery and Cost Effectiveness

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[1]*University of Western Australia*

Background: Early intervention models of care aim to improve access and reduce duration of untreated psychosis and identify effective treatment to improve clinical and functional recovery outcomes for young people. Clozapine has been hailed as an effective antipsychotic for treatment-resistant schizophrenia, but its use in early psychosis remains largely unexplored.

Aim: This study examined the use of Clozapine by Black Swan Health in an early intervention model and effectiveness in reducing mental health admissions and associated costs.

Methods: A longitudinal case study approach which examines the profile of service utilisation of young people at hYEPP prescribed Clozapine. Mental health inpatient admissions pre- and post-Clozapine initiation were compared.

Results: Ten young people were prescribed Clozapine in 2016 and 2017 (median dose = 260 mg, range 200-500 mg). Eight young people were compliant (5 males, aged 18-24). Prior to Clozapine, the number of inpatient admissions averaged 3.6 (range 1-9 admissions), and inpatient days averaged 137.5 (range 11-379 days). Costs of inpatient admissions in the 12-months prior to Clozapine were estimated at $177,300 pp. Since Clozapine commencement, there had been no further inpatient re-admissions, representing a 12-month saving of approximately $1,418,400 in acute hospitalisation costs across 8 young people. The other 2 non-compliant young people had further re-admissions after the discontinuation of Clozapine (2 and 5 respectively), incurring an additional $252,000 in healthcare utilisation costs in a 12-month period.

Conclusions: Results show early introduction of Clozapine enhance and optimise recovery by reducing the rate of mental health admissions and healthcare costs.

Topic Area: Psychopharmacology

A119
The Impact of Substance Use on Treatment Outcomes among Patients Experiencing First-episode Psychosis

Oladunni Oluwoye[1,2,3], Maria Monroe-DeVita[5], Ekaterina Burduli[1,2,3], Lydia Chwastiak[5], Sterling McPherson[2,3,4], Jon M. McClellan[5], Michael G. McDonell[1,2,3]

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Aim: The primary aim of this study was to examine the effect of recent tobacco, alcohol, and cannabis use on treatment outcomes among participants experiencing first episode psychosis (FEP).

Methods: Secondary data analyses were conducted on 404 participants enrolled in the Recovery After an Initial Schizophrenia Episode – Early Treatment Program (RAISE-ETP) study. RAISE-ETP investigated the effectiveness of a coordinated specialty care (CSC) intervention for FEP in community mental health agencies in the U.S. Generalized estimating equations were used to examine whether recent tobacco smoking, alcohol, and cannabis use at baseline were associated with illness severity, number of antipsychotic pills missed, psychiatric symptoms, and quality of life during the 24-month treatment period, after controlling for duration of untreated psychosis and treatment group.

Results: At baseline, roughly 50% (n = 209) of participants reported recent tobacco, 28% (n = 113) alcohol, and 24% (n = 95) cannabis use. Tobacco smokers had higher levels of illness severity ($\beta = 0.24$; $p < 0.005$), a higher number of missed pills ($\beta = 2.89$; $p < 0.05$), higher psychiatric symptoms, and lower quality of life during treatment relative to non-smokers. Alcohol users had a higher number of missed pills ($\beta = 3.16$; $p < 0.05$) during treatment and cannabis users had higher levels of illness severity ($\beta = 0.18$; $p < 0.05$) and positive symptoms ($\beta = 1.56$; $p < 0.05$) relative to non-users.

Conclusions: Tobacco, alcohol, and cannabis use are common in youth seeking treatment for FEP. Tobacco smoking was associated with more negative clinical outcomes. These findings have implications for including interventions targeting these areas of substance use within current CSC models.

Topic Area: Substance Use

A120
Drinking, Drug Use and Addiction in the Autism Community

Elizabeth Kunreuther[1], Ann Palmer[1]

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Up until recently, researchers assumed a substance use diagnosis (SUD) was rare among those with an autism spectrum diagnosis (ASD). Common misconceptions regarding adolescents and adults with an ASD such as rule following, social challenges, sheltered living, and sensory aversions to alcohol/drug delivery and the environments where substance use may occur were protective factors putting individuals with an autism diagnosis at low risk for developing an SUD. Recent population-based studies have debunked these assumptions with one study indicating individuals with ASD may be twice as likely to develop an SUD than the general population. This presentation addresses the IEPA conference's theme of Prevention and Early Intervention. The goal of early intervention is often the mainstreaming of children with an ASD with expectations of socializing, managing the stress of complicated academic demands, meeting deadlines and generally fitting in. Mainstreaming has presented a host of challenges for someone with an ASD to navigate. Co-occuring anxiety, depression and ADD also put those with an ASD at risk. The presenters will give a brief overview of the research and literature on this topic, they will then introduce the risk and protective factors for those with an ASD for developing an SUD. The presenters will also address the use of substances as a means of self-medicating or coping, how autism and addiction affect one another and some of the behavioral connections such as perseveration and a desire for routine. The presenters will conclude with strategies for prevention, identification/screening and treatment options for those dually diagnosed.

Topic Area: Substance Use

A121
Personality Vulnerabilities to Substance use in Early Phase Psychosis

Alissa Pencer[1,2,3], Ivy-Lee Kehayes[1], Annie Chinneck[1], Emma Ells[2], Erica Rudolph[2], Phil Tibbo[1,2], Sabina Abidi[1,3], Sherry Stewart[1,2]

[1]*Dalhousie University*, [2]*Nova Scotia Health Authority*, [3]*IWK Health Centre*

Cannabis and alcohol are significant substances of abuse for people with Early Psychosis (EP), with researchers showing 35% and 27% having a diagnosis of cannabis abuse or alcohol abuse, respectively (Van Mastrigt et al., 2004). A four-factor model of personality vulnerability (anxiety sensitivity, hopelessness, sensation seeking, impulsivity) has proven useful in predicting risk of alcohol/cannabis misuse in young people in the general population as well as in clinical samples of inpatient substance users (Schlauch et al., 2015), adolescents receiving outpatient treatment for a primary mental health disorder (Battista et al., 2012), and high-risk adolescents involved in the child welfare system (Hudson et al., 2015). The goal of this study is to determine if (and how) these personality traits predicted hazardous drinking/cannabis misuse in an EP population. Schizotypy has also been linked to both EP and substance use and was thus added as a fifth personality trait to investigate in this populaiton. We will present data on the effects of anxiety sensitivity, hopelessness, sensation seeking, impulsivity, and schizotypy on (1) risky alcohol use and (2) cannabis use, and discuss preliminary results. Given that the four-factor model of personality vulnerability has been used to develop a successful personality-targeted substance misuse intervention (Conrod et al. (2011), it is hoped that the results from the present study will provide support for the examination of a similar intervention for individuals with EP to help reduce their risky substance misuse.

Topic Area: Substance Use

A122
Prevalence of Substance Use and Its Correlates in the First Episode of Psychosis

Attila Szigeti[1], Felicity Fanning[1], Corina Muprhy[1], Aisling McClenaghan[1], Anthony Kinsella[1], Donal O'Keefe[1], Roisin Doyle[1], Mary Clarke[1]

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Background: To determine prevalence of substance use among patients with first episode of psychosis (FEP) in comparison to the general population and clinical correlates including aggression and violence levels in co-morbid presentations.

Methods: All service users presenting to a geographically defined catchment based early intervention service were recruited. Sociodemographic data were collected, and clinical variables were assessed with a set of standardized instruments: SCID (Structured Interview for DSM-IV-TR), SAPS (Scale for the Assessment of Positive Symptoms) , SANS (Scale for the Assessment of Negative Symptoms), CDSS (Calgary depression Scale for Schizophrenia), YMRS (Young Mania Rating Scale). MOAS (Modified Overt Aggression Scale) was used to retrospectively assess aggression and violence recorded as occurring in 6 months before and after each patient's presentation with FEP.

Results: 269 patients with FEP were included. Illicit substance use and prevalence of alcohol use disorders was significantly higher in patient with FEP than in the general population on both national and regional level [Difference: 9.2%, 95%CI: 2.32 to 16.06, p = 0.0082]. Substance users presented on average 6 years younger to psychiatric services with FEP than non-users. There were no significant differences in positive, negative and affective symptoms between substance user and non-user groups at presentation. In contrast aggression and violence had a significant association with illicit substance use [OR: 1.464 (1.090 – 1.967), p = 0.009].

Conclusion: Substance use is significantly more prevalent in FEP cohort than in general population and may contribute to a younger presentation with FEP and higher aggression levels.

Topic Area: Substance Use

A123
Substance Use, Symptom Severity, and Functioning in First Episode Psychosis

Danielle M. Beaudette[1], Kathryn L. Hardin[1], Alan Breier[2], Kyle S. Minor[1]

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There has been much discussion regarding the impact of substance use on mental health and general functioning. This issue is particularly relevant for those with first episode psychosis (FEP) due to the high incidence of substance use in this population. Understanding the influence of substance use on symptom severity and functioning in these individuals remains unclear and is an important avenue for informing treatment development. In the current project, 20 FEP and 20 healthy controls were compared on lifetime substance use, symptom severity, and functioning. We sought to determine the relationships between these constructs and hypothesized that substance use within the FEP group would predict higher symptom severity and lower role functioning. Chi square analyses showed group type to be significantly related to cannabis and tobacco use, with the FEP group more likely to use these substances. Independent sample t-tests showed a significant difference in role functioning scores between the FEP (M = 4.16, SD = 2.32) and control groups (M = 7.89, SD = 1.82); t(36) = -5.53, p<0.001. Within the FEP group, cannabis use significantly predicted negative symptom severity, accounting for up to 61% of the variance. Contrary to hypotheses, however, cannabis use predicted less negative symptoms. Regression analyses evaluating substance use as a predictor for functioning did not reach significance. The results of this preliminary analysis suggest more complex relationships among substance use, psychotic symptoms, and functioning in FEP. This analysis is limited due to small sample size, and results should be interpreted prudently. Future research is needed to elucidate these relationships.

Topic Area: Substance Use

A124
Impact of Cannabis Use on Gender Based Outcomes in Early Phase Psychosis

Candice Crocker[1,2], Scot E Purdon[3], Christopher Hanstock[3], Madison Holmans[1], Philip Tibbo[1,2]

[1]*Dalhousie University*, [2]*Nova Scotia Health Authority*, [3]*University of Alberta*

Female gender is associated with superior outcomes in early phase psychosis (EPP) services. However, there is evidence that cannabis use may more profoundly impact the disease course in female EPP patients as opposed to males. The impact of cannabis use on gender in EPP will be discussed in the context of data from two different approaches. First, we examined patient outcomes in a retrospective study of a comprehensive clinical databank of patient outcomes and characteristics that is maintained in our program. Both clinical and functional outcomes were queried for 92 female early psychosis patients that were identified through the WHO-ASSIST as using or non-using cannabis at time of program entry. Second, we examined gender differences by imaging. 3T magnetic resonance spectroscopy data were collected from a region the prefrontal cortex, including a rostral portion of the anterior cingulate cortex from 130 male and female subjects with psychotic disorders as well as healthy controls with co-varying for cannabis use. There was no significant difference in age at clinic entry between males and females but female users had a significantly earlier age of onset as compared to non-users (p<0.05); other differences in functional outcomes were also observed. There were significant changes in choline containing compounds in EPP females relative to healthy controls but not EPP males (p<0.01). The positivity of female gender on outcomes in early phase psychosis are negated with cannabis at time of entry. Ongoing use is associated poorer functional outcomes that may be related to changes in white matter.

Topic Area: Substance Use

A125
y-QUIT? A Tobacco Cessation Program for Youth with Psychosis

Jackie Curtis[1,2], Esther Pavel-Wood[2], Rachel Morell[1,2], Bernadette McGuigan[2], Charry Zhang[1], Julia Lappin[1,2], Andrew Watkins[2,3]

[1]*University of New South Wales, Sydney, Australia*, [2]*South Eastern Sydney Local Health District, Sydney, Australia*, [3]*Faculty of Health, University of Technology, Sydney, Australia*

Smoking is a major contributor to the gap in life expectancy of 15-20 years between people experiencing severe mental illness and the general population. Young people with psychosis are five times more likely to smoke (59%) than their peers. Local target group consultation indicated 65% of young consumers who smoked were interested in quitting. Currently no smoking cessation programs in Australia address the specific needs of young people with psychosis.

Methods: Prevalence of smoking was assessed across community-based youth mental health services in a catchment area in Sydney. Among young consumers (aged 14-25 years), identified smokers were offered a 12-week tailored smoking cessation intervention program "y-QUIT" that incorporated nicotine replacement therapy, motivational interviewing and behavioural change techniques. Outcomes assessed included: attitude, confidence, smoking history, carbon monoxide (CO), weight, waist circumference, sleep, and physical activity.

Results: In young consumers accessing FEP services (n = 101) 58% identified as smokers. All consumers were offered a brief or full smoking cessation intervention. Preliminary findings indicate young consumers are able to reduce their nicotine dependence level and CO levels with the support of comprehensive cessation services.

Conclusion: The very high rates of smoking in this population, and the failure of public health measures for the general population to have any significant impact on smoking levels for young people with mental illness, mandates new approaches. The y-QUIT program offers a tailored smoking cessation intervention strategy targeting young people with psychosis and is embedded in the Keeping the Body in Mind lifestyle intervention program for psychosis.

Topic Area: Substance Use

A126
Characteristics and Outcomes of Young People with a Diagnosis of Substance Induced Psychotic Disorder

Jessica O'Connell[1], Monica Sunwoo[1], Patrick McGorry[2,3], Brian O'Donoghue[1,2,3]

[1]*Orygen Youth Health, Parkville,* [2]*Orygen, the National Centre of Excellence in Youth Mental Health, Melbourne, Australia,* [3]*Centre for Youth Mental Health, University of Melbourne, Australia*

Background: Substance induced psychotic disorders (SIPD) have been historically considered as associated with better clinical and functional outcomes than other psychotic diagnoses and as a result, treatment for those with SIPD are often considerably less intensive. Emerging research is however challenging this premise. The present study aimed to examine differences between those with SIPDs and other first episode psychosis (FEP) diagnoses on demographic, clinical and functional variables. The study also sought to examine rates of diagnostic change from SIPD to other psychotic diagnoses.

Methods: Data was collected on all young people who presented with FEP to the Early Psychosis Prevention and Intervention Centre between 01/01/2011 and 31/12/2013. Group differences were analysed with independent samples t-tests and chi-square analyses. Where applicable, odds ratios were calculated.

Results: A total of 544 young people presented with a FEP and 10.3% (N = 53) were diagnosed with SIPD. Individuals with SIPD were more likely to be male, unemployed, and have a comorbid substance use disorder. There were no significant differences between groups with regards to DUP, severity of psychotic symptoms, time to remission, or rates of relapse. Those with SIPD were less likely to be employed or engaged in study at discharge and 35.7% of those with SIPD had a change of diagnosis to a schizophrenia spectrum or bipolar disorder by service discharge, typically after 18 months.

Conclusion: Young people diagnosed with SIPD should be an important focus of early intervention services and receive comparable treatment to those with other psychotic diagnoses.

Topic Area: Substance Use

A127
Substance Use, Mental and Sexual Health in Same-, Opposite- and Both-sex Attracted Adolescents

Elon Gersh[1], Laura P Richardson[2], David Breland[2], Carolyn A McCarty[2]

[1]*Orygen, the National Centre of Excellence in Youth Mental Health,* [2]*Seattle Children's Research Institute*

Background: Evidence suggests that sexual minority youth are at increased vulnerability to mental health issues, but the picture for substance abuse is less clear, and research has often failed to distinguish between same- and both-sex attracted adolescents. This study aimed to examine adolescent substance use, mental and sexual health across sexual attraction groups.

Methods: 428 adolescents (69% female, 29% male, 2% other) aged 13-18 (M = 16.09) were recruited from three school based health centers. Participants completed electronic self-report measures of health risks and sexual attraction (options included opposite, same, both-sex, not sure and none). Logistic regression models were used to examine the association between sexual attraction and the presence of health risks. Age and gender were entered as covariates.

Results: Overall, 72% of adolescents were only opposite sex-attracted, 19% both-sex attracted, 3% same-sex attracted, 4% not sure and 2% reported no attraction. Females were more likely to be both-sex attracted (23% of females) than males (6% both-sex attracted). Compared to the opposite-sex attraction group the following was found: 1) The both-sex attraction group had significantly higher rates of marijuana use, depression and inconsistent condom use. 2) The "not sure" group had higher rates of anxiety. 3) The same-sex attracted group was comparatively not at elevated risk for any health risk.

Discussion: Results point to the importance in research and practice to consider sexual attraction in a more differentiated fashion, including opposite-, same- and both-sex attraction. Larger samples are needed to better inform supports and interventions for these potentially vulnerable groups.

Topic Area: Substance Use

Poster Session B, Tuesday, October 9, 11:30 a.m. – 1:00 p.m., Essex Ballroom

B1
Clinical-high Risk for Psychosis in Adolescence: Findings from the Two-year Follow-up of the ReARMS Project

Andrea Raballo[1], Lorenzo Pelizza[2], Michele Poletti[2], Silvia Azzali[2], Federica Paterlini[2], Ilaria Scazza[2], Sara Garlassi[2], Luigi Rocco Chiri[3], Francesca Fontana[2], Rosanna Favazzo[2], Luana Pesieri[2], Enrico Semrov[2]

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The clinical significance and the prognostic value of Clinical High Risk (CHR) for psychosis while substantially corroborated in adults, remains less firmly established in early adolescents. This follow-up study, developed within the Reggio Emilia At Risk Mental States (ReARMS) project, is meant to contribute to the reduction of such lacuna, and has two main aims: (a) to characterize the clinical profile of help-seekers (stratified in non-CHR, CHR and First Episode Psychosis [FEP]) referred to child-adolescent mental health services; and (b) to monitor the cumulative transition rate from CHR to FEP in adolescents at the follow up of 12 and 24 months. 112 adolescents (aged 13–18 years) were assessed with the Comprehensive Assessment of At Risk Mental States (CAARMS) and the Schizophrenia Proneness Instrument, Child and Youth version (SPI-CY). 51 subjects met CHR criteria (45.5% of the sample) and 33 subjects met FEP criteria (29.5%) at baseline. The criterial transition rate from CHR to FEP was 4.9% over 12 months and 14.3% over 24 months; higher rates of cumulative transition were detected when also functional transition (indexed by the consensual introduction of antipsychotic medication by the treating clinical staff) was considered. The identification of CHR for psychosis in help-seeking adolescents is feasible and clinically relevant. Studies conducted in real-world, publicly funded components of the national health system, should take in consideration not only criterial, psychometric transition, but also functional equivalents of transition.

Topic Area: Epidemiology

B2
Help-seeking for Mental Problems in the General Population: Results from a Swiss Telephone Survey

Chantal Michel[1,2], Nina Schnyder[1], Stefanie J. Schmidt[1], Susann Ochsenbein[1], Nicola Groth[1], Benno G. Schimmelmann[1,3], Frauke Schultze-Lutter[1,4]

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Objective: Absent or delayed help-seeking is considered to aggravate the immense personal and societal burden caused by mental disorders. This study aimed to examine rates and moderators of help-seeking for current clinician-assessed non-psychotic mental problems/disorders in the community.

Methods: In total, 2,683 individuals of the Swiss Canton Bern (16–40 years old, response rate of 63.4%) were interviewed by telephone for current axis-I problems/disorders using the Mini-International Neuropsychiatric Interview, for psychosocial functioning using the Social and Occupational Functioning Assessment Scale, and for help-seeking for mental problems.

Results: In total, 1,122 (41.8%) reported mental problems, in which 769 (28.7%) affirmed any one screening question and 353 (13.2%) fulfilled criteria for any current axis-I disorder. Of 1,122 individuals, 35.3% reported having sought help at any time; 28.3% of which reported having sought help in the past and 7.0%, being in current treatment. In path analyses, current help-seeking was predicted mainly by type and number of mental problems/disorders mediated by functional impairment, in addition to older age, no current partner, and past treatment.

Conclusion: We found a significant gap in the treatment of mental problems/disorders. Relationship between number of mental problems/disorders and help-seeking mediated by functional impairment indicates that a higher disease burden leads to more help-seeking. Our findings confirm that individuals commonly do not seek help until problems are severe enough to cause problems in occupational and psychosocial functioning, driving the already immense costs of mental disorders. Thus, campaigns promoting help-seeking should focus on psychosocial functioning, aside from signs of mental illness.

Topic Area: Epidemiology

B3
The Interplay of Etiological Knowledge and Mental Illness Stigma on Healthcare Utilisation in the Community: A Structural Equation Model

Chantal Michel[1,2], Nina Schnyder[1], Radek Panczak[3], Susann Ochsenbein[1], Benno G. Schimmelmann[1,4], Frauke Schultze-Lutter[1,5]

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The stigma of mental illness, especially personal attitudes towards psychiatric patients and mental health help-seeking, is an important barrier in healthcare utilisation. These attitudes are not independent of each other and are influenced by other factors, such as mental health literacy, especially the public's causal explanations for mental problems. We aimed to disentangle the interrelations between the different aspects of stigma and causal explanations with respect to their association with healthcare utilisation. Stigma and causal explanations were assessed cross-sectional using established German questionnaires with two unlabelled vignettes (schizophrenia and depression) in a random-selection representative community sample (n = 1375, aged 16-40 years). They were interviewed through a prior telephone survey for current mental disorder (n = 192) and healthcare utilisation (n = 377). Structural equation modelling was conducted with healthcare utilisation as outcome and stigma and causal explanations as latent variables. The final model was additionally analysed based on the vignettes. We identified two pathways. One positive associated with healthcare utilisation, with high psychosocial stress and low constitution/personality related causal explanations, via positive perception of help-seeking and more help-seeking intentions. One negative associated with healthcare utilisation, with high biogenetic and constitution/personality, and low psychosocial stress related explanations, via negative perception of psychiatric patients and a strong wish for social distance. Sensitivity analysis generally supported both pathways with some differences in the role of biogenetic causal explanation. Our results indicate that campaigns promoting early healthcare utilisation should focus on different strategies to promote facilitation and reduce barriers to mental healthcare.

Topic Area: Epidemiology

B4
The Relationship between Childhood Trauma and Cognitive and Perceptual Biases Associated with Psychosis in a Large UK Birth Cohort

Jazz Croft[1], Jon Heron[1], Christoph Teufel[2], Stanley Zammitt[1,2]

[1]*University of Bristol,* [2]*University of Cardiff*

Childhood trauma is an established risk factor for the onset and development of sub-clinical psychotic experiences (PEs). PEs reported in childhood and adolescence increase the risk of developing a psychotic disorder in adulthood. There is a range of cognitive and perceptual biases that are associated with psychotic symptoms. Theoretically, cognitive and perceptual biases may mediate the relationship between trauma and psychotic symptoms. However, this relationship has not been tested in a large population-based cohort. This study uses data on approximately 3,500 participants from the Avon Longitudinal Study of Parents and Children to investigate whether exposure to trauma during childhood and adolescence is associated with performance on cognitive and perceptual tasks completed at 24 years of age. The tasks examine biases that have previously been associated with psychotic experiences (the beads task that measures hasty decision making, the source monitoring task that measures source attribution and the two-tone image task that assesses a reliance on top-down perception). Socio-demographic measures, IQ and genetic risk for mental health disorders are also included in analytical models as confounding variables. Results that describe the association between trauma and cognitive biases, the extent to which confounding affects the relationship and whether a specific type of trauma (bullying, emotional abuse, neglect, physical abuse, domestic violence, sexual abuse) and the specific timing of trauma (early childhood, middle childhood, adolescence) will be outlined and discussed in relation to integrated bio-psycho-social models of psychosis and implications of findings that may inform novel interventions.

Topic Area: Epidemiology

B5
Vitamin D and First Episode Psychosis

Richard Whale[1,2], Emily Bailey[2], Emily Simmons[2], Emma Cook[2], Daniel Titheradge[2]

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Vitamin D is a regulator of calcium metabolism, essential for bone health, and acts as a neuro-steroid with roles in brain development and ageing. Emerging evidence implicates Vitamin D deficiency in the aetiology of psychosis. This study aimed to explore rates of Vitamin D deficiency in patients with diagnosed FEP in Brighton, UK 50°49'N latitude. Blood samples for 25-hydroxyvitamin D levels were collected from 140 patients between September 2016 and March 2017. The cohort was stratified into individuals at high- and low-risk of deficiency according to the 2014 UK National Institute for Health and Care Excellence guidelines. Levels were classified as deficiency (<25 nmol/L), inadequate (25-<50 nmol/L), adequate (50-<120 nmol/L), and high (>120 nmol/L). The National Diet and Nutrition Survey (NDNS, 2008/09-2011/12) was used as a UK population reference sample. Primary stratification categorised 31% patients as high-risk of Vitamin D deficiency, and 69% low-risk, with significant difference in mean blood Vitamin D levels between groups ($p = 0.005$). In the low-risk group, deficiency was still found in 3 cases (8%) and insufficiency in a further 10 cases (25%). Our cohort demonstrated significantly higher mean Vitamin D levels than the NDNS population sample ($p = 0.002$). Contrary to prevailing literature our cohort demonstrated higher Vitamin D levels than the UK population. Vitamin D deficiency may have a role in psychosis aetiology in some cases. National guidance on stratifying risk of deficiency was valid in our population but inadequate to guide replacement.

Topic Area: Epidemiology

B6
Risk of Involuntary Admission among First-generation Ethnic Minority Groups with First-episode Psychosis: Estimates from Population-based Health Administrative Data

Kelly K. Anderson[1,2,3], Rebecca Rodrigues[1], Arlene MacDougall[1,2]

[1]*Department of Epidemiology & Biostatistics, The University of Western Ontario,* [2]*Department of Psychiatry, The University of Western Ontario,* [3]*Institute for Clinical Evaluative Sciences*

Background: It is well established in the international literature that ethnic minority groups often have more complex and aversive pathways to care. However, Canadian data on this trend is lacking, particularly regarding involuntary admissions. We sought to examine the risk of involuntary admission among first-generation ethnic minority groups.

Methods: Using health administrative data, we constructed a retrospective cohort of first-onset cases of psychotic disorder in Ontario between 2009 and 2016. This cohort was linked to data from Immigration, Citizenship, and Refugee Canada for information on migrant status and country of origin. We followed the cohort for a two-year period after first diagnosis to ascertain the first psychiatric hospitalization event, and compared the risk of having involuntary status for first-generation ethnic minority groups relative to a general population reference group.

Results: Of the 6204 psychiatric hospitalizations in our study cohort, 18.9% (n = 1172) were attributed to first-generation migrants. After adjustment for socio-demographic, clinical, and service-use factors, migrants from Europe (OR = 1.89, 95%CI = 1.19-3.00), the Caribbean (OR = 1.77, 95%CI = 1.05-2.99), and Africa (OR = 2.55, 95%CI = 1.34-4.86) had higher rates of involuntary admission, compared to the general population. There was also evidence of effect modification by gender, with African males having particularly high rates of involuntary admission (OR = 6.63, 95%CI = 1.40-31.38).

Conclusions: Our findings are consistent with the international literature showing increased rates of involuntary admission among some ethnic minority groups with first-episode psychosis. Interventions aimed at improving pathways to care could be targeted at these groups to reduce disparities in access to care for people with psychotic disorders.

Topic Area: Epidemiology

B7
Violence in First-Episode Psychosis Patients: What Do We Know?

Oliver Gil[1], Amal Abdel-Baki[1,2], Alexandre Dumais[1,3]

[1]*Université de Montréal,* [2]*Clinique des Jeunes Adultes Psychotiques, Centre Hospitalier de l'Université de Montréal,* [3]*Institut Universitaire en Santé Mentale de Montréal*

Introduction: Very few studies have been conducted to investigate the prevalence of of violent behaviour (VB) and factors associated with it, in FEP patients before and after treatment initiation.

Objective: To describe the prevalence before and after treatment initiation, factors associated to VB, and the evolution of violence in first-episode psychosis (FEP).

Methods: Systematic literature review performed using Pubmed with the following key words: [first episode psychosis OR first episode schizophrenia OR early psychosis OR early schizophrenia] AND [violence OR aggression OR assault OR battery OR homicide OR criminality]. Some additional studies were located by hand searching the reference lists of included studies. Inclusion criteria: FEP population or results presented for the sub-group of FEP, VB prevalence, VB evolution, VB measures, factors associated with VB.

Results: Of the 707 articles responding to search criteria, 22 articles were retained. The prevalence of VB before and at admission /after treatment initiation varies between 6.7–67.5% / 9.4–31.0%. Variable methodologies (e.g., various definitions of VB, different measures,, populations, etc) could explain these discrepancies. Some factors were repeatedly associated with VB such as male gender, young age, unemployment, drug use, past violence, manic symptoms. Most studies have a follow-up duration of less than 3 years.

Conclusion: Though the association between untreated first-episode psychosis and violence is well established, more longitudinal data pertaining to the long term evolution and factors associated with VB, following the initiation of treatment, is needed.

Topic Area: Epidemiology

B8
The Time Has Come to Eliminate the Gaps in the Under-recognized Burden of Elder Mistreatment: A Community-based, Cross-sectional Study from Rural Eastern Nepal

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Elder mistreatment is a well-recognized public health issue, and it is a violation of human rights. Various exceptionally complex underlying factors contribute to its occurrence. The current study hypothesized that there is no effect of any of the following factors on any type of elder mistreatment: ethnicity, age group, education status, gender, living arrangement, concentration problems, medication for any disease, income level of caregiver, use of psychoactive substances, and dependence on family or caregivers for daily activities. We conducted a cross-sectional study of 339 elders residing in a rural part of eastern Nepal between August and November 2016. Multi-stage cluster sampling was adopted to select the study subjects. Information was collected using semi-structured questionnaires administered to elderly people by a designated interviewer. Our findings revealed that 61.7% of 60+-year-olds experienced some form of mistreatment (physical 2.4%, psychological 22.4%, caregiver neglect 57.5%, financial 12.1% and stranger-inflicted 8.3%). Elder mistreatment was associated with the following characteristics of elders: dependent on family for daily living activities, uneducated, experiencing concentration problems, residing in a living arrangement with their son(s)/daughter(s)-in-law, taking regular medications, belonging to the Dalit community according to the Hindu traditional caste system, and residing with a caregiver having a monthly family income of less than NRs. 20,000 (200 USD). Our data show that elder mistreatment is prevalent in a rural community of Nepal. Addressing the lower socio-economic or socio-cultural classes of caregivers and elders via community-focused development programs might have significant implications for improving the well-being of elders.

Topic Area: Epidemiology

B9
Risk Factors Analysis of Long Hospital Stay of Schizophrenia Patients: A Retrospective Study

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[1]*Tongde Hospital of Zhejiang Province*

Objective: [:] Explore the risk factors of long hospital stay (>60 days) inpatients of schizophrenia and provide evidence for community mental rehabilitation.

Methods: With multifactor Logistic regression analysis method, 460 cases of schizophrenia who were hospitalized in Tongde hospital of Zhejiang province from 2011-2015 year were investigated demographic factors and characteristics of the disease for the risk factors of long hospital stay.

Results: 460 cases of patients with schizophrenia, male 262 cases, 56.95%, female 198 cases, 43.05%, average age (50.51±15.40)years old, married(354 cases, 76.96%), below high school education level (278 cases, 60.43%), retirement/unemployment (338 cases, 73.48%) and course of the disease >5 years(377 cases, 81.96%). Multi-factor Logistic regression analysis results show that older age (OR = 3.846, 95%CI: 1.988~7.440),the longer course of the disease (OR = 5.816, 95%CI: 2.948~11.472) were danger factors for patients with long-term hospitalization; female (OR = 0.580, 95%CI: 0.352~0.954), high degree of education (OR = 0.072, 95%CI: 0.040~0.129) were protective factors for patients with long-term hospitalization.

Conclusion: High age, long duration, low cultural level, and male are risk factors for long-term hospitalization for schizophrenia.

Topic Area: Epidemiology

B10
Cannabis use and Hypomania in Young People: A Prospective Analysis

Steven Marwaha[1], Catherine Winsper[1], Paul Bebbington[2], Daniel Smith[3]

[1]*University of Warwick*, [2]*University College London*, [3]*University of Glasgow*

Background: Cannabis use in young people is common and associated with psychiatric disorders. However, the prospective link between cannabis use and bipolar disorder symptoms has rarely been investigated. The study hypothesis was that adolescent cannabis use is associated with hypomania in early adulthood via several potential etiological pathways.

Methods: Data was used from the Avon Longitudinal Study of Parents and Children, a UK birth cohort study. The prospective link between cannabis use at age 17 and hypomania at age 22-23 years was tested using regression analysis, adjusted for gender, early environmental risk factors, alcohol and drug use, and depression and psychotic symptoms at age 18 years. Path analysis examined direct and indirect effects of the link and whether gender, childhood family adversity, or childhood abuse are associated with hypomania via an increased risk of cannabis use.

Results: Data were available on 3,370 participants. Cannabis use at least 2-3 times weekly was associated with later hypomania (Odds Ratio: 2.21, 95% CIs: 1.49-3.28) after adjustment. There was a dose-response relationship (any use vs. weekly). Cannabis use mediated the association of both childhood sexual abuse and hypomania, and male gender and hypomania. The cannabis use-hypomania link was not mediated by depression or psychotic symptoms.

Conclusions: Adolescent cannabis use may be an independent risk factor for future hypomania, and the nature of the association suggests a potential causal link. Cannabis use mediates the link between childhood abuse and future hypomania. As such it might be a useful target for indicated prevention of hypomania.

Topic Area: Mood Disorders

B11
The Highs and Lows of Caregiver Experience in Youth Bipolar Disorder

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During the early stages of serious mental illness, carers often struggle to understand what has happened to their loved one and caregiving can have considerable psychological, emotional, and physical impacts. While caregiver burden in first episode psychosis has been well documented, there is little understanding of burden associated with caring for a young person who has recently experienced the onset of bipolar disorder. In this presentation an overview will be provided of the literature on caregiving in bipolar disorder and some of the early themes that emerge from a study involving caregivers of youth who are in the early stages of recovery following a first episode of mania will be presented. Factors that will be explored include carer burden, expressed emotion, health, wellbeing, and coping strategies. Better understanding of the subjective and objective experience of carers of youth bipolar disorder may assist in development of interventions aimed at reducing carer burden and promoting adaptive coping strategies and wellbeing. In addition to benefiting caregivers, this may also enhance outcomes for young people with bipolar disorder.

Topic Area: Mood Disorders

B12
Age of Onset of Bipolar Disorder: A Systematic Review and Meta-analysis

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Objective: As many studies of age of onset (AOO) of bipolar disorder (BD) have been reported but not synthesized, we carried out a systematic review and meta-analysis of this large research literature.
Methods: We analyze findings from literature searches of the PubMed, Web of Science and Psychology & Behavioral Sciences Collection databases, from their inception through 31 July 2014. Pooled estimates the AOO of BD were calculated by random-effects, meta-analytic modeling, and factors were investigated for influence on between-study heterogeneity with subgroup and meta-regression analyses.
Results: Of 8,735 initially identified reports, 252 met inclusion criteria, and represented 68,471 individuals. The overall, pooled average was 25.8 years (95% Confidence Interval [CI]: 25.2–26.3) with high inter-study heterogeneity. There were marked differences in the pooled AOO between countries (Hungary, 19.9, to Croatia, 45.0 years) and world regions (UK 22.0, to East Asia 29.3 years). Mean age, gender, study design, method of estimating AOO, polarity of first-lifetime episode and family history of mood disorder had no association with reported AOO. BD-II did not have older onset than BD-I, even in 14 studies with both diagnoses evaluated under matched conditions.
Conclusions: The findings support expectation that most patients diagnosed with BD have their AOO between ages 15 and 30 years. At variance with some primary research, family history and BD-I diagnosis were not associated with younger AOO. Our study suggests that there might be genuine differences in the age of onset on bipolar disorder across geographic regions but it does explain these differences.

Topic Area: Mood Disorders

B13
Prognosis of Early-onset Bipolar Disorder Compared to Early-onset Schizophrenia and Healthy Controls in a Nationwide Register Based Study

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Aims: To investigate differences in outcomes between early-onset bipolar disorder (BD) compared to schizophrenia and healthy controls.
Methods: 5 to 17 years old patient diagnosed with BD (ICD-10 F30.X or F31.X) for the first time between 1995 and end of 2014 were included and matched 1:1 to schizophrenia (F20.X) and 1:3 to healthy controls. Several regression models investigating intentional self-harm acts, fracture and criminal charges in all groups and days hospitalized, admissions and outpatient contacts in patient groups were conducted, adjusted for family history of psychiatric disorder, substance misuse and age at first psychiatric contact.
Results: The cohort comprised 365 youth with incident BD, 349 with incident schizophrenia and 1,095 healthy controls. The annual rate of days hospitalized were 16 days (95% CI: 12.69-18.80) in the BD cohort, and 33 days (95% CI: 27.88-37.94) for the schizophrenia cohort. Patients in the BD cohort had a decreased incidence rate ratio of admissions as compared to the schizophrenia cohort (IRR 0.44, 95%CI (0.41-0.48), P < 0.001), with similar results on of outpatient contacts (IRR = 0.72, 95%CI (0.71-0.74), P < 0.001), intentional self-harm acts (IRR = 0.30, 95%CI (0.21-0.42), P < 0.001), healthcare contacts due to fractures (IRR = 0.68, 95%CI (0.50-0.91), P<0.01), and criminal charges (IRR = 0.86, 95%CI (0.74-0.99), P < 0.05). Patients in the BD cohort was associated with an increased IRR of intentional self-harm acts compared to healthy controls (IRR = 2.80, 95%CI (1.75-4.48), P < 0.001).
Conclusions: Early-onset BD have a better prognosis compared to psychiatric controls, but worse than healthy controls. Further studies should focus on interventions to improve outcomes on intentional self-harm acts.

Topic Area: Mood Disorders

B14
Development of a Mental Health Literacy Scale of Depression

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Mental health literacy (MHL) is defined as "knowledge and beliefs about mental disorders, which aid their recognition, management, or prevention" by Jorm. MHL includes six components currently not considered in the MHL scale of depression. The aim of this study was to develop a MHL scale of depression based on the aforementioned definition. We conducted 1) a literature review and 2) interviews of depressed patients and extracted 78 questions satisfying all MHL components. A questionnaire survey was conducted on 966 undergraduate students. Both exploratory factor analysis and confirmatory factor analysis were applied for validation and provided two goodness models. Model 1 consisted of two factors (recognition of depression symptoms and onset and suicide possibility) with 8 questions (goodness-of-fit index [GFI] = 0.974, adjusted GFI [AGFI] = 0.951, confirmatory fit index [CFI] = 0.963, root mean square error of approximation [RMSEA] = 0.064, Akaike's information criterion [AIC] = 127.904). Model 2 consisted of three factors (recognition of depression symptoms, etiology of depression and onset and suicide possibility) with 12 questions (GFI = 0.953, AGFI = 0.929, CFI = 0.938, RMSEA = 0.064, AIC = 308.272). Based on the AIC value, we estimated that Model 1 was better. Adequate Cronbach's alpha (α = 0.73) and test-retest (intraclass correlation coefficient = 0.77) levels attested the reliability of this model. However, the health locus of the control scale used to validate the criterion and the validity were not correlated (r = -0.11, P<0.01). In the future, we will investigate the relationship between the MHL of depression and actual help-seeking behavior using this new scale.

Topic Area: Mood Disorders

B15
Will it Happen Again? Course of Illness and Predictors of Relapse in First Episode Mania

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Minimisation or denial of the risk of relapse is common following a first episode of mania. However, bipolar disorder can be a highly recurrent illness and unfortunately many young people do experience one or more relapses in the years following their initial episode. The aim of this study was to examine the early course of the disorder and identify factors associated with relapse in a youth population following treatment for first episode psychotic mania. Seventy-four patients treated at Orygen Youth Health in Melbourne, Australia and enrolled in a pharmacotherapy randomised controlled trial (RCT) were prospectively followed up for 18-months, with their course mapped through regular outpatient appointments and research assessment. The design of the RCT allowed close monitoring of the timing of symptom recurrences, changes to treatment, and examination of the association of clinical variables and medication status with relapse. Our study showed high rates of relapse early in the course of bipolar disorder despite high quality biopsychosocial treatment, with sixty-two percent of participants experiencing one or more affective and/or psychotic relapses. Results from logistic regression and survival analyses will be presented. Understanding risk factors for recurrence has important clinical implications, particularly for psychological early intervention aimed at relapse prevention.

Topic Area: Mood Disorders

B16
Good Psychometric Properties of the Birchwood Insight Scale for Patients with Bipolar Disorder

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Birchwood Insight Scale (BIS) is a self-report questionnaire assessing patients' awareness of illness, the ability to re-label unusual mental events as pathological and perceived need for treatment. Several studies have demonstrated its validity in patients with non-affective psychotic disorders, but validation studies in bipolar disorder (BD), where insight also could be compromised, is lacking. The aim of this study was to provide knowledge of the psychometric properties of BIS in a large BD sample. Secondary we aimed to investigate the concordance between BIS and single items assessing insight in the YMRS-C and the PANSS. We studied BIS in 998 participants, including a BD sample (BDI n = 282; BDII n = 138) and a reference sample comprising schizophrenia spectrum disorders (SCZ n = 577). We performed confirmatory factor analysis to examine the factorial structure of BIS in all three diagnostic groups. Bivariate correlational analysis was applied to examine the relationship between the different insight measures. Confirmatory factor analyses indicated a reasonable model fit to the original three-factor subscale structure of BIS in the BDI and BDII samples, in addition to the SCZ sample. The BIS full scale score and its subscales correlated significantly with both the PANSS G12 and YMRS item 11 in both BDI and SCZ. In BDII, however, the BIS correlated poorly for all scales. Our study supports the use of BIS in BD populations. The study also demonstrates that patients' self-reports of insight correspond to clinician-based single item ratings of insight in BDI and SCZ.

Topic Area: Mood Disorders

B17
Sleep in Early Course Psychosis Patients and Their first-degree Relatives

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Accumulating evidence suggests that abnormal sleep is a key feature of schizophrenia. In particular, a deficit in sleep spindles has been frequently reported, with this deficit being associated with impaired cognition and increased positive symptoms. Most work however has focused on chronically medicated patients, and it is unclear whether these deficits are seen in early course, minimally medicated patients. We report here on initial data collected in an investigation into sleep physiology in early course psychosis patients and their first-degree relatives, and the association between sleep and cognitive and symptom measures. Participants to date include 12 early course psychosis patients (n = 8 schizophrenia (SZ), n = 4 non-schizophrenia psychosis (NSZ)), 14 first-degree relatives of schizophrenia patients (FH), and 14 healthy controls (HC). Ongoing analyses focus first on differences in sleep architecture between the groups. Second, differences in sleep spindle activity will be investigated. It is hypothesized that the SZ and FH groups will show reduced spindle density compared to NSZ and HC. Finally, spindles measures will be correlated with measures of cognitive functioning and symptoms. It is expected that lower spindle density will be associated with reduced cognitive functioning and increased positive symptoms. By focusing on early course patients who have received minimal medication and unaffected first-degree relatives, this study will be important in teasing apart effects of medication and illness chronicity from biological differences between patients, relatives and controls.

Topic Area: Neurocognition

B18
Cognitive Enhancement Therapy: Moving Research into Community Mental Health Settings

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This presentation will highlight the successful implementation of Cognitive Enhancement Therapy (CET) in community mental health treatment settings. CET is a recovery-phase intervention for remediating neurocognitive and social-cognitive deficits in schizophrenia. Hogarty and colleagues at the University of Pittsburgh developed CET and conducted the first study in 2004 with 121 participants diagnosed with schizophrenia or schizoaffective disorder, which provided evidence that the intervention could improve cognitive and functional outcomes in this population. Multiple research studies have replicated these findings, but implementation in community mental health centers has been limited. In 2015, The Best Practices in Schizophrenia Treatment (BeST) Center at Northeast Ohio Medical University (NEOMED) began a collaboration with researchers from the University of Pittsburgh to implement CET as a best practice in the community. The BeST Center's mission is to promote recovery and improve the lives of as many people with schizophrenia as possible by accelerating the adoption of evidenced-based and promising practices. To achieve its mission, the BeST Center offers training, consultation, and technical assistance to build the capacity of local systems to provide state-of-the-art-care. Using a "train-the-trainer" model, University of Pittsburgh researchers trained and provided technical assistance to a BeST Center consultant and trainer while she provided CET treatment and trained clinicians in vivo at two rural mental health agencies. Attendees will hear the initial implementation strategies and the iterative process used to implement CET in community mental health agencies. Preliminary findings, barriers, keys to successful translation implementation, and future directions will be discussed.

Topic Area: Neurocognition

B19
The Relationship between Confidence in Cognitive Abilities, Role Functioning, and MCCB Performance in First-episode Psychosis

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Background: Neuropsychological performance is a predictor of functioning in schizophrenia and first episode psychosis (FEP). Individuals' beliefs about their abilities are also likely to impact behaviors and performance. However, there is no known research on whether confidence in cognition affects neuropsychological performance and role functioning.

Methods: A new measure, the Cognitive Confidence Scale (CCS) is a 12-item self-report measure that asks participant to rate their confidence in a range of areas of cognitive ability. A pilot sample of FEP clients were assessed with the CCS, the global functioning role scale (GFR), and the MATRICS Cognitive Consensus battery (MCCB) (n = 20). We investigated whether cognitive confidence (CC) was correlated with GFR or performance on the MCCB, or if CC moderates the relationship between GFR and MCCB performance.

Results: CCS subscales and totals did not significantly correlate with MCCB performance. A regression predicting GFR from MCCB performance and CCS was significant, $F(2,17) = 3.942$, $p = 0.039$, with both predictors contributing independently to prediction of role functioning. A moderation analysis showed a significant trend in a moderator variable, $F(1, 16) = 3.620$, $p = 0.075$, with CCS moderating the relationship between GFR and MCCB performance.

Discussion: Although CC was not related to cognitive performance in this pilot sample, CC may moderate the influence of MCCB performance on GFR. This suggests that in order to remediate functional deficits, clinicians must not only address cognitive abilities but also address clients' confidence in their abilities. Results are limited by the small sample size, but provide a starting off point for future studies and exploration.

Topic Area: Neurocognition

B20
The Effect of Rehabilitation Combined with Cognitive Remediation on Functioning in Persons with Severe Mental Illness: Systematic Review and Meta-analysis

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Objective: Psychiatric rehabilitation (PR) can improve functioning in people with severe mental illness (SMI), but outcomes are still suboptimal. Cognitive impairments have severe implications for functioning and might reduce the effects of PR. It has been demonstrated that performance in cognitive tests can be improved by cognitive remediation (CR). However, there is no consistent evidence that CR as a stand-alone intervention leads to improvements in real-life functioning. The present study investigated whether a combination of PR and CR enhances the effect of a stand-alone PR or CR intervention on domains of functioning.

Methods: A meta-analysis of randomized controlled trials of CR combined with PR in people with SMI was conducted, reporting on functioning outcomes. A multivariate meta-regression analysis was carried out to evaluate moderator effects.

Results: The meta-analysis included 23 studies with 1,819 patients. The combination of CR and PR had beneficial effects on employment outcomes (e.g. employment rate: SMD = 0.41, 95% CI 0.10-0.72), and social skills (SMD = 0.25, 95% CI 0.14-0.37). No beneficial effects were found on relationships and outcomes of community functioning. Effects on employment outcomes were moderated by years of education, intensity of the intervention, type of CR approach and integration of treatment goals for PR and CR. Type of PR was no significant moderator.

Conclusions: Augmenting PR by adding cognitive training can improve vocational and social functioning in patients with SMI more than a stand-alone PR intervention. First indications exist that the same is true for the effect of the combined intervention, compared to a stand-alone CR intervention.

Topic Area: Neurocognition

B21
Metacognition and Negative Symptoms in First Episode Psychosis: A Long-term Follow-up

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Background: Metacognition can be described as the ability to think about mental states and metacognitive deficits have been observed in schizophrenia. Negative symptoms are considered core psychopathology in schizophrenia. Recent research has identified the importance of negative symptoms and metacognitive deficits in long-term outcomes for people with schizophrenia.

Aim: The goal of this study was to examine the relationship between metacognitive functioning and negative symptoms at long-term follow-up for people with first episode psychosis. Design: The prospective study used the Metacognitive Assessment Scale (MAS) to assess metacognition based on free narratives of patients' personally relevant episodes and relationships. Negative symptoms was assessed using the Positive and Negative Symptom scale (PANSS).

Results: Results collected from participants (n = 58) revealed a significant correlation between baseline MAS scores and negative symptoms at three year follow-up ($r = 0.44$, $p < 0.001$). A regression analysis revealed that MAS baseline scores accounted for 19% of the variance of negative symptoms displayed at 3 years. A hierarchical regression revealed that baseline negative symptoms accounted for 20% ($F(1,56) = 14.10$, $p < 0.000$) of the variance negative symptoms displayed at 3 years and MAS baseline scores explained a further 3% ($F(2,55) = 8.39$, $p < 0.001$) of the variance of negative symptoms at 3 year follow-up.

Conclusion: Metacognitive deficits and negative symptoms may be causally linked and therefore interventions that reduce psychopathology associated with these two factors may have implications for improving long-term outcomes in first episode psychosis. Further studies are required to clarify the relationship between metacognition and negative symptoms.

Topic Area: Neurocognition

B22
Longitudinal Changes in the Striatum and Subthreshold Positive Symptoms in Individuals with an 'At Risk Mental State' (ARMS)

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Background: The striatum is implicated as a crucial site for dopaminergic dysregulation in schizophrenia due to its high density in dopamine receptors. Recent studies have revealed that several psychotic symptom changes observed in 'at risk mental state' (ARMS) as well as schizophrenia are associated with changes in the striatum. While previous studies have focused on factors leading to exacerbation of symptoms and transition to full blown psychosis, we sought to investigate if structural changes in the striatum are associated with recovery of subthreshold positive psychotic symptoms in subjects with ARMS who did not develop psychosis (ARMS-N).

Methods: Sixteen healthy controls and 42 ARMS (37 ARMS-N) subjects participated this study. Striatal volume (bilateral caudate, putamen, and nucleus accumbens) were analyzed using magnetic resonance imaging. Subthreshold psychotic symptoms of the ARMS subjects were measured using the Scale of Prodromal Symptoms (SOPS). Imaging and symptoms were reevaluated in the ARMS group 52 weeks later. This study was approved by the Ethics Committee of the Toho University.

Results: Significant right putamen volume reduction was observed at the 1-year follow-up in ARMS-N subjects. There was relationship between improvement in subthreshold psychotic symptoms and volume increase in a sub region of the striatum at follow-up.

Conclusion: The association between improvement in subthreshold positive symptoms and an increase in volume in a sub region of striatum may suggest that changes in the striatum, which is a major site for dopamine innervation, are associated with symptom recovery.

Topic Area: Neurocognition

B23
Deficit in Motor Self-monitoring in Schizophrenia with Passivity Experiences: A Novel Joint Position Matching Paradigm

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Deficit in motor self-monitoring is associated with passivity experiences. It is proposed that the loss of the sense of agency in patients with passivity experiences originates from abnormalities in the motor control system. The current study examined the abnormalities of efferent copy and predicted state in the motor control system of patients with relevant (passivity) symptoms. Using a novel paradigm which is a modified joint position matching task, we compared the replication accuracy between voluntary and passive (tactile and verbal) movements in 20 patients with (mean age 31.9 $\pm$ 12.0 years) and 20 patients without (mean age 32.3 $\pm$ 13.3 years) relevant symptoms and 25 healthy controls (mean age 31.3 $\pm$ 8.4 years). It was hypothesized that the replication accuracy is improved in voluntary condition in healthy control and less apparent in patients without relevant symptoms but not be observed in patients with relevant symptoms. The healthy controls and patients without relevant symptoms had better performance in voluntary conditions when compared with passive tactile (2.21 $\pm$ 0.75 cm vs 1.79 $\pm$ 0.51 cm; $p = .02$) and both passive conditions (1.95 $\pm$ 0.69 cm vs. tactile 1.18 $\pm$ 0.51 cm; $p < .001$ and verbal 1.53 $\pm$ 0.57; $p = .01$) respectively. However, the patients with relevant symptoms had poorer performance in voluntary condition than passive tactile condition (2.26 $\pm$ 0.88 vs. 1.86 $\pm$ 0.99 cm, $p = .03$). The findings suggested that schizophrenic patients with passivity experiences are impaired in the motor performances that utilized the direct information from efferent copy and predicted state.

Topic Area: Neurocognition

B24
Eye Movement Abnormalities and Their Role in Neurocognition and Clinical Recovery

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Introduction: Eye movement measures have been known to be impaired in a wide variety of mental illnesses, especially schizophrenia. However, the role of such findings beyond biological perspectives is still to be revealed.

Methods: Data is being collected from healthy subjects, from subjects with chronic mental illness, and from a subgroup of participants of a longitudinal study named the "3R" study, which stands for the three "R"s of Remission, Relapse prevention, and Recovery. The primary aim of the 3R study is to follow the clinical and social outcomes of adolescents and young adults with recent first visits at mental health services.

Results: Preliminary analyses using acquired cross-sectional data of 63 healthy subjects, 13 subjects with chronic schizophrenia, and 14 subjects with early psychosis revealed shorter scanpath length during free viewing tasks in both psychosis groups in comparison with healthy subjects. This measure was also positively correlated with the composite score of the Brief Assessment of Cognition in Schizophrenia (BACS) in subjects with early psychosis ($R = 0.55$, $p = 0.04$) and with total work hours per week from the Social Activity Assessment in subjects with chronic schizophrenia ($R = 0.62$, $p = 0.03$). Scanpath length is a measure of visual exploration known to be impaired in subjects with schizophrenia, and cognitive impairments due to such eye movement abnormalities from an early stage of the illness may be related to these findings. Results from analyses including added data will be presented and interpreted in the context of current literature.

Topic Area: Neurocognition

B25
Does Hedonic Capacity Moderate Improvement during Cognitive Enhancement Therapy for Early-course Schizophrenia? Preliminary Findings

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Cognitive Enhancement Therapy (CET) has shown substantial and lasting effects on neurocognition in schizophrenia. This ongoing study compares the effects and durability of CET to an Enriched Supportive Therapy (EST) control condition in early-course schizophrenia (ES). Prior pilot findings from this study suggested differential neurocognitive improvements favoring CET but have not yet examined the role of hedonic capacity (HC) on these effects. ES outpatients were randomized to CET or EST as part of a 2.5-year randomized-controlled trial. Neurocognition was assessed with the MATRICS Consensus Cognitive Battery (MCCB) and HC was evaluated with pleasantness ratings on the Modified Brief Smell Identification Test. Linear mixed-effects analyses were performed on data from 67 participants at baseline (41 CET, 26 EST) and 37 at 9 months (21 CET, 16 EST). Preliminary results confirmed previous findings of a significant time x group interaction favoring CET on the MCCB Composite score. Of note, there was a main effect for HC in both groups, indicating that those with the largest ranges of ratings between the most pleasant and unpleasant odors showed better neurocognitive performance in their respective conditions. These initial findings continue to suggest that CET is effective in ES, but that the extent of neurocognitive improvement may be partially moderated by HC. Considering the critical role of hedonic and other reward processes in learning, these findings have important implications for incorporating targeted reward-enhancing interventions in cognitive rehabilitation for people with ES. As data for this study accrues, the durability of these effects can be examined further.

Topic Area: Neurocognition

B26
Neurodevelopmental Trajectory of Cognitive Function in Adolescents with a First Episode of Psychosis

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We aimed to assess longitudinally the cognitive function of early onset psychosis (EOP) patients over 5 years. A sample of 107 patients (mean age 15.53 [9-17]) and 98 matched controls (mean age 15.17 [9-17]) completed baseline assessments. Of those, 75 patients and 79 controls completed 2-years and 73 patients and 63 controls completed 5-years longitudinal cognitive assessments respectively as part of the CAFEPS study [2]). Cognitive domains were assessed with a neuropsychological battery that included measures of attention, working memory, learning and memory and executive functions (z-scores). Mixed model analyses were used to examine differences between diagnostic groups in longitudinal cognitive performance using age, gender, socioeconomic status medication, DUP and symptoms as covariates of no interest. Only significant variables were included in the final mixed models. EOP patients did not show significant changes (for better or worse) in cognitive performance between 2 and 5 years follow-up, whereas the control group improved significantly in most cognitive domains. No gains were observed in working memory or verbal memory performance over time in healthy controls, whereas major gains were found in executive functioning. No significant differences were observed between SZ and BP groups in any cognitive domain. Adolescents with psychosis presented a specific cognitive arrest in all cognitive domains evaluated compared with their healthy counterparts during the first five years after illness onset. Our results suggest that during adolescence, patients seem to follow an abnormal neurodevelopmental trajectory in which widespread cognitive dysfunction is a characteristic of both SZ and BD subgroups.

Topic Area: Neurocognition

B27
Associations between Intelligence, Verbal Working Memory, and Processing Speed in Parents with Schizophrenia or Bipolar Disorder and Their 7-year-old Offspring

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Purpose: Neurocognitive phenotypes with high heritability and genetic overlap with schizophrenia and bipolar disorder may contribute to the understanding of pathways from genetic risk to psychopathology. In this study, we aimed to investigate associations of the neurocognitive domains; intelligence, processing speed, and verbal working memory between parents and children in families with schizophrenia, bipolar disorder, and controls.

Methods: The Danish High Risk and Resilience Study – VIA7, is a nationwide cohort identified through Danish Registries. The cohort includes children aged 7 with no, one or two parents with schizophrenia or bipolar disorder and both biological parents. We assessed biological parents and children simultaneously using the same methodology. Main outcomes were intelligence measured with Reynolds Intellectual Screening Test (RIST), verbal working memory, and processing speed assessed with Letter Number Sequencing and Coding subtests (WISC-IV/WAIS-IV).

Results: We examined 489 children, 151 parents with schizophrenia, 100 parents with bipolar disorder, 183 controls, and 443 co-parents without schizophrenia or bipolar disorder. We found significant and small to moderate positive correlations between children and affected parents as well as between children and co-parents. The intelligence scores showed the strongest correlations. We did not find significant differences between the three groups (schizophrenia, bipolar disorder and controls) regarding the associations of intelligence, processing speed, and verbal working memory between children and parents.

Conclusion: Findings showed associations of neurocognitive phenotypes between children and parents. These associations did not differ markedly between families with schizophrenia, bipolar disorder, and controls.

Topic Area: Neurocognition

B28
Examining Feasibility of Using mHealth Technology to Enhance Cognitive Function of Patients at Clinical Risk for Psychosis

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Introduction: Psychiatric interventions demonstrate some effectiveness in reducing subclinical psychotic symptoms among individuals at clinical high risk (CHR) for psychosis, but cognitive skills remain impaired and predict conversion to psychosis. Therefore, an innovative and engaging strategy is critically needed to enhance their cognitive functioning, therefore, improving prognosis. This on-going study in Shanghai Mental Health Center aims to examine the feasibility of a mobile app. to facilitate cognitive improvement of such individuals.

Methods: This NIMH-funded collaboration between researchers from the United States and China ascertains CHR individuals at Shanghai Mental Health Center. Forty participants will use the app—SMART (the Specific Memory Attention Resource and Training), which has gamification features, for 3 months. At baseline and 3-month follow-ups, all subjects will complete questionnaires to measure the feasibility and engagement of the SMART app. In addition, 1:1 in-depth interviews will be conducted at the two time points to cross-validate the findings obtained from the questionnaires.

Results: Both quantitative and qualitative analyses will be used to extract user attitude about the feasibility of using such an app. Results generated will inform the design and implementation of such apps not only for CHR individuals but possibly for patients with other mental health challenges.

Discussion: Mobile health (mHealth) applications with gamification features may offer novel opportunities for providing individuals with CHR targeted cognitive intervention and personalized support critical to improved functional outcomes. Therefore, it is critical to understand their needs and attitude towards using technologies as part of the intervention effort.

Topic Area: Neurocognition

B29
Processing Speed as a Predictor of Psychological Resilience: Preliminary Results from the PRONIA Study

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The study of resilience has attempted to identify factors which make an individual more likely to have better long-term outcomes despite risk for mental illness. Previous research has identified psychological factors which may be associated with resilience. Moving forwards, it is essential that researchers investigate multimodal protective factors which could be incorporated into new interventions. This study investigated the relationship between neurocognition and psychological resilience using data from the PRONIA study. 684 participants aged 15-40 (mean 24.62) completed a comprehensive neurocognitive test battery and the Resilience Scale for Adults (RSA). The sample included individuals with first-episode Psychosis (N = 144), first-episode depression (N = 141), ultra-high risk for psychosis (N = 134), and healthy controls (N = 265). Multiple regression analysed the prediction of RSA total score using the neurocognitive test scores. The final model significantly predicted RSA total score, explaining 4.1% of the variance in these scores, $F(1,518) = 23.19$, $p<0.001$. Performance on the Digit-Symbol Substitution Test, a measure of processing speed, significantly predicted RSA total ($\beta = 5.6$, $p<.001$). In this study processing speed had a small, but significant relationship with psychological resilience. Resilience is a dynamic process, by which individuals utilise assets and resources to their benefit. Processing speed may support mechanisms such as social skills and reasoning which allow an individual to function well despite adversity or risk. The results should be interpreted in the context of the study's limitations, including the cross-sectional design and reliance on self-report measures of resilience. Future research should examine resilience longitudinally, identifying further multimodal protective factors involved in this process.

Topic Area: Neurocognition

B30
Barriers and Facilitators to Computerized Cognitive Training: A Qualitative Analysis

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The use of computerized cognitive training (CCT) as a rehabilitative tool for neurocognitive impairment in schizophrenia has demonstrated strong efficacy, gaining significant traction in the field of early intervention for psychosis. However, adherence to CCT at the required level of intensity in clients with psychosis can be challenging. To address this, utilizing a qualitative approach to understand the clients' experience of completing CCT could represent an important step forward in understanding the barriers and facilitators to successful completion. In this ongoing study, across four specialist early-psychosis clinics, clients were recruited to participate in a semi-structured interview exploring factors associated with CCT adherence. All clients were diagnosed with a primary psychotic disorder, had participated in a CCT study, were within two years of onset of their first psychotic episode, and were clinically stable at the time of the interview. We will present preliminary data from a thematic analysis with the aim of providing a qualitative understanding of participants' experiences with CCT within an early psychosis service. Such findings could represent an important step towards developing strategies to improve treatment adherence, improve user experience, and support the implementation of CCT more widely in coordinated specialty care programs for early psychosis.

Topic Area: Neurocognition

B31
Basic Self-disturbance, Neurocognition and Metacognition among Help-seeking Adolescents with and without Attenuated Psychosis Syndrome

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Aim: The goal of this pilot study was to assess the association between basic self-disturbance (SD) and deficits in neurocognitive and metacognitive functioning among help-seeking adolescents with and without attenuated psychosis syndrome (APS).

Methods: Sixty-one non-psychotic, help-seeking adolescents (age 13-18) were assessed with the Examination of Anomalous Self-Experience (EASE), the Structured Interview for Prodromal Syndromes (SIPS), and a new metacognitive approach to neurocognitive assessment applied to two non-social (executive functions and verbal memory) and two social (theory of mind and emotion recognition) domains. After each answer, subjects were also requested to indicate their level of confidence in the answer and to decide whether they desired it to be "counted" toward their total score on the task. Each volunteered answer earned a 5-cent gain if correct, but an equal fine if wrong.

Results: As hypothesized, metacognitive monitoring and control had a significant contribution to the prediction of SD over and above neurocognitive functioning and attenuated psychotic symptoms. However, the direction of this association was positive rather than negative. Also, inconsistent with or hypothesis, it was not moderated by the presence of APS.

Conclusions: These pilot results provide preliminary support for a modest association between SD and metacognition, which is not reducible to neurocognition and APS. Also, they raise an intriguing possibility regarding metacognitive monitoring and control being indicators of hyperreflectivity that characterizes individuals with SD. However, further research with larger samples and high-stress assessment conditions are needed to assess this possibility.

Topic Area: Neurocognition

B32
The Relationships between Childhood Trauma and Cognitive Biases, Cognitive Functions and Symptoms among Individuals Prone to Psychosis

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The relationship between childhood trauma and a risk for developing psychosis is well established. Little is known however about cognitive correlates of trauma which may foster our understanding of the mechanisms how life adversity shape psychosis vulnerability. The aim of our study was to investigate relationships between childhood trauma and cognitive biases, cognitive functions and symptoms. A total of 54 (25 females; mean age 25.63, SD = 4.80) individuals from general population (n = 3006) with the highest score in Prodromal Questionnaire (PQ-19) were clinical assessed using the Comprehensive Assessment of At-Risk Mental States (CAARMS). Cognitive biases were assessed with self-report scale – DACOBS, as well as two experimental tasks assessing jumping to conclusions (the Fish Task) and source monitoring (Action Memory Task). Cognitive functions were assessed by Brief Cognitive Assessment Tool for Schizophrenia (B-CATS), California Verbal Learning Test (CVLT) and D2 Test of Attention. Childhood trauma was measured by The Childhood Experience of Care and Abuse Questionnaire (CECA.Q). All type of trauma was significantly related with cognitive biases, neurocognitive functioning and symptoms. Emotional abuse was related with source monitoring error ($r = 0.36$, $p<0.01$), verbal learning ($r = 0.34$, $p<0.05$) and mood lability ($r = 0.33$, $p < 0.05$). The physical abuse showed a significant relation with external attribution bias ($r = 0.35$, $p < 0.01$), attention ($r = 0.39$, $p < 0.01$) and positive symptoms ($r = 0.36$, $p < 0.05$). The sexual abuse turned out to be related with jumping to conclusion task 80:20 ($r = 0.33$, $p < 0.05$) and suicidality ($r = 0.39$, $p < 0.01$). Dysfunctional information processing as well as compromised neurocognitive functioning is related to early childhood trauma and may shape vulnerability to psychosis.

Topic Area: Neurocognition

B33
Attachment Patterns in 522 7 Year Old Children Born to Parents with Severe Mental Illness and Controls Measured by the Story Stem Attachment Profile

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Results from The Danish High Risk and Resilience Study – VIA7; a population based cohort study Secure attachment is considered a fundamental resilience factor in many ways and our experiences of early attachment figures are thought to be of great importance when we form and maintain social relations later in life. Children born to parents with severe mental illness like schizophrenia (FHR-SZ) or bipolar disorder (FHR-BP) are known to be vulnerable in many aspects of life due to higher risk of developmental delays, cognitive problems and higher risk of trauma and psychopathology. Less is known about if or how severe mental illness among their parents may affect their attachment patterns. We aimed to compare attachment constructs among children with FHR-SZ, FHR-BP and controls measured at age 7 with a validated and recommended instrument SSAP (The Story Stem Assessment Profile). A representative cohort of 7-year-old children with FHR-SZ (N = 202), FHR-BP (N = 120) and none of those two disorders (N = 200) was retrieved using Danish nationwide registers. Children with FHR-SZ were matched to controls on age, sex and municipality. The child examiners were blind to parental diagnoses. Results on level of secure, insecure and disorganized attachment constructs showed no differences when comparing the three groups at an overall level. Subgroup analysis will be presented together with results concerning the parents' own attachment style measured by questionnaire PAM (Psychosis Attachment Measure).

Topic Area: Neurodevelopmental

B34
Fine Motor Skill Deficits in Young People with Previously Reported Psychotic Experiences: A Longitudinal Study

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Objective: To evaluate neuropsychological and motor performance over time in adolescents with psychotic experiences.

Methods: The current research focuses on a longitudinal community-based sample of adolescents (n = 56) conducted over a 10 year follow-up period, assessed over 3 time-points. Psychotic experiences were assessed at two time-points (baseline mean age 12, T2 mean age 16) using the Kiddie Schedule for Affective and Depressive Symptoms (K-SADS). Neuropsychological assessments were also administered at T2, and again at T3 (mean age 20). Neuropsychological assessments measured fine motor skill, speed of processing, executive function and working memory, including subtests of the MATRICS battery.

Results: Participants were considered as those who had reported a psychotic experience at baseline or T2 (n = 18) and those who had not (healthy controls) (n = 38). At T2, no group differences were found on the administered neuropsychological tasks. At T3, a significant group difference was found in the performance on the fine motor skill task ($F = 7.07$, $p = .01$) for both dominant ($F = 4.84$, $p = .03$) and non-dominant hands ($F = 6.25$, $p = .02$), and this remained when controlling for scores of affective psychopathology as measured by the K-SADS ($F = 4.35$, $p = .04$). No other group differences were found on the remaining neuropsychological tasks.

Conclusion: Fine motor skill deficits have been revealed over time in young adults who reported psychotic experiences up to 10 years previously, advancing the knowledge in the trajectory of sub-clinical symptoms of psychosis. This study also emphasises the importance measuring motor skill, in order to delineate the core cognitive deficits found in individuals with psychotic experiences.

Topic Area: Neurodevelopmental

B35
Maternal Mental Illness and Associations with Infant Neurobehavior

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There are greater developmental impairments among offspring of those with schizophrenia compared with offspring of those with affective psychosis (Buka, Seidman, Tsuang, & Goldstein, 2013). It remains unclear, whether psychosis, or the social disadvantages and obstetric concerns that often accompany these disorders, leads to the infant developmental outcomes. We introduce two studies that shed light on stress reactivity as a potential mechanism for explaining neurobehavior among infants of parents with psychosis. In the New England Family Study, 188 mothers and their 237 offspring were identified. Mixed linear models, adjusted for obstetric complications, social disadvantage, and intrafamilial correlations between siblings, examined the effect of maternal psychosis type (non-affective psychosis–NP, affective psychosis–AP, Control) on offspring mental and motor development at 8-months. Adjusted analyses on mental scores revealed a significant group difference ($F(2,199) = 4.97$, $p = .008$). NP infants had significantly lower scores ($M = 78.1$, $SD = 5.2$) relative to controls ($M = 81.2$, $SD = 5.1$), whereas AP infants ($M = 79.5$, $SD = 5.2$) showed no difference relative to the other groups. Adjusted analyses on motor development yielded a significant difference by group ($F(2,199) = 4.63$, $p = .01$) with NP infants having lower scores on motor development ($M = 31.6$, $SD = 4.3$) relative to AP infants ($M = 34.0$, $SD = 4.3$), and controls ($M = 34.1$, $SD = 4.3$). We also describe a new ongoing study that directly measures physiological reactivity using cardiac measures among pregnant women with and without psychosis. Reactivity level and the ability to regulate stress among pregnant women with psychosis may reflect a highly stressed population over and beyond general risks of social adversity and obstetric experiences.

Topic Area: Neurodevelopmental

B36
Social Cognition, Language, Social Skills, and Social Functioning in 7-year-old Children at Familial High Risk for Schizophrenia or Bipolar Disorder – The Danish High Risk and Resilience Study – VIA 7

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Background: Our aim was to characterize social cognition, language, social skills, and social functioning in children at familial high risk for schizophrenia or bipolar disorder compared to children without familial high risk for these two mental disorders.

Methods: The Danish High Risk and Resilience Study – VIA 7 is a prospective cohort study of 522 children, age seven, at familial high risk for developing schizophrenia (FHR-SZ, N = 202) or bipolar disorder (FHR-BP, N = 120) compared to a population-based control group (PBC, N = 200). The cohort was stratified from the Danish National Registers. Children at FHR-SZ were matched on age, gender, and urbanicity to the PBC group. The children at FHR-BP were a non-matched group. All children were assessed with comprehensive, well-validated tests and questionnaires using multiple sources. Social cognition was measured on two dimensions, theory of mind and emotion recognition, including social cognitive processing speed. Also, receptive and pragmatic language, creative generativity, social skills and social functioning were investigated.

Results: Children FHR-SZ showed significant deficits in their theory of mind, receptive and pragmatic language as well as in their social skills and social functioning compared to the PBC group. Children at FHR-BP showed significant social skills impairments. None of the familial high risk groups presented with deficits in emotion recognition or in social cognitive processing speed.

Discussion: Early in neurodevelopment children at FHR-SZ present with impairments within the social cognitive and language domain as well as in their social skills and social functioning. These results enhance the importance of early detection and preventive interventions.

Topic Area: Neurodevelopmental

B37
Reduced Cortical Thickness in Schizophrenia and Schizotypal Disorder

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Background: Schizotypal disorder is characterized by odd behavior and attenuated forms of schizophrenic features without the manifestation of an overt and sustained psychosis. Past studies suggest that schizotypal disorder may share biological and psychological commonalties with schizophrenia. Few studies have compared cortical thickness, which is thought to be a specific indicator of cortical atrophy, between schizophrenia and schizotypal disorder.

Methods: Subjects consisted of 102 schizophrenia and 46 schizotypal disorder patients who met the ICD-10 criteria, and 79 gender- and age-matched healthy controls. Each participant underwent a T1-weighted 3-D MRI scan using a 1.5-T scanner. Cortical thickness was estimated using FreeSurfer. A general linear model adjusting for age and gender was used to estimate the group differences of cortical thickness in each vertex. A Monte Carlo simulation was used to correct for multiple comparisons.

Results: Consistent with previous studies, schizophrenia patients exhibited wide-spread cortical thinning predominantly in frontal and temporal regions compared with healthy subjects. Patients with schizotypal disorder had significantly reduced cortical thickness in the left parahippocampal gyrus, right medial superior frontal gyrus, right inferior frontal gyrus, and right medial orbitofrontal cortex relative to healthy controls. Schizophrenia patients had thinner cortices in the left superior frontal and precentral gyri than those with schizotypal disorder.

Conclusions: Common cortical thinning patterns seen in schizophrenia and schizotypal disorder patients might be associated with vulnerability to psychosis. Our results also suggest that wide-spread cortical thinning in frontal and temporal regions may be related to the manifestation of psychotic symptoms.

Topic Area: Neuroimaging

B38
Vitamin D Levels, Brain Volume, and Genetic Architecture in Patients with Psychosis

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Lower vitamin D levels are found in people with schizophrenia and depressive disorders, and associated with neuroimaging abnormalities such as reduced brain volume. Reduced whole brain and increased ventricular volume are also systematically reported in schizophrenia. In this study we investigated the relationship between vitamin D levels and brain phenotypes in psychotic disorders, and assessed possible interactions with genetic variants that play a role in vitamin D concentration in the body. Our sample consisted of 84 psychosis patients (19 first episode psychoses and 18 first episode mania) and 101 healthy controls. We measured vitamin D levels as serum 25-hydroxyvitamin D (S-25OHD). All participants were genotyped and neuroimaging conducted by structural magnetic resonance imaging. We observed a significant interaction effect of BSML marker (rs1544410) which mediated the association between patient status and both white matter volume (β 23603.3; 95% CI 2732.8 – 48708.6, $p < .05$) and whole brain volume (β 46670.6, 95% CI 8817.8 – 93888.3, $p < .04$). Vitamin D did not predict ventricular volume, which was associated with patient status (β 4423.3, 95% CI 1583.2 – 7267.8p < .002) and CYP24A1 marker (rs6013897) (β 2491.5, 95% CI 269.7 – 4978.5, $p < .04$). This study suggests that genetic variants associated with vitamin D concentration, and not current S-25OHD concentrations, influence white matter and whole brain volume in patients with psychosis. The present findings warrant replication in independent samples.

Topic Area: Neuroimaging

B39
An Investigation of Functional Brain Activity in Youth At-Risk for Serious Mental Illness during a Monetary Incentive Delay Task: Results from the PROCAN Study

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The Monetary Incentive Delay (MID) task shows robust reward anticipation effects making it an ideal paradigm for use in psychiatric populations at risk for anhedonia symptoms. The MID involves making a response to a briefly presented stimulus by pressing a button, where each stimulus is associated with a monetary reward (or none). It has been used extensively in neuroimaging research to identify the neural basis of the affective response to reward, as well as to identify changes in the reward network related to psychiatric symptoms and disorders. However, much less is known about the relationship between the neurobiology of the reward network and youth at-risk for serious mental illness (SMI). In order to address this gap in the literature, the Canadian Psychiatric Risk & Outcome (PROCAN) study used functional magnetic resonance imaging (fMRI) to examine a sample of youth at various stages of risk for SMI while performing the MID task. These stages included healthy controls (HC), non-help seeking youth with risk factors (Stage 0), distressed youth with early mood and anxiety symptoms (Stage 1a), and youth with subthreshold psychotic symptoms (Stage 1b). Although the fMRI results indicated that participants in all stages utilized a similar brain network to perform the task, differences in activity were found in the prefrontal cortex, basal ganglia and insula when comparing the more symptomatic (Stages 1a and 1b) to the less symptomatic participants (HCs and Stage 0).

Topic Area: Neuroimaging

B40
Neural Activity during an Emotional Go-NoGo Task in Youth At-Risk for Serious Mental Illness in the PROCAN Study

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Some patient groups struggle with inhibition in emotional situations. This can be assessed experimentally with the emotional version of the Go-NoGo task. The classic Go-NoGo task has been used to test behavioural inhibition in humans and animals for decades. This task involves creating a prepotent response tendency that must be inhibited in response to a rarely presented NoGo stimulus. The emotional version of the task uses affect-laden stimuli in order to assess both behavioural inhibition, as well as the emotional modulation of this inhibition. Although this task has been widely used in studies with participants with mood disorders, the changes in emotion processing and inhibition involved in these illnesses likely predate diagnosis. The Canadian Psychiatric Risk & Outcome (PROCAN) study used functional magnetic resonance imaging (fMRI) to assess the changes in neural function in a large cohort of youth at various stages of risk for serious mental illness (SMI). These stages included healthy controls (HC), non-help seeking youth with risk factors (Stage 0), distressed youth with early mood and anxiety symptoms (Stage 1a), and youth with subthreshold psychotic symptoms (Stage 1b). Neural activity involved in inhibiting prepotent responses and their interaction with stimulus emotion will be assessed in light of the current mood symptoms of the participants, as these mood symptoms are predicted to moderate the relationship between impulsivity and emotional regulation in this task.

Topic Area: Neuroimaging

B41
White Matter Differences in Individuals at Clinical High Risk for Psychosis – Findings from the SHARP Project

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White matter (WM) microstructural differences measured with diffusion tensor MRI (DTI) have been consistently associated with psychotic disorders and may be apparent prior to illness onset. The prodromal phase of these disorders typically occurs in a period of development when significant changes in brain structure and function occur, raising the possibility that disruptions in these processes contribute to the development of psychosis. To investigate WM differences before the onset of psychosis, we used diffusion data from the Shanghai at Risk for Psychosis (SHARP) study including 92 healthy controls and 159 individuals at clinical high risk (CHR) for psychosis who were largely medication-naïve, and group matched for age and sex. Using tract-based spatial statistics in FSL, the ENIGMA-DTI protocols were run on fractional anisotropy (FA) maps. The average FA was extracted within nine WM regions of interest (ROIs) previously implicated in psychosis, including the whole corpus callosum (including body, genu, and splenium), anterior limb of internal capsule, anterior corona radiata, uncinate fasciculus, superior longitudinal fasciculus, and average FA across the WM skeleton. After FDR correction, CHR individuals showed reduced FA in the uncinate ($p = 0.04$), and in the corpus callosum ($p = 0.04$), including the body ($p = 0.04$) and splenium ($p = 0.04$). In the CHR group, 22 individuals later converted to psychosis, however, no significant FA differences were observed between converters and non-converters at baseline. We plan to follow-up these analyses with measures from free-water imaging as it is hypothesized that elevated FW may be associated with an acute response related to the onset of psychosis.

Topic Area: Neuroimaging

B42
Using Deep Neural Network to Differentiate Brain Activity between Patients with Recent-Onset Schizophrenia and Healthy Individuals

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Backgrounds: Reduced brain cortical activity has been reported in patients with schizophrenia, and could reveal the underlying neural correlates of the neuropathophysiology of the disease. The study of schizophrenia at early stage is of particular interest because the confounding role of chronicity and medication can be excluded. The aim of this study was to automatically discriminate patients with recent onset schizophrenia (ROS) and normal controls on the basis of brain activity measured by near infrared spectroscopy (NIRS) employing a support vector machine (SVM) and deep neural network (DNN) classifier.

Methods: A total of 33 ROS patients and 34 healthy controls (HCs) underwent NIRS while performing two versions of verbal fluency tests (VFTs). The patterns of hemodynamic changes in brain cortical activity of the bilateral frontemporal regions during the VFTs were selected as features in SVM and DNN classifier.

Results: Compared to HCs, patients displayed reduced brain cortical activity over the bilateral frontotemporal regions during both types of VFTs. With regard to the classifier performance, SVM reached an accuracy of 68.6%, while DNN reached an accuracy of 79.7% in the classification of patients and normal controls.

Conclusions: Similar to previous study, we confirmed that brain activity during the VFT measured by NIRS could be used as a potential marker to classify patients with schizophrenia, who show reduced brain activity in respect to normal controls. Moreover, we found DNN approaches have improved ability to learn hidden patterns in brain imaging data.

Topic Area: Neuroimaging

B43
Lower Glutamate Level in Temporo-parietal Junction may Predict a Better Response to tDCS in Schizophrenia: A Pilot Study

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Several key neurotransmitters such as glutamate have been suggested as a mediating factor in psychotic symptoms including auditory hallucination. It has been suggested that transcranial direct current stimulation (tDCS), a non-invasive neuromodulation technique, may be useful in reducing auditory hallucination, but the role of the neurotransmitters in regard to the treatment effect in schizophrenia remains unclear. Therefore, we investigated alteration of key neurotransmitters including glutamate and gamma-aminobutyric acid (GABA) in temporo-parietal junction (TPJ) after tDCS intervention in 7 schizophrenia patients, using magnetic resonance spectroscopy (MRS) technique. Positive and Negative Symptom Scale (PANSS) total and general psychophathology scale showed a significant improvement after tDCS, while Auditory Hallucination Rating Scale (AHRS) demonstrated an insignificant improvement. A significant positive correlation between the pre-tDCS glutamate/Cr value in left TPJ and the improvement in auditory hallucination measured by AHRS after tDCS was found. This study suggests a potential role of glutamatergic system in temporo-parietal area in predicting treatment response of auditory hallucination.

Topic Area: Neuroimaging

B44
Differentiation between Schizophrenia, Bipolar Disorder, and Major Depression Using the Prefrontal Brain Activity and the Evaluation of Ultra-high Risk for Psychosis: A Large-Sample Functional Near-infrared Spectroscopy Study

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Background: A functional near-infrared spectroscopy (fNIRS) has an advantage of easy measurement of the activity in the surface of the cortex with a naturalistic position. In this study, we intend to explore the difference in fNIRS brain activity between three psychiatric diseases considering demographic variables. Then, we tested which disease spectrum the brain activity in ultra-high risk (UHR) individuals would be differentiated into.

Methods: Of 1,838 measurements for 1,524 participants, 268 for 195 patients with schizophrenia, 181 for 177 patients with bipolar disorder, 516 for 405 patients with major depressive disorder, and 457 for 369 controls were included after considering the exclusion criteria. In addition, 50 UHR individuals participated. Intensity and timing of brain activity during the block-designed letter version of a verbal fluency task were tested on 20 brain area.

Results: The intensity was smaller in patient groups over the brain area, but no difference was found between the patient groups. The timing in the bilateral superior and middle prefrontal cortex and the left pars orbitalis was later in schizophrenia group. The timing in the right superior medial prefrontal cortex and the left pars opercularis was later in depression group. We will show the results for UHR individuals in the conference.

Discussion: This is the first study which investigated the characteristics of the brain activity in a variety of psychiatric disorders using a large sample set. In future, the clinical application to the fNIRS system may improve the differentiation rate and apply to other disease spectrums.

Topic Area: Neuroimaging

B45
Structural Brain Correlates of Prominent Negative Symptoms in Medication Naïve Patients with First Episode Psychosis

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Background: Negative symptoms of schizophrenia have been linked to alterations in grey matter in several brain regions however, findings to date have been inconsistent. The existing literature mainly comprises studies with either modest sample size or involved chronic patients, thus the confounding effects of illness progression and antipsychotic treatment cannot be excluded. We investigated gray matter (GM) volumes and cortical thickness in a homogenous first episode psychosis sample prior to starting antipsychotic medication.

Methods: T1-weighted structural MRI brain scans were obtained from 185 medication naïve patients recruited through Optimise trial. We used Voxel-Based Morphometry and FreeSurfer to compare regional brain volumes and cortical thickness respectively between patients with (N = 100) and without (N = 85) prominent negative symptoms.

Results: Patients with prominent negative symptoms showed larger left inferior orbitofrontal GM volume and increased cortical thickness in right parahippocampal gyrus compared to patients without prominent negative symptoms.

Conclusion: This work, using an ideal design, provides further support for the involvement of alterations in orbitofrontal and parahippocampal cortex in pathogenesis of negative symptoms of schizophrenia.

Topic Area: Neuroimaging

B46
Differential Cortical Thinning of Auditory Cortex in First Episode Schizophrenia: Association with Auditory Verbal Hallucinations

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Background: Patients with chronic schizophrenia and persistent auditory verbal hallucination (AVH) are found to have reduced cortical thickness in auditory cortex. The role of cortical thickness in pathogenesis of AVH among first episode treatment responsive patients is not clear yet. We compared the cortical thickness of auditory cortex in first episode schizophrenia patients with and without AVH in this study.

Methods: We measured the cortical thicknesses of 34 right-handed patients (17 AVH+, 17 AVH–) using T1-weighted MPRAGE structural MRI images and compared them after propensity score matching.

Results: AVH+ group had significantly lower cortical thickness in left superior temporal sulcus than AVH– group. The left superior temporal sulcus cortical thickness was negatively associated with auditory hallucinations score.

Conclusions: Our finding of decreased cortical thickness in the left superior temporal sulcus provides further evidence about the involvement of auditory cortex in the pathogenesis of AVH in schizophrenia.

Topic Area: Neuroimaging

B47
Altered Functional Connectivity in the Regions Related to Negative Schema in Patients with Schizophrenia Spectrum Disorder

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Objective: Abnormal brain connectivity in resting state is commonly reported in patients with schizophrenia spectrum disorder. Functional connectivity in regions related to negative schema was explored in patients with schizophrenia spectrum disorder and healthy controls.

Methods: We recruited patients with schizophrenia spectrum disorder (n = 36) and healthy controls (n = 25). Resting state fMRI scans were acquired for 5 min instructing to close eyes and relax but not to sleep. We selected a total of 7 seeds shown to be significant regions in the group analysis of task-based (evoking negative schema) fMRI data. We compared the differences of brain connectivity between the groups.

Results: Compared with healthy controls, seed to voxel connectivity analysis showed three significant hyper-connectivity (thresholded at $p < 0.05$, FDR corrected, cluster size > 50) in patients with schizophrenia spectrum disorder: 1) thalamus – precuneus, lingual gyrus, posterior cingulate gyrus; 2) calcarine cortex – right lateral occipital cortex and right fusiform cortex; and 3) left hippocampus – right calcarine cortex. In the ROI to ROI analysis, patients with schizophrenia spectrum disorder were found to have hyper-connectivity (thresholded at $p < 0.05$, FDR corrected, cluster size > 50) between the left hippocampus and right intracalcarine cortex. There were no significant hypo-connectivity results in both analyses.

Conclusions: Our results indicate that the functional connections between the thalamus, calcarine cortex, hippocampus and other brain regions were increased in patients with schizophrenia spectrum disorder. The relevance of the findings is discussed in terms of understanding the pathogenesis of psychotic symptoms.

Topic Area: Neuroimaging

B48
Reduced Fronto-Temporal Cortical Gyrification Associated with Psychotic Like Experiences in Healthy Adolescents

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Psychotic Like Experiences, PLEs, are prevalent in general population and increase the risk of developing psychosis. Cortical gyrification, a stable marker for neurodevelopmental abnormalities, may contribute to PLEs. CAPE-42 is a valid and reliable self-report questionnaire for PLEs in healthy adults and adolescents. We used the MRI data of 600 adolescents already acquired by the IMAGEN study. We compared cortical gyrification of 313 adolescents with high CAPE scores with 287 adolescents with low CAPE scores, at baseline (age 14 yrs) and at follow up (age 16-19 yrs). At both baseline and follow up, high CAPE scorers had reduced gyrification in the left superior frontal gyrus, the left middle temporal gyrus, and the area around left superior temporal sulcus. At baseline, high CAPE scorers had reduced gyrification in the right temporal pole, which was normalised at follow up, perhaps indicating an ongoing brain maturation process in adolescents. The left superior frontal gyrus is associated with self-awareness, while the left superior temporal sulcus is associated with voice perception and theory of mind and the left middle temporal gyrus plays an important role in language processing and semantic cognition. In line with the continuum theory of psychosis, persistent PLEs are prodromal psychotic manifestations. Our results show that persistent neurodevelopmental abnormalities such as reduced gyrification in the left fronto-temporal region comprising of the superior frontal gyrus, the superior temporal sulcus and the middle temporal gyrus underlie PLEs in healthy adolescents.

Topic Area: Ethical Issues

B49
Mental Health Awareness Creates Prevention

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People are still afraid to have the talk. They fear speaking about suicide but it continues to be the tenth leading cause of death in the United States. A lot of fear and lack of awareness is what keeps so many from seeking and receiving help. I know because I use to be one of those people. Instead of being aware and comfortable with having the talk about my mental health I attempted to take my life twice in the past 10 years. I felt ashamed and scared to talk about my issues because of how society views mental health and suicide. Now that I'm in recovery from Major Depressive Disorder I have become a mental health advocate, Certified Peer Support Specialist, Self Help Book Author of "A Fight Worth Finishing" a book about my own personal experiences with depression and suicide, and I own my own recovery based Service to help those who battle depression, anxiety, and suicidal thoughts. I have made it my life's mission to get other's to be aware of their mental health. I have reached over one million people on social media with my advocating. Something I've heard from a few people is "thank you for speaking up. Your words saved my live". By continually making others aware and not feel ashamed it can truly save lives. I wish to discuss this in detail during my presentation.

Topic Area: Other

B50
Can the 6-minute Walk Test Estimate Cardio-respiratory Fitness in Early Psychosis?

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Guidelines recommend assessing cardio-respiratory fitness (CRF) to people with a schizophrenia spectrum psychotic disorder (SZSPD) since this is one of the best indicators of general health and life expectancy. Since the VO2 Max, the gold standard to assess CRF, cannot be routinely used in clinical settings, more accessible alternatives are needed. Hence, we assessed the accuracy of the estimate of the CRF measured with a readily accessible procedure, the 6-minute walking test (6-MWT), by comparing its results with CRF estimate obtained with a treadmill test. Our 20 participants (male = 11; female n = 9; mean age = 26.5) were treated for a SZSPD in an early-intervention program. They completed: 1. A 6-minute walking test (6-MWT) which measures the maximal distance that a person can walk in 6 minutes, following the guidelines of the American Thoracic Society; 2. A Bruce protocol treadmill test which aims to measure the longest period of time the person can achieve on a treadmill with increasing speed and incline every 3 minutes following the guidelines of the American College of Sports Medicine. Results of both procedures were transformed in METs, and then in Z-scores using published general population norms. The correlation between the two tests was statistically significant yet relatively modest ($r = 0,40$; $p<0,01$). Furthermore, the 6-MWT underestimated the CRF by 21.5%. These results show that the 6-MWT cannot accurately assess CRF in our population. This probably results from a floor effect due to the fact that the 6-MWT was developed for older people with chronic cardio-respiratory conditions.

Topic Area: Other

B51
The Role of Relatives' Cognitive and Emotional Appraisals as Predictors and Mediators of Expressed Emotion: Results from the Sant Pere Claver-early Psychosis Program (SPC-EPP) in Barcelona (Spain)

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The factors accounting for Expressed Emotion (EE) in relatives of early psychosis persons, their association with symptoms and functioning and what elements mediate between relatives' EE and patients' dysfunction are still not well understood. This study examined the association of relatives' EE, attributions, distress, attachment style and perceived loss in 140 relatives of early psychosis patients attending the Sant Pere Claver-Early Psychosis Program of Barcelona. This program is an integrated need-adapted treatment that includes family-psychotherapy and psychoeducation. Results showed that EE was highly associated with relatives' illness attributions, distress, perceived loss and attachment anxiety, and with a wide variety of early psychosis patients' symptoms and functioning. Relatives' distress, negative emotions about psychosis and attributions of control/blame toward the patient predicted EE. Relatives' attachment anxiety was found to mediate the association between perceived loss and EE, while relatives' attributions of blaming patients for their symptoms were found to mediate the relationship between EE and patients' symptoms. Findings highlight the importance of family emotional environment in the early stages of psychosis and the need of design specific goals of intervention to improve the efficacy of treatments and prevent chronic disorders. Given that early psychosis is a critical period where relatives' appraisals/attitudes are forming, it is fundamental that early family interventions provide proper information and specific psychological support to help relatives to: improve their understanding of the circumstances; handle difficult thoughts and emotions over the psychotic processes; reduce negative appraisals; change attributions that blame the patient; and prevent the entrenchment of high-EE attitudes.

Topic Area: Other

B52
Effects of Physical Activity on Recovery, Well-being and Motivation among Individuals with Early Psychosis

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Physical activity has been correlated with risk for psychotic disorders and with symptom severity and brain volume changes among people with psychotic disorders. In this study, we are recruiting 60 individuals from our early psychosis program to rate their physical activity over the prior week on the SIMPAQ and their beliefs about exercise using the BREQ-2. Participants also rate their well-being using the MHC-SF, degree of recovery using the Recovery Assessment Scale and motivation using the Intrinsic Motivation Scale. Participants then rate their current mental state before & after home physical exercise or passive activity using the Subjective Exercise Experiences Scale and Stanford Current State Scale. Participants who have engaged in physical exercise >30 minutes at least 3x in prior week rate before & after their next 3 consecutive physical exercise sessions, and all others rate their next 3 consecutive sessions of video gaming. We collect medication and laboratory data by chart review. We hypothesize: 1) Motivational factors for exercise will increase linearly with greater reported physical activity 2) Higher levels of exercise will correlate with higher levels of recovery and well-being 3) Higher levels of exercise will correlate with lower antipsychotic dose, fewer medications and better metabolic status 4) Physical exercise will be associated with greater improvement in symptoms and greater motivation versus video gaming 5) The effects of physical exercise on symptoms will last 24-36 hours before reverting to baseline levels

Topic Area: Other

B53
Cognitive Behavioral Therapy for Obsessive-compulsive Disorder in Children and Adolescents– Preliminary Results from a Systematic Review

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Objective: To assess the effect of cognitive behavioral therapy (CBT) for pediatric obsessive-compulsive disorder (OCD).

Methods: We systematically reviewed data from randomized trials with children and adolescents with OCD, comparing CBT with 1) no intervention (e.g., wait list); 2) treatment as usual (or similar terms); 3) pharmacological treatments; or 4) alternative psychotherapeutic approaches. On July 28th, 2017, we conducted a systematic literature search, which yielded 12 eligible trials. Data from the trials were grouped into three comparisons: CBT vs. no intervention (n = 7), CBT vs. pharmacological intervention (n = 3), CBT vs. relaxation therapy (n = 3). We assessed the effect on symptom severity measured with the Children's Yale-Brown Obsessive Compulsive Scale. To evaluate the quality of the trials, two independent investigators assessed risk of bias within seven domains, following the guidelines of The Cochrane Collaboration. For further details, see our protocol on PROSPERO (CRD42017079118).

Results: The overall results indicate that in pediatric OCD, CBT is more favorable than no intervention ($Z = 5.29$, $p<0.00001$), and relaxation training ($Z = 7.22$, $p<0.00001$), while no significant difference was found, comparing CBT to pharmacological treatment ($Z = 0.05$, $p = 0.96$). However, all included trials had a high risk of bias, not only owing to the nature of psychotherapeutic interventions, which makes blinding of participants and treatment providers effectively impossible.

Conclusion: The systematic review indicates that CBT is more favorable than no intervention and relaxation training, and as effective as pharmacological treatment, for pediatric OCD. However, the quality of the evidence is low, and future trials with low risk of bias are needed.

Topic Area: Other

B54
A Systematic Review of the Effectiveness of Virtual Reality Therapy in Treating Psychotic Disorders

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Rationale: Over the last few decades, virtual reality (VR) interventions have been implemented in the treatment of clinical populations with psychosis.

Methods: This systematic review will be undertaken to analyse the effectiveness of VR (i.e. augmented VR, immersive VR, virtual worlds, cave) in the treatment of those diagnosed with psychosis. It will also address the areas of unmet need within this particular population and in the technology being implemented. The mainstream databases that will be searched include Web of Science, Medline, EMBASE, PsycINFO, Scopus and Cumulative Index to Nursing and Allied Health Literature. The grey literature will also be searched to assess its eligibility. The outcomes to be reviewed include the type of VR treatment provided; the deficits targeted in those diagnosed with psychosis, as well as quality of life and other mental health symptoms/conditions.

Results: The analyses will be presented outlining the themes relating to the use of VR as a method of delivering treatment to those diagnosed with psychosis.

Conclusion: It is expected that the findings will help to provide recommendations for future research. This systematic review protocol will be submitted to the PROSPERO register.

Topic Area: Other

B55
Adolescent Paranoia: Prevalence, Structure, and Causal Mechanisms

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Paranoia is heightened during adolescence, but little is known about the content of paranoid thoughts at this age. Paranoia likely builds upon normative adolescent social concerns and may be shaped by the psychological and social context of adolescence. In this study we examine the prevalence, structure, and the probabilistic causal mechanisms of adolescent paranoia using a Bayesian approach with Directed Acyclic Graphs (DAGs). A cross-sectional UK school cohort of 801 adolescents (11-15 years) completed measures of paranoia and hypothesised affective, cognitive, and social factors. Paranoid thoughts were common, followed a continuous distribution, and were hierarchically structured. Fifteen percent of participants scored within an estimated clinical range for paranoia. A second-order model of items demonstrated excellent fit comprising a paranoia factor and sub-factors of social fears, conspiracy, and physical threat. All variables predicted paranoia in a linear regression, but a DAG sampled from the posterior distribution identified independent relationships between paranoia and negative affect, peer difficulties, bullying, and engagement with social media (i.e. safety behaviours, self-comparison, and affective reactivity). The direction of some relationships was uncertain, however, a directed effect was indicated for negative affect causing paranoia, and paranoia causing peer difficulties and social media safety behaviours. This study supports a continuum of paranoid thoughts in young people, rooted within the context of adolescence. Although causal conclusions are limited in cross-sectional data, this study demonstrates clear interactions between paranoia and affective and social processes in adolescence. Interventions targeting these mechanisms are needed to test their causal role.

Topic Area: Other

B56
The VIP School Programme - Guidence and Information on Mental Health in Schools

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The intervention is universal preventive for classes of 16-17 years old students. Experience, based on 18 years of development and implementation in the field Mental health in schools. The VIP Programme is founded by the Norwegian Directory of Health and owned by Vestre Viken Hospital Trust. The aim is to help students learn more about mental health, and provide information about what kind of help is available, should psychological problems occur. Strengthen teacher's ability to support students. Equip teachers to discover early mental illness among the students.

How to do it: A national VIP-team facilitate the implementation in each high school. The implementation is cross-sectional and involves the school administration and teachers, school nurse and specialist mental health persons. They participate in a work-shop at each school. For students, the VIP programme takes a minimum of three hours with a teacher and a two-hour session with health personnel and is founded on dialogue, empowerment and salutogenesis.

Material: Student booklet, manual for teachers and health-workers, and a homepage with assignments for students.

Conclusion: A research project on the intervention showed significant positive effects on students health seeking behavior, self-reported anxiety and self-reported peer-problems. Early help from the health care system will provide students with mental problems with a faster recovery and a reduced risk of recurrent. In order to get early help, however, students' knowledge of the area is essential.

Topic Area: Other

B57
The Clinical Significance of Subthreshold Borderline Personality Disorder Features in Outpatient Youth

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The absence of a distinct and scientifically robust threshold for 'caseness' for borderline personality disorder (BPD) also means that there is no distinct point of 'onset' for the disorder. This is a fundamental issue for 'indicated prevention', which includes 'subthreshold' forms of the disorder. However, the clinical significance of subthreshold features has not been investigated among real-world patients during the clinical emergence of BPD, which is usually between puberty and emerging adulthood. Studies among adult patients have found that subthreshold BPD features are associated with elevated psychosocial morbidity, compared with patients with no BPD features. This study aimed to replicate and extend this research, by comparing outpatient youth aged 15-25 years with subthreshold BPD features with outpatient youth who had no BPD features. The sample included 499 potential participants, of which 111 had no DSM-IV BPD features, and 155 had between one and four BPD features. Results indicated that the group with subthreshold BPD features had more severe mental illness and poorer social and occupational functioning. These findings suggest that subthreshold BPD features are clinically important and should be the focus of intervention to improve outcome and to reduce longer term disability and cost.

Topic Area: Personality Disorders

B58
Daily-life Stress Differentially Impacts Ventral Striatal Dopaminergic Modulation of Reward Processing in First-degree Relatives of Individuals with Psychosis

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Stress confers risk for the development of the psychotic disorder, hallmarked by motivational and hedonic deficits. Stress-induced attenuation of reward-oriented behavior proposes a plausible underlying mechanism of this phenomenon. Ventral striatal dopaminergic neurotransmission has been shown to modulate reactivity to laboratory as well as naturalistic rewards, and has been found to be affected by stressors as well. We investigated the hypothesis that stress experienced in the real life has a blunting effect on reward-related dopamine release in the ventral striatum of 16 individuals at a familial risk for psychosis compared to 16 control subjects. We performed 6 days of ecological momentary assessments quantifying the amount of daily-life stress prior to a 18F-fallypride PET imaging scan during a probabilistic reward learning condition. Relative to the controls, individuals at a familial risk for psychosis who encountered more daily-life stress showed significantly diminished extent of reward-induced dopamine release in the right ventral striatum, as well as poorer performance on the reward task. These findings provide the first neuromolecular evidence for the elusive stress-induced deregulation of reward processing in familial predisposition to psychosis. The implication of daily-life stress in compromised modulation of reward function may facilitate the design of targeted neuropharmacological and ecological interventions.

Topic Area: Stress Responsivity

B59
Stress Reactivity and Regulation in Pregnant Women with Severe Mental Illness

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The Mother Infant Mood and Emotion Study (MIMES) is a NIH-funded study to examine physiological stress reactivity in pregnant women with severe mental illness. We describe pilot data involving the physiological profiles of three women from the 2nd trimester of pregnancy: one healthy control (HC), one with bipolar disorder (BD), and another with major depressive disorder (MDD). The HC showed the lowest scores on standardized measures of depression, anxiety, and prenatal life stress compared to the women diagnosed with BD and MDD. To determine stress reactivity, we examined heart rate (HR), with heart rate variability (HRV), which represents physiological regulation. HR and HRV were measured continuously through each episode of the Stroop, a cognitive stress task (baseline, practice, assessment, recovery). The average HR across episodes was the highest for the woman with MDD (M = 108.6) and the lowest for the HC (M = 79.2). HR changes were negligible across all three participants. HRV was highest for the HC (M = 6.3) but lowest for the woman with MDD (M = 4.9) across episodes. Interestingly, HRV showed greater change across episodes for all with the average HRV being lower during practice and assessment compared to baseline and recovery. However, HC showed the greatest change in HRV from baseline to practice/assessment, and from practice/assessment to recovery compared to the other women. While our presentation will include a larger sample size, it appears that highly stressed pregnant women may be prone to higher HR baselines and lower levels of regulation during rest and recovery periods relative to healthy, non-stressed women.

Topic Area: Stress Responsivity

B60
Schizotypy Relates to the Behavioural Response to Criticism and Praise: The Mediating Effects of Negative Affect and Perceived Expressed Emotion

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Background: Poor family communication is a risk for the onset of psychosis. Schizotypy is a latent personality organization, and another risk for schizophrenia-spectrum disorders. Greater perceived criticism relates to depression in people with high positive schizotypal traits, which denotes perceptual aberrations, hallucinations, magical thinking and delusions. This study aimed to determine (1) the relation between schizotypy and the behavioural response to criticism and praise, and (2) whether depression, anxiety, and perceived expressed emotion from a close relative would mediate these associations.

Methods: 98 University students listened to standard praise, criticism, and neutral comments. Participants rated the arousal and relevance of each comment through Likert scales. Participants completed questionnaires of schizotypy, depression, anxiety and level of expressed emotion. Correlations tested the relation between schizotypy and the behavioural response to praise and criticism. Mediation analyses tested whether depression, anxiety, and perceived level of expressed emotion mediated these associations.

Results: Greater positive schizotypy related to greater relevance of criticism. The mediators, in particular depression, fully mediated this association. Greater cognitive disorganisation, which denotes social anxiety, moodiness and poor concentration, related to greater relevance of praise. The mediators, in particular perceived level of intrusiveness from a close relative, partially mediated this association.

Conclusion: Positive schizotypy relates to greater perceived criticism, which can be explained by depression. Cognitive disorganisation, which features social anxiety, relates to perceived praise, which can be partly explained by perceived level of intrusiveness from a close relative.

Topic Area: Stress Responsivity

B61
Stress Sensitivity and Social Dysfunction in Adolescents at Risk for Psychosis: An Ambulatory Assessment Study

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Despite abundant empirical evidence that social dysfunction and stress sensitivity are key markers for predicting the onset of psychosis, less is known about the timing, progression, and co-occurrence of these experiences among adolescents at risk for psychosis. Current methods for examining experiences of people at risk for psychosis in adolescence should be enhanced with the addition of ambulatory assessment, also known as ecological momentary assessment (EMA). Ambulatory assessment is ideal for: 1) understanding behavior in the real world beyond the laboratory, and 2) capturing subtle-day-to-day fluctuations in behaviors and symptoms that may be less evident from other measurement methods. The current project examined social functioning, physiologic indices of stress sensitivity, and clinical symptoms in a sample of 40 adolescents ages 13-19 at clinical and/or familial risk for psychosis (HR; n = 20) compared to typical adolescents matched for age and sex (n = 20). Participants completed laboratory-based self-report instruments, clinical interviews, and an assessment of heart rate variability while completing the Trier Social Stress Test. Following this visit, participants completed 9 days (3 consecutive weekends) of ambulatory assessment on study smartphones. Compared to controls, HR adolescents evidenced a pattern of stress response dysregulation, affective disruptions, and social dysfunction both in the laboratory and in daily life. These results should help to identify indicators of dysregulation during the prodromal period of psychosis; these findings could lead to improved identification of people at risk for schizophrenia and related disorders, and to better targets for monitoring and interventions to prevent these disorders.

Topic Area: Stress Responsivity

B62
Analysis of the Difficulties Experienced by Service Providers Supporting Adolescents and Adults Having Autistic Spectrum Disorder without Intellectual Disabilities–Survey Results from 141 Psychiatry Day- Treatment Institutions

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A self-administered questionnaire survey was conducted on the difficulties experienced by 141 stuff members of psychiatry day- treatment institutions, etc., providing support to autistic spectrum disorder (ASD) individuals. Analysis of free-text entries revealed difficulties in the following areas resulting from a lack of knowledge among support providers: "understanding of ASD characteristics," "concrete responses to be taken" and "planning of tailor-made support." In addition, the analysis revealed that, due to the ADS characteristics of those individuals, service providers experience "difficulties in resolving issues."

Topic Area: Stress Responsivity

B63
The Transformation of Stress Coping and Defense Style after Studying Abroad and Mental Health

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It is known that studying abroad is a risk factor for mental health from the viewpoint of travel medicine; however, it has not been clearly explained what personality type is more vulnerable to mental disorders, and how they associate with the stress coping and defense style.
Methods: About 900 students dispatched overseas by International Education and Student Mobility Division, Kyoto University, for their transformation in stress coping and defense style before and after studying abroad.
Results: Before and after studying abroad, there was not a significant change in terms of General Health Questionnaire (GHQ); however, for the stress coping style, cognitive re-interpretation index became significantly higher after studying abroad. For the defense style, an immature defense mechanism had a significant increase. In addition, the increased group in cognitive re-interpretation index in stress coping style showed the significantly lower point of GHQ than the non-increased group. Furthermore, the increased group in immature defense mechanism showed a significantly higher point of GHQ than the non-increased group.
Conclusion: In summary, under the psychological stress caused by experiencing different cultures, it is estimated that there are two groups of students who can successfully maintain their mental health by trying the cognitive re-interpretation and who are maladapted by strengthening the immature defense mechanism.

Topic Area: Stress Responsivity

B64
Social Functioning as a Transdiagnostic Marker in Youth with Emerging Psychopathology: Comparing Traditional to Daily Life Measurements

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Introduction: As early detection and intervention in mental health gain popularity, the healthcare sector is searching for ways to detect youth at risk for mental disorders early. Recently more attention has been drawn to social functioning (SF): research pointed towards SF as an early sign of emerging psychosis, depression and anxiety. These symptoms often co-occur in youth, sometimes at a subthreshold level. Therefore, while broadening the scope, SF might be a useful transdiagnostic marker for early detection and intervention. Although innovative possibilities for measuring SF in daily life became available using daily diary techniques such as the Experience Sampling Methodology (ESM), these techniques have not yet been thoroughly compared to traditional retrospective measurements in relation to transdiagnostic/subclinical symptoms in youth.
Aim: Therefore, our aim is to investigate the value of traditional versus real life SF as a predictor in youth with emerging psychopathology.
Methods: Data were collected as part of the Smartscan study; a large randomized controlled trial (N = 190) investigating the effects of psychological therapy on psychopathology. Participants were 16-25 years of age and presented with early stage psychiatric symptomatology or without complaints (healthy controls). Anxiety, depressive and psychotic symptoms were measured at baseline and at six weeks follow-up. SF was measured both in retrospect, using the Social Functioning Scale, as well as in daily life, using ESM where participants received 10 beeps a day, for 7-15 days in a row, inviting them to fill out a short questionnaire.
Results: First results and conclusions will be presented at the conference.

Topic Area: Transdiagnostic Approaches

B65
A Psychometric Validation of a Developmental Psychopathology Measure: The Youth Experience Tracker Instrument (YETI)

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Severe mental illness (SMI) is defined as any major psychotic or affective disorder, including bipolar disorder, major depressive disorder, and schizophrenia. Antecedents are early manifestations of risk for SMI, which, if identified early, may allow for targeted intervention to prevent the onset of SMI. However, there are no brief self-report measures that screen for antecedents in clinical and research settings. The Youth Experience Tracker Instrument (YETI), which was developed to address this need, measures six antecedents: affective lability, anxiety, basic symptoms, psychotic-like experiences, insomnia, and depressive symptoms. This study aims to establish the psychometric properties, factor structure, and optimal cut-off points of the YETI. The sample used to validate this measure was composed of 208 offspring of parents with and without SMI aged 8 to 21-years participating in the Families Overcoming Risks and Building Opportunities for Well-being (FORBOW) study. A confirmatory factor analysis procedure comparing a bifactor, single, higher-order, and multiple correlated factors model was used to establish the questionnaire's structure. Concurrent validity was evaluated through correlations of YETI subscales with established measures of each antecedent. Receiver operating curves were used to select a cut-off point for the scale. YETI was internally consistent with a Cronbach's alpha of 0.91. This study's findings, which will be discussed in more detail, validate a new instrument that may facilitate detection of youth at high risk for the development of SMI by screening and monitoring antecedents.

Topic Area: Transdiagnostic Approaches

B66
The Role of Self-concept Clarity in Psychotic and Non-Psychotic Symptom Profiles

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Self-concept clarity (SCC–the "extent to which the contents of an individual's self-concept… are clearly and confidently defined, internally consistent, and temporally stable") seems to be associated with psychosis and psychotic like symptoms. It has also been suggested as a mediator between childhood trauma and the occurrence of early psychosis. However, it is also associated with mental health problems not involving psychotic symptoms. The present study compared psychotic and non-psychotic groups in terms of adverse childhood experiences and the potential role of SCC as a mediator specific to the occurrence of psychotic symptoms. Participants (n = 145) were recruited to one of three groups: (1) psychosis (presence of psychotic experiences), (2) anxiety/depression (moderate-severe levels) or (3) control group (no psychotic experiences, mild levels of anxiety/depression). Adverse experiences in childhood were found to predict anxiety, depression and psychotic experiences. There were no statistically significant differences in levels of SCC between the three groups. However, reduced levels of SCC were associated with elevated anxious and depressive symptoms and SCC emerged as a significant predictor of anxiety and depression. There was no evidence that SCC specifically mediated the relationship between adverse childhood experiences and the occurrence of psychotic symptoms. Methodological issues are discussed as well as implications for further research.

Topic Area: Transdiagnostic Approaches

B67
Mediating role of Resilience and Cognitive Biases in the Relationship between Childhood Trauma and Psychotic-like Experiences in the General Population

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Introduction: Although the relationship between childhood traumatic experiences and psychotic-like experiences is well established the mechanisms of the relationship is poorly understood. We aimed to investigate a mediating role of dysfunctional information processing and resilience factor.

Methods: A total of 2614 (1673 females; mean age 26.37, SD = 4.71) individuals in the general population (psychotic disorders were excluded) were assessed with self-report scales that measure traumatic life events (The childhood experience of care and abuse questionnaire), psychotic-like experiences (Prodromal Questionnaire), resilience (The Connor-Davidson Resilience Scale), cognitive biases (Davos Assesment of Cognitive Biases Scale) and symptoms of depression (Center for Epidemiologic Studies Depression Scale–CES-D). We proposed an explanatory model of the relationship between trauma and psychotic-like experiences that takes resilience into account. Our model was tested with mediation analysis.

Results: The direct effect of childhood trauma on psychotic-like experience (β = 0.33, R2 = 11%, p<0.001) was significantly reduced after resilience, history of depression and cognitive biases were included (β = 0.16, R2 = 33%, p < 0.001).

Discussion: Dysfunctional cognition as well as limited resilience capacities may be mechanisms of the relationship between early life adversities and the risk of psychosis. Further longitudinal studies are required to establish causal relations.

Topic Area: Trauma

B68
Experience and Coping Strategies of Prodromal Schizophrenia

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Aim: The purpose of this study is to develop a theoretical explanation of the prodromal schizophrenia process, or so-called psychosis risk syndrome, by describing patients' own experiences with symptoms, thoughts, feelings and coping strategies.

Methods: A total of 40 interviews were conducted in Asian population. A Grounded Theory method was selected because of its demonstrated effectiveness in generating theory around dynamic and complex processes on which little is known, all of which is the case with prodromal schizophrenia. Constant comparison analysis, memo writing, member checking, and theoretical sampling were adopted.

Results: A core theoretical framework was developed in which the process of the psychosis risk syndrome is described as proceeding from manageable to uncontrollable. Four stages emerged from the analysis: (1) something is wrong, (2) boiling up, (3) breaking point, and (4) losing control. In the process, the participants shift through using avoidance and ignoring copings to adopt self-help methods.

Conclusions: The framework resulting from this Grounded Theory research is innovative in presenting patterns and clinical staging that marks the progression from premorbid stage to full-blown psychosis. In addition to specifying the detailed process through in-depth interviews, this research makes two fundamental contributions by: (1) adding evidence to current science and (2) taking patients' experience into consideration to improve the validity of screening tools and design appropriate intervention programs for people with early warning signs of developing schizophrenia.

Topic Area: Ultra High Risk/Prodromal Research

B69
Investigating the Role of Cognitive Biases and Cognitive Insight in Paranoia in Youth at Risk for Psychosis

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Youth at risk for psychosis often experience anxiety and suspiciousness without having fully formed paranoid delusions. Research suggests that cognitive biases and poor insight play a role in the formation and maintenance of paranoia. In order to better understand the cognitive factors that contribute to suspiciousness in youth at risk for psychosis, this study investigated the association between anxiety and paranoia through cognitive insight and cognitive biases. Participants were 20 youth (50% female) ages 14-25 (M = 17.85, SD = 3.24) who met CAARMS criteria for At-Risk Mental State (ARMS) and were entering a Group and Family-Based Cognitive Behavioral Therapy Program (GF-CBT). We examined the potential mediating effects of cognitive biases (DACOBS) and cognitive insight (BCIS) on the association between Anxiety (STAI) and Paranoia (PANSS P6 Suspiciousness/Persecution). Mediation analysis was performed using SPSS Process Macro with bias-corrected bootstrapping method based on 10,000 bootstrap samples. Results showed that cognitive biases mediate the association between anxiety and paranoia (indirect effect β = 0.03, 95% CI = 0.01-0.08). Further analysis of cognitive bias subscales showed significant indirect effects for the selective attention to threat bias (β = 0.06, 95% CI = 0.02-0.12) and self as target bias (β = 0.04, 95% CI = 0.01-0.08). The indirect effect of cognitive insight was in the expected direction but not statistically significant. Targeting cognitive biases during psychosocial treatment for ARMS youth may prevent or mitigate transition to full-blown paranoid delusions. CBT is an appropriate treatment to address cognitive biases and may facilitate recovery from ARMS.

Topic Area: Ultra High Risk / Prodromal Research

B70
Clinical Staging Model in Offspring of Parents with Bipolar Disorder: A Systematic Review

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We sought to systematically review the literature on the psychiatric risk of offspring of parents with bipolar disorder (OPBD) using a developmental psychopathology framework. The review also sought to establish the utility of clinical stage modelling as a framework for identifying precursor disorders to later onset of bipolar disorder (BD) in OPBD. A systematic search was performed using EMBASE, PsychINFO and Medline. Reference lists of included studies and previous reviews were also searched. Studies were included if they reported diagnostic outcomes for child, adolescent and young adult offspring of parents diagnosed with BD. Twenty-six studies were identified representing 21 individual cohorts. The review identified that OBPD present as a high-risk group for a range of mood and non-mood disorders in childhood, adolescence and young adulthood. The trajectory of risk was from non-mood disorders in childhood via non-bipolar mood disorders in early adolescence towards mania/hypomania in late adolescence and early adulthood. From a clinical staging perspective, childhood anxiety disorders were associated with later onset of BD. Recurrent substance use disorder was identified as a risk in OPBD during late adolescence and early adulthood. Quality ratings indicated that studies were methodologically robust. Our review provides evidence for a developmental psychopathology trajectory of precursor risks to BD in OPBD. There is support for clinical stage modelling as a conceptual framework for understanding developmental risk in OPBD and as a tool for developing early and individualized intervention strategies.

Topic Area: Ultra High Risk/Prodromal Research

B71
Interventions and Social Functioning in Youth at Risk of Psychosis: A Systematic Review and Meta-analysis

Daniel Devoe[1], Megan S Farris[1], Parker Townes[1], Jean Addington[1]

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Aim: Youth at clinical high risk (CHR) for psychosis often exhibit difficulties in social functioning and poorer social functioning may be predictive of transition to a psychotic disorder. Therefore, the primary objective of this systematic review was to summarize the impact of all interventions on social functioning in CHR samples.

Methods: Electronic databases PsycINFO, CINAHL, Embase, EBM, and MEDLINE were searched from 1951 to June 2017. Studies were selected if they included any intervention that reported changes in social functioning in youth at CHR. Data was evaluated using random effects pairwise meta-analyses, stratified by time, and reported as the standardized mean difference (SMD).

Results: Nineteen studies met our inclusion criteria, including a total of 1,667 CHR participants. The mean age was 20.5 years and 47% were male. Cognitive behavioural therapy (4 studies) did not significantly improve social functioning at 6-months (SMD = 0.06; 95% CI = -0.35, 0.46), 12-months (SMD = -0.15; 95%CI = -0.41, 0.11), and 18-months (SMD = 0.20; 95%CI = -0.10, 0.50). Omega-3 (2 studies) did not significantly improve social functioning at 6-months (SMD = 0.01; 95CI = -0.21, 0.24) and 12-months (SMD = -0.08; 95%CI = -0.33, 0.17). Lastly, cognitive remediation (3 studies) did not significantly improve social functioning at 2-3-month follow-up (SMD = -0.18, 95%CI = -0.91, 0.56).

Conclusions: This systematic review and meta-analysis demonstrated that no treatment significantly improved social functioning in youth at CHR. Future randomized control trials are required that are designed to target and improve social functioning in youth at CHR for psychosis.

Topic Area: Ultra High Risk / Prodromal Research

B72
Interventions and Transition in Youth at Risk of Psychosis: A Systematic Review and Meta-analysis

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Objective: The primary objective of this systematic review and meta-analysis was to summarize the impact of all treatments on transition to psychosis in high risk samples.
Methods: PsycINFO, Embase, CINAHL, EBM, and MEDLINE were searched from inception to May 2017 using keywords psychosis, risk, and treatment with no language restrictions. The following data was extracted: study characteristics (e.g., sample size), participant characteristics (e.g., mean age), and clinical outcome data (e.g., number and percent transited for each intervention group at each time-point and transition assessment employed). Data were analyzed using random-effects pairwise meta-analysis, and secondly, multivariate network meta-analyses (NMA), and reported as risk ratios (RR).
Results: A total of 38 independent studies met the inclusion criteria. In pairwise meta-analyses, CBT studies were associated with a significant reduction in transition compared to controls at 12-month and 18-month follow-up (RR = 0.57; 95% CI, 0.35 to 0.93; I^2 = 7%; P = 0.02 versus RR = 0.54; 95% CI, 0.32 to 0.92; I^2 = 0%; P = 0.02). In the NMA, integrated psychological therapy, CBT, supportive therapy, family therapy, needs-based interventions, omega-3, risperidone plus CBT, ziprasidone, and olanzapine were not significantly more effective at reducing transition at 6- and 12-months relative to any other intervention.
Conclusions: This systematic review and meta-analysis demonstrated a reduced risk for transition favoring CBT at 12- and 18-months. No interventions were significantly more effective at reducing transition compared to all other interventions in the NMA.

Topic Area: Ultra High Risk / Prodromal Research

B73
Negative Symptoms in Youth at Clinical High Risk for Psychosis: A Systematic Review and Meta-analysis

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Evidence suggests that understanding negative symptoms in those at clinical high risk (CHR) for psychosis may elucidate important pathophysiological mechanisms in schizophrenia. Thus, we conducted a systematic review and meta-analysis of negative symptom studies in youth at CHR for psychosis. We searched CINAHL, EBM, PsycINFO, Medline, Embase from inception. Studies were selected if they demonstrated a relationship between negative symptoms and another variable (e.g. transition to psychosis) in a sample of CHR participants. Treatment studies were excluded. Due to the differences in negative symptom scales effect sizes were reported as the standardized mean difference (SMD) and analyzed with random effects meta-analyses. Of 3,043 citations, 103 studies met our inclusion criteria, including a total of 12,168 CHR participants. The mean age was 19.44 years (SD = 8.92) and 6,927 (56.9%) were female. We identified 13 unique associations including functioning (n = 31), transition (n = 23), symptoms (n = 12), cognition (n = 11), brain regions (n = 8), gender (n = 8), cannabis use (n = 5), ethnicity (n = 3), postural sway (n = 3), family relationships (n = 3), biological interactions (n = 3), and P300 amplitude (n = 3). In the pairwise meta-analysis, negative symptoms were significantly higher at baseline in those who transitioned to psychosis compared to those who did not transition (SMD = 0.68; 95% CI, 0.44 to 0.91; I^2 = 0%; P<0.00001, 7 studies). This review demonstrated a significantly large effect size between baseline negative symptoms in those who transitioned to psychosis compared to those who did not transition. Additionally, this review identified a large body literature that describes the relationship between negative symptoms.

Topic Area: Ultra High Risk/Prodromal Research

B74
Suicidality and At Risk Mental State: About a Cohort Study

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Introduction: Few studies focus on the suicidality risk in at risk mental state patients, despite data from the literature reporting a high prevalence of suicidal ideation and behavior in this population.
Methods: A retrospective cohort study was conducted at the early detection and intervention center (CEVUP) in Brest Medical University Hospital, based on the collection of demographic data and the complete data from the Comprehensive Assessment of At Risk Mental States (CAARMS) of patients received for a thorough assessment of the psychosis risk. Statistical analyzes were conducted by comparing the characteristics of patients with a history of suicidal ideation or attempts with those for whom these histories were not found.
Results: 49 patients were included between June 2010 and April 2014. The prevalence of suicidal ideation was 65%, that of suicide attempts of 34.69%. The following items were significantly related to a suicidal risk: the presence of non-bizarre ideas, loss of sense of personal identity, irritability, disorganized, bizarre, stigmatizing behaviors, impaired tolerance to normal stress and several items related to presence of anxious or depressive symptomatology. In addition, 72.41% of patients identified at risk of psychosis by the CAARMS reported suicidal ideation or behavior compared to 56.25% of patients not at risk.
Conclusion: Patients at risk for psychosis are a high-risk suicidal population. Some clinical elements can alert the practitioners. Further studies considering insight, stigmatisation and the management strategies to be proposed within this population appear necessary.

Topic Area: Ultra High Risk/Prodromal Research

B75
Symptoms of Depression and Anxiety in Youth at Risk for Psychosis: A Systematic Review and Meta-analysis

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Youth at clinical high risk (CHR) for psychosis often present with symptoms of depression and anxiety, which can reduce quality of life. Therefore, the aim of this systematic review was to determine the impact of all interventions on symptoms of depression and anxiety in CHR samples. We systematically searched Embase, EBM, PsycINFO, CINAHL, and MEDLINE. Studies were selected if they reported changes in depression or anxiety symptoms in youth at CHR and included an intervention. Data was evaluated using pairwise meta-analyses, stratified by time, and reported as the standardized mean difference (SMD). Twenty-three studies met our inclusion criteria, including a total of 1,831 CHR participants. The mean age was 19.35 years and 49% were female. Interventions included family therapy, glycine, antipsychotics, cognitive remediation, however analysis could only be performed on cognitive behavioural therapy (CBT) and omega-3. CBT did not significantly improve depression at 6-months (SMD = 0.02; 95% CI = -0.25, 0.28), 12-months (SMD = -0.04; 95%CI = -0.23, 0.14), 18-months (SMD = -0.11; 95%CI = -0.41, 0.20), or at 24-48-month follow-up (SMD = -0.21; 95%CI = -0.50, 0.08). CBT did not significantly improve anxiety at 6-months (SMD = -0.10; 95% CI = -0.29, 0.08), 12-months (SMD = 0.05; 95%CI = -0.14, 0.23), 18-months (SMD = 0.09; 95%CI = -0.22, 0.39), or at 24-48-months (SMD = -0.06; 95%CI = -0.55, 0.43). Omega-3 did not significantly improve depression at 6-months (SMD = -0.46; 95CI = -1.15, 0.23) and 12-months (SMD = -0.29; 95%CI = -1.10, 0.51). In conclusion, no interventions significantly impacted symptoms of depression or anxiety in CHR samples. However, no trials in this review were designed to target and treat these symptoms and the CBT used was specifically designed to address attenuated psychotic symptoms.

Topic Area: Ultra High Risk / Prodromal Research

B76
Referral Pathways for Youth Seeking Help for Mental Distress

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The majority of serious mental illnesses begin in adolescence or young adulthood. These young people often present with mixed symptom patterns or brief or undifferentiated symptoms several months or even years before the development of a diagnosable mental disorder. It is important to find ways to identify these young people early so that we can learn more about the factors that may predict later mental illness and offer early intervention. Studies on recruitment in this population have identified strategies focused on the education of mental and general health professionals, and on public health outreach and advertising. We utilized data from our "At Risk for Mental Illness" research group where we are running three large studies on young people at risk of mental illness. The research group had targeted recruitment strategies to healthcare professionals, some school outreach, and widespread public advertising in buses, trains and public places. The aim of this project was to examine referral sources by age group, and clinical stage of risk in order to understand where referrals came from, how people heard of the recruitment and to gain information to guide further recruitment activities. The majority of referrals came from community mental health services (CMHS) and family or self. CMHS referred more individuals with an attenuated syndrome whereas family and self referrals tended to be more individuals with mild symptoms and in distress.

Topic Area: Ultra High Risk/Prodromal Research

B77
Olfactory Deficits in Individuals at Risk for Psychosis and Patients with Schizophrenia: Relationship with Socio-cognitive Functions and Symptom Severity

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Purpose: Odor identification deficits are well documented in schizophrenia, but it remains unclear whether individuals at clinical high-risk for psychosis exhibit similar changes and whether their olfactory function is related to social/cognitive functions and symptomatology. This study aimed to investigate olfactory function and its relation to clinical variables in subjects with at-risk mental state (ARMS) and schizophrenia patients.

Materials and Methods: Odor detection sensitivity and identification ability were examined in 32 ARMS, 59 schizophrenia, and 169 healthy subjects using a T&T olfactometer. The ARMS and schizophrenia subjects were administered the Brief Assessment of Cognition in Schizophrenia (BACS), the Schizophrenia Cognition Rating Scale (SCoRS), and the Social and Occupational Functioning Assessment Scale (SOFAS) to assess their cognitive and social functions, and the Positive and Negative Syndrome Scale (PANSS) for clinical symptoms.

Results: Both the ARMS and schizophrenia subjects had a lower odor identification ability when compared with controls, while no significant difference was found in the odor detection sensitivity. The lower odor identification ability in the ARMS group correlated with the severity of negative symptoms and weakly correlated with lower performance on the BACS verbal fluency test. The olfactory measures of schizophrenia patients did not correlate with socio-cognitive functions and symptomatology. For the ARMS and schizophrenia groups, the olfactory measures did not correlate with the SOFAS and SCoRS scores.

Conclusion: High-risk subjects for psychosis likely exhibit odor identification deficits similar to those observed in schizophrenia patients, which probably reflect a biological trait related to vulnerability to psychosis.

Topic Area: Ultra High Risk / Prodromal Research

B78
Semantic and Syntactic Analysis of Speech in Patients at Ultra-high-risk for Psychosis: A Proof of Concept Study

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In the early psychosis detection field, the challenge is to identify a predictive marker of transition to schizophrenia. Language disorders, could be one of these markers. Computerized speech analysis techniques such as Latent Semantic Analysis (LSA) have already proven their reliability in schizophrenia (Elvevag, 2007, Schizophrenia research). One study showed that a combination of semantic and syntactic analysis would accurately predict the psychotic transition (Bedi G, 2015, NPJ Schizophrenia). The aim of our study is to validate this model in French language as well as identifying specific linguistic markers of the psychotic transition. Patients will be recruited during two years from the early psychosis detection centers in Brest, Paris and in Lausanne. The initial report, including the Comprehensive Assessment of At-Risk Mental States will be completed with an audio recording from the initial medical interview. The recording will be transcribed and analyzed by computer following the method of LSA. An analysis of the grammatical function (number of words, rate of the various grammatical functions) will also be performed. With this first analysis, linguistic markers correlated to transition to psychosis, can be identified. Then, we wiil use these markers and the global coherence index to construct a predictive model for transition to schizophrenia. Finally this model will be tested through machine learning, where each new inclusion will enrich the algorithmic model. Our study leads to demonstrate that language abnormalities may be predictive markers of the psychotic transition in high-risk psychotic patients, using a model based on automatize semantic and syntactic analysis

Topic Area: Ultra High Risk / Prodromal Research

B79
The Five-factor Model of Personality and the Staging Model in Youth at Risk for Serious Mental Illness

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Personality profiles scoring high in neuroticism and low on extraversion and agreeableness have been reported for youth at clinical high-risk for psychosis; high neuroticism and openness, and low extraversion are associated with depression; high extraversion and openness with mania; and high neuroticism with anxiety disorders. It is plausible that certain premorbid personality traits may be related or lead to higher risk of developing a severe mental illness (SMI). However, little is known about earlier stages of risk and the characterization of personality profiles for youth at-risk for SMI. In the PROCAN study, we examined personality characteristics in a large sample of youth at-risk for SMI using the NEO-Five Factor Inventory (NEO-FFI) for 41 non-help seeking youth with risk factors for SMI (Stage 0), 52 distressed youth with early mood and anxiety symptoms (Stage 1a), 105 youth with subthreshold psychotic symptoms (Stage 1b), and 42 healthy controls (HCs). One-way ANOVA group comparisons revealed that the groups were statistically different in neuroticism ($F = 36.81$, $p<.001$), extraversion ($F = 20.77$, $p<.001$), agreeableness ($F = 4.44$, $p = .005$), and conscientiousness ($F = 13.25$, $p<.001$). Post-hoc Tukey's testing revealed that participants in Stage 1b and 1a scored higher in neuroticism, and lower in extraversion and conscientiousness than participants in Stage 0 and HCs. Participants in Stage 1b scored lower than those in Stage 0 in agreeableness. Therefore, youth at-risk for SMI who present with early signs of mood, anxiety or subthreshold psychotic symptoms seem to present a personality profile reflecting an individual who is undergoing significant distress and has poor coping mechanisms.

Topic Area: Ultra High Risk/Prodromal Research

B80
The At-risk for Psychosis Terminology Redefined by Young People

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The terms "Ultra High Risk" for psychosis (UHR) and "At-Risk Mental State" have been used to designate young people with increased risk of developing a psychotic disorder. After debate the Attenuated Psychotic Syndrome was added in section III of DSM5 as "condition for further study". The debate focused on stigma, discrimination, unnecessary exposure to antipsychotic medication and high number of false-positives. The language used in clinical and research settings is important because it can provide a more understandable and accurate way of describing clinical and theoretical concepts resulting in less stigma, more engagement and compliance. Efforts to update psychiatric labels to more culturally appropriate and youth friendly terms resulted in renaming 'schizophrenia' in several Asian countries. Research looking at stigma in UHR has focused on clinicians' perspective. Orygen Youth Health provides a unique environment where consumer participation is integrated to clinical work. New/alternative terms describing the At-Risk concept were generated by former patients now enrolled in the Platform Team. The generated terms included "pre-diagnosis stage", "potential of developing a mental illness" and "disposition for developing a mental illness". 50 UHR patients, 50 family members/caregivers and 50 clinicians will be asked to answer a questionnaire assessing stigma, acceptance of the currently used at-risk-related terms compared to these newly generated terms and the preferred timing, extent and context of disclosure of diagnosis. Preliminary results will be presented at the conference. Discussion will focus on clinical and service delivery implications for people at risk of developing full threshold disorders.

Topic Area: Ultra High Risk/Prodromal Research

B81
Family Adaptability and Cohesion Evaluation in Youth At-risk for Serious Mental Illness: Results from the PROCAN Study

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Family flexibility and cohesion are at times impaired in families of first-episode psychosis patients compared to healthy controls (HCs). Furthermore, family functioning may be important even before the onset of illness. A positive family environment may be related to a decrease in symptoms and improved functioning in youth at clinical high-risk for psychosis. However, little is known about earlier stages of risk and the importance of the family environment for youth at-risk for serious mental illness (SMI).In the PROCAN study, we examined family functioning from the Circumplex Model of Family Systems in a large sample of youth at-risk for SMI. Family functioning was evaluated with the Family Adaptability and Cohesion Evaluation Scales-IV (FACES-IV) for 41 youth with a family history of SMI (Stage 0), 52 distressed youth with early mood and anxiety symptoms (Stage 1a), 105 youth with subthreshold psychotic symptoms (Stage 1b), and 42 HCs. Results from multivariate linear regression analyses showed that participants in Stage 1a and Stage 1b significantly differ from HCs in all the family functioning scales. Furthermore, participants in Stage 0 differed from participants in Stage 1b; and similarly, participants in Stage 1a differed in all the scales from participants in Stage 0. Therefore, family functioning appears to be decreased in youth at-risk for SMI who present with early signs of mood, anxiety or subthreshold psychotic symptoms.

Topic Area: Ultra High Risk/Prodromal Research

B82
Family History of Mental Illness and it Association with Family Functioning in Youth at Risk for Serious Mental Illness

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Family functioning is at times impaired in families of individuals with a serious mental illness (SMI) compared to healthy controls. However, little is known about earlier stages of risk and the importance of the family environment for youth at-risk for SMI. Moreover, if these youth have a first-degree family member with SMI, family dynamics may be more disrupted. In the PROCAN study, we examined the association of a family history of mental illness (FHMI) using the Family Interview for Genetics Studies (FIGS) and family functioning using the Family Adaptability and Cohesion Evaluation Scales-IV (FACES-IV) for 41 non-help seeking youth with risk factors (Stage 0), 52 distressed youth with early mood and anxiety symptoms (Stage 1a), and 105 youth with subthreshold psychotic symptoms (Stage 1b). Independent samples Mann-Whitney U comparisons for those with FHMI compared to those without revealed that: in Stage 0, those with parental HMI or any FHMI had lower scores on all family functioning scales. In Stage 1b, where there was (i) a sibling with a SMI, increased rigidity in family functioning was reported; (ii) parental psychosis or mania, increased chaotic functioning was reported; and (iii) any parental SMI, decreased family communication was reported. For Stage 1a, sibling psychosis was associated with increased rigid functioning. FHMI is associated with general impairments in family functioning for youth with risk factors, while the association is more specific for youth at-risk for SMI who present with early signs of mood, anxiety or subthreshold psychotic symptoms with rigidity, chaotic or communication impairments.

Topic Area: Ultra High Risk/Prodromal Research

B83
Mapping the Impact of Treatments on Symptoms, Functioning, and Transition in Youth At-Risk of Psychosis: A Scoping Review

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Treatments in youth at clinical high risk (CHR) for psychosis have varied, yet a review of all treatments and their impact on various outcomes has not been descriptively mapped. Thus, the aim of this study was to survey the treatment literature in CHR samples, document treatment types, chart the impact of these treatments on various outcomes, and identify gaps in our understanding. We searched Medline, PsychINFO, CINAHL, Embase and EBM databases with no date, language, or geographical restrictions. Studies were included if they implemented any intervention in a CHR sample and collected follow-up data measuring transition or symptomatic outcomes. Identified studies were then descriptively synthesized to determine the current state of the literature. Of 5,801 citations identified, a total of 76 studies met the inclusion criteria. A total of 4,502 CHR participants received treatment with a mean age of 19.4 years (SD = 4.6) and 2,344 (52.9%) were male. Eighteen unique interventions and 14 different outcomes were reported at follow-up. The most common outcome measures were attenuated psychotic symptoms (n = 41) and transition (n = 39), followed by global functioning (n = 35), negative symptoms (n = 32), total symptoms (n = 29), general symptoms (n = 28), social functioning (n = 24), disorganized symptoms (n = 24), depression (n = 21), cognition (n = 20), anxiety (n = 15), role functioning (n = 11), quality of life (n = 9), and mania (n = 5). This review identified an important body of treatment literature that describes all researched treatments and outcomes in CHR samples. Additional research is needed to determine an ideal treatment strategy for alleviating the plethora of symptoms that CHR individuals face.

Topic Area: Ultra High Risk / Prodromal Research

B84
Expressed Emotion (EE) in Families of Individuals at Risk of Developing Psychosis: A Systematic Review

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The At-Risk Mental State (ARMS) for psychosis describes a state that confers a high but not inevitable risk for developing a psychotic disorder in the near future. The distressing experiences for individuals with an ARMS may impact on themselves; their sense of wellbeing, their psychosocial functioning as well as on their family. Understanding what variables may lead to poorer outcomes may help to further reduce transition rates. Expressed emotion (EE) looks at the environment and communication style of relatives to their family member and can be considered an important potential explanatory variable in the ARMS. Following PRISMA guidelines, a systematic review of EE in relatives of ARMS was conducted. We identified 15 studies investigating the relationship between EE in the ARMS population. Approximately one third of ARMS relatives had high-EE. The results suggest that greater levels of criticism and hostility are associated with higher levels of symptoms and poorer functioning. In contradiction to psychosis literature, the construct Emotional-Over-Involvement (EOI) was found to be an adaptive response, where family members' worries of the individuals made no negative impact on symptoms. Environments that included warmth and positive remarks, combined with optimal family involvement were associated with improved functioning and reduced symptoms. Limitations of the quality of the studies includes small sample sizes, and over-represented samples of Caucasian, young males and middle-aged mothers. Although approximately half of the studies included were longitudinal, only two measured EE over time, therefore, future research should include larger studies measuring EE at more than one time point.

Topic Area: Ultra High Risk/Prodromal Research

B85
Cognitive Behavioral Social Skills Training for Youth at Risk of Developing Psychosis

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Youth at clinical high risk (CHR) for psychosis often exhibit significant deficits in social and role functioning and poor social functioning may be a predictor for later conversion to psychosis. Even in those at CHR who do not ultimately develop psychosis, a large proportion have persisting functional deficits. Cognitive Behavioral Social Skills Training (CBSST) is a group treatment that may improve functioning and is increasingly being used in psychosis. It has been adapted for youth at CHR. The goal of this study, REGROUP, is to examine the effectiveness of CBSST compared to psychoeducation and support, for the improvement of functioning and prevention of disability. 225 individuals at CHR for psychosis will be recruited and randomized to one of two group treatments (CBSST or Psychoeducation) that run weekly for 18 weeks. The primary outcome will be changes in social and role functioning. This will be measured at baseline, end of treatment, and 6 months post treatment as assessed by global social and role functioning scales. Secondary outcomes will include change in prodromal symptoms, depression, and anxiety. This presentation will describe the study, detail the CBSST treatment and present baseline descriptions of the sample. Adapting CBSST to fit into community-based programs for youth at CHR of psychosis creates an opportunity to increase the number of youth who could have access to and benefit from CBSST.

Topic Area: Ultra High Risk/Prodromal Research

B86
The Interrelationship between Schizotypy, Clinical High Risk for Psychosis and Related Symptoms: Cognitive Disturbances Matter

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Schizotypy and clinical high risk (CHR) criteria can identify individuals who are at increased risk for developing psychosis in community and patient samples. However, both approaches have rarely been combined, and little is known about their associations. Therefore, we examined the factorial structure of CHR and related symptoms and schizotypy features as well as their interrelationship. In a sample of 277 patients (22 $\pm$ 6 years) from two early detection services, structural equation modelling including confirmatory factor analysis was performed to test a theory-driven model using four Wisconsin Schizotypy Scales, 14 predictive basic symptoms (BS) of the Schizophrenia Proneness Instrument, and positive, negative, and disorganized symptoms from the Structured Interview for Psychosis-Risk Syndromes. The data fit well to the six hypothesized latent factors consisting of negative schizotypy, positive schizotypy including perceptual BS, negative symptoms, positive symptoms, disorganized symptoms and cognitive disturbances. As postulated, schizotypy features were significantly associated with positive, negative and disorganized symptoms through cognitive disturbances. Additionally, positive and negative schizotypy also had a direct association with the respective symptom-domain. The identified factorial structure corresponds well to dimensional models of schizotypy and psychoses. Our model suggests that schizotypy features may be associated with symptoms in the other dimensions directly or indirectly via subjective cognitive disturbances. These results call for more consideration of subjective cognitive deficits in combination with schizotypy features during the early detection and intervention of psychoses.

Topic Area: Ultra High Risk / Prodromal Research

B87
Striatal Cerebral Blood Flow and Executive Functioning in Clinical High Risk for Psychosis

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Recently, several independent studies have shown increased striatal cerebral blood flow (rCBF) during the resting state in patients at clinical high risk (CHR) for psychosis. Moreover, patients with CHR exhibit deficits in cognitive functioning. However, the relation between rCBF and cognitive impairment in CHR is still unknown. Here, we studied the association between striatal CBF and executive functioning in CHR and clinical controls (CC). Participants with CHR and CC were assessed for ultra-high-risk criteria and basic symptoms and were tested for executive functioning using the trail making test-B (TMT-B). Neurocognitive deficits were defined as 1) more than one standard deviation lower than the mean, 2) a t-score lower than 40, or 3) a percentile lower than 16, as compared to normative data. Additionally, resting state rCBF was calculated from arterial spin labeling 3T MRI data. Striatal rCBF was highest in CHR patients with TMT-B deficits and was significantly higher than that in CC with and without TMT-B impairment. This is the first study to specifically examine TMT-B performance, as a measure of executive functioning, and striatal metabolic activity in a CHR sample. Our study provides support to the influence of the striatum on the pathogenesis of executive dysfunction as described in full-blown schizophrenia and extends it to CHR states.

Topic Area: Ultra High Risk/Prodromal Research

B88
Functional and Structural Correlates of Abnormal Involuntary Movements in Psychosis Risk, First Episode Psychosis and Clinical Controls

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Increased abnormal involuntary movements (AIM) have previously been described in patients with clinical high risk for psychosis (CHR). However, knowledge on the pathophysiology of increased AIM in CHR remains sparse. Here, we evaluated the prevalence of AIM in patients with CHR, first episode psychosis (FEP) and clinical controls (CC). Furthermore, we tested the association of AIM with regional cerebral blood flow (rCBF) and gray matter volume (GMV). Videos on patients with CHR, FEP and CC were evaluated by two independent and blinded raters, using the abnormal involuntary movement scale. Additionally, arterial spin labeling MRIs and structural MRIs were measured to investigate the association of AIM with rCBF and GMV. Significantly higher AIM scores were detected in CHR and FEP as compared to CC. Furthermore, AIM scores correlated positively with rCBF in the premotor cortex, Brodmann area 6, and negatively with GMV of the corresponding caudal middle frontal gyrus. This is the first video-based analysis to report increased AIM in CHR and FEP patients as compared to CC. The results of the MR analysis indicate higher neuronal activity as measured by rCBF and decreased GMV in the premotor cortex, which is responsible for planning, initializing and suppressing of motor functions, in AIM.

Topic Area: Ultra High Risk/Prodromal Research

B89
A Prospective Follow-up Intervention Study of the Combined Treatment Approach "Robin" (Standardized Treatment Manual Combined with a Smartphone Application) for Adolescents at High Risk for Developing a Psychotic Disorder

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Background: The aim of preventing schizophrenia and other psychotic disorders has led researchers to focus on early detection of individuals at risk for psychosis and to treat at-risk symptoms in the pre-psychotic period. While at-risk symptoms for psychotic disorder are common in adolescence and associated with a significant reduction in functioning, the evidence base required to guide effective interventions in this vulnerable age group is limited. "Robin" is a newly developed treatment approach for adolescents at high risk of developing a psychotic disorder combining a standardized manual with a smartphone application combining a standardized manual with a smartphone application. The manual is targeting coping with at-risk symptoms and comorbid symptoms, improvement of quality of life and daily functioning in our specialized outpatient care unit for early intervention in psychosis. The smartphone application targets medication adherence, real-time symptom assessment and provides help in coping with symptoms and stressful situations in daily life.

Methods: In August 2017, we started a systematic clinical intervention trial for testing the efficacy of the combined treatment approach. One goal is to compare efficacy of a 16-week intervention in 30 patients with at-risk symptoms (age range 13-18) with an active control group (treatment as usual). Participants from a former early recognition study are included for the control condition. Outcome measures are at-risk and comorbid symptoms, functioning, self efficacy, quality of life and treatment satisfaction. Data will be collected at baseline, during the treatment period and at the end of the combined therapy. There will be also follow up assessments 6, 12 and 24 months after baseline.

Results: At the Conference, we will be able to present baseline data of the first patients in the intervention group. Further, preliminary results will comprise a comparison of baseline data with the control group (62 patients; 40% female, mean-age 15.6) and first follow-up data. We will discuss the results showing (1) intraindividual changes in symptomatology and well-being after 6 months of treatment in the intervention group and (2) differences between the intervention group and the control group.

Conclusion: Even though young patients with at-risk symptoms may profit best of specialised treatment approaches, there is an on-going lack of investigation about age-appropriate treatment strategies in this vulnerable age group. To our knowledge, this is the first controlled trials to test the efficacy of a specific treatment manual in combination with a smartphone application for minor patients at high risk for psychosis.

Topic Area: Ultra High Risk/Prodromal Research

B90
Treatment History of Youth At-risk for Serious Mental Illness

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The aim was to describe the treatment history including medications, psychosocial therapy and hospital visits of participants in the Canadian Psychiatric Risk and Outcomes Study (PROCAN). PROCAN is a two-site study of 243 youth and young adults aged 12-25 years, categorized into four groups: healthy controls (n = 42), stage 0 (non-help seeking, asymptomatic with risk mainly family history of serious mental illness (SMI); n = 41), stage 1a (distress disorders; n = 52) and stage 1b (attenuated syndromes; n = 108). Participants were interviewed regarding lifetime and current treatments, including medications, psychosocial therapies and hospital visits. The number receiving baseline medications differed significantly across groups ($p < 0.001$): 0% healthy controls, 14.6% stage 0, 32.7% stage 1a and 34.3% stage 1b. Further, 26.9% and 49.1% of stage 1a and stage 1b received psychosocial therapy at baseline, again indicative of statistically significant differences between groups ($p < 0.001$). Similar results were observed for lifetime treatment history; as stage 1b participants had the highest frequency of lifetime treatment. Medications started in adulthood (>18 years of age) were the most common for initiation of treatment compared to childhood (0-12 years of age) and adolescence (>12-<18 years of age) for stage 1a and 1b participants. Lifetime mental health hospital visits differed significantly across groups ($p<0.001$) and were most common in stage 1b participants (29.6%) followed by stage 1a (13.5%), stage 0 (4.9%) and healthy controls (2.4%). We found that treatment history for participants in the PROCAN study differed between at-risk groups. Future initiatives focused on determining the effects of treatment history on SMI are warranted.

Topic Area: Ultra High Risk/Prodromal Research

B91
Disturbed Thalamo-cortical Connectivity in the Unaffected Relatives of Schizophrenia Patients

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Background: Alterations in thalamo-cortical anatomical connectivity, specifically the connection between the orbitofrontal cortex and thalamus, have been frequently reported in schizophrenia and are suggested to contribute to the pathophysiology of schizophrenia. However, the evidence of genetic aspects underlying these alterations is still lacking.

Aim: The connectivity of the thalamo-cortical white matter in unaffected relatives of schizophrenia patients were compared to healthy controls (HCs).

Methods: A total of 35 unaffected relatives and 34 HCs underwent diffusion-weighted and T1-weighted magnetic resonance imaging to examine the white matter connectivity between the thalamus and orbitofrontal cortex using probabilistic tractography.

Results: After controlling for age and sex, the unaffected relatives exhibited significantly reduced fractional anisotropy values for the left thalamo-orbitofrontal tract compared to that of controls, $F(1,65) = 6.93$, $P = 0.011$, effect size partial $\eta^2 = 0.10$.

Conclusions: Our finding in the unaffected relatives of schizophrenia patients, which is in line with the alterations reported in schizophrenia, first-episode psychosis and clinical high risk for psychosis, highlight a possible genetic contribution to the proposed biomarker of altered thalamo-cortical connectivity.

Topic Area: Ultra High Risk / Prodromal Research

B92
Multitudinous Contributors to Impaired Functioning in UHR for Psychosis Individuals. Four Case Studies

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The introduction of Ultra high-risk (UHR) criteria aimed to prospectively identify patients at increased risk of transitioning to a psychotic disorder. The at risk mental state (ARMS) for psychosis concept and its subsequent clinical implementation aspires to intervene earlier and achieve better outcomes for young people with emerging symptoms or with a trait vulnerability to psychotic disorder. Extensive research has investigated the UHR criteria, outlining stage specific treatment and predictors of transition to psychotic disorder. Standardised criteria to identify individuals at risk for developing psychosis have been used internationally. The current version of the UHR criteria implemented in the PACE (Personal Assessment and Crisis Evaluation) clinic in Melbourne includes a significant drop in functioning or chronic low functioning for all three UHR groups (APS, BLIPS, Trait vulnerability). Although the aim of including this deterioration or persistent low functioning requirement for all three groups was to increase enrichment for psychosis risk, compromised functioning may be present for a variety of clinical reasons, not necessarily related to emerging psychosis. The objective of this presentation is to illustrate UHR patient heterogeneity with regard to clinical factors contributing to compromised functioning in this clinical population. Four de-identified case vignettes retrieved from case management in the PACE clinic will portray the multitudinous contributing factors to impaired functioning (i.e. attenuated psychotic symptoms, depression, anxiety, socio-economic related hardship, traumatic life experiences, personality pathology), and highlight the bidirectional relationship between everyday functioning and transition risk to a psychotic disorder among individuals meeting UHR criteria.

Topic Area: Ultra High Risk/Prodromal Research

B93
Social Cognition in Individuals at Clinical High-risk for Psychosis

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In longitudinal studies of those at clinical high risk for psychosis (CHR) outcome can be classified as remission of symptoms, symptomatic, still meeting prodromal criteria and transition to psychosis. Social cognition was examined in those who completed 2-years in the North American Prodrome Longitudinal Study (NAPLS2). The sample included in remission (n = 72), symptomatic (n = 57), prodromal progression (n = 42), or psychotic (n = 46) participants. Social cognition was assessed with The Awareness of Social Inference Test (TASIT; theory of mind), Penn Emotion Recognition (ERT) and Differentiation tasks (EDT) (facial emotion perception), and Relationship Across Domains (RAD; social perception). CHR groups did not differ on baseline social cognition [Pillai's Trace = .044, F(12,972) = 1.20, p = .28, partial η^2 = .015]. To analyze group differences on change in social cognition, a variable for change between baseline and 24-months was used. MANOVA showed no significant effect for group on change in social cognition [Pillai's Trace = .083, F(12,576) = 1.36, p = .18, partial η^2 = .028]. Mixed ANOVAs assessed group differences on social cognition over time (baseline and 24-months). There were no significant group × time interactions. However, there was a significant effect for group [F(3,225) = 6.71, p < .001, partial η^2 = .082] on TASIT, and significant effect for time on TASIT [F(1,225) = 61.15, p < .001, partial η^2 = .21], RAD [F(1,220) = 21.63, p < .001, partial η^2 = .090] and ERT [F(1,213) = 20.49, p < .001, partial η^2 = .088]. CHR groups did not differ on social cognition at baseline. The groups showed improvement on social cognition over time, but there were no group differences on change at 24 months, suggesting that CHR groups do not differ on change in social cognitive functioning over time.

Topic Area: Ultra High Risk/Prodromal Research

B94
School Counselors' Recognition of the Ultra-high Risk for Psychosis

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The ability to identify students at ultra-high risk (UHR) for psychosis in school settings is crucial for enabling appropriate referral to a clinician and positive therapeutic results. The aim of this study was to examine school counselors' recognition of the diagnosis and appropriate treatment recommendations for students at UHR for psychosis. In total, 132 school counselors completed surveys, including questions relating to a vignette about a student at UHR for psychosis. In total, 12.4% of the sample provided the correct diagnosis, much lower than that for other schizophrenia spectrum disorders and non-psychotic disorders, including depressive disorder. Although most school counselors preferred psychiatrists as the first-line treatment for students at UHR for psychosis, counseling centers were also mentioned as potential treatment options. In terms of medication, antipsychotics were preferred over other medication classes. It is necessary to design appropriate educational and training programs for school counselors to promote identification and effective referral of those at UHR for psychosis.

Topic Area: Ultra High Risk/Prodromal Research

B95
Altered Subcortical Volumes in Individuals at Risk for Psychotic Disorders

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Purpose: Previous structural magnetic resonance imaging (MRI) studies of psychotic disorders have shown volumetric alterations in the subcortical regions, which are involved in high-order cognition and emotional regulation. However, it remains elusive whether individuals at clinical high-risk for psychotic disorders, who have minimal confounding effects of medication and disease chronicity, exhibit subcortical volumetric changes.

Materials and Methods: T1-weighted MR scans were obtained from 107 individuals with at-risk mental state (ARMS), of whom 21 (19.6%) subsequently exhibited the transition to psychotic disorders during clinical follow-up, and 104 age- and gender- matched healthy subjects recruited at 4 scanning sites. Group differences in subcortical regional volumes (lateral ventricles, thalamus, caudate, putamen, globus pallidus, nucleus accumbens, hippocampus, and amygdala) were examined using FreeSurfer software.

Results: The ARMS group as a whole showed significantly larger volume for the caudate and pallidum in the left hemisphere and for bilateral lateral ventricles as compared with healthy controls. ARMS individuals were also characterized by left-greater-than-right asymmetries of the lateral ventricle, caudate, and pallidum. These changes were not related to medication dose and were also evident in drug-naïve ARMS subsample. There was no difference in the subcortical volumes between the ARMS with and without later transition to psychotic disorders.

Conclusion: Our findings suggested that left-dominant volume expansion of the caudate and pallidum in the ARMS subjects, which could not be explained only by medication effects, might be related to general vulnerability to psychopathology.

Topic Area: Ultra High Risk/Prodromal Research

B96
Analyses of NMDA-receptor Co-agonists in Serum among Individuals with At-risk Mental State for Psychosis

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Aim: Individuals who meet the criteria for at-risk mental state for psychosis (ARMS) have a high risk of developing psychosis. However, useful predictors for the onset of psychosis in individuals with ARMS remains unclear. Therefore, the establishment of reliable biomarkers to predict development of psychosis in ARMS patients is urgently needed. Recently, N-methyl-D-aspartate (NMDA) receptor co-agonists abnormalities in serum of patients with schizophrenia have been reported. In this study, we examined NMDA-receptor co-agonists as biomarkers for the development of psychosis in individuals with ARMS.

Methods: We examined serum levels of NMDA-receptor co-agonists including glutamate, cysteine, glycine, γ-glutamylcysteine, glutathione, D-serine and L-serine in antipsychotic-naïve ARMS patients. We compared these levels with those in healthy controls. We also examined correlations between clinical scores and serum levels of NMDA-receptor co-agonists in individuals with ARMS.

Results: A total of 24 individuals with ARMS and 42 healthy controls were enrolled in this study. The levels of γ-glutamylcysteine, glutathione and D-serine were significantly lower, but the glutamate level was higher in ARMS individuals compared to healthy controls. These results were equivalent to those of patients with schizophrenia. There were no correlations between clinical scores and serum levels of NMDA-receptor co-agonists in individuals with ARMS.

Conclusion: The present study revealed that the levels of some NMDA-receptor co-agonists of individuals with ARMS were different from those of healthy controls, and was equivalent to those of patients with schizophrenia. The detection of abnormal levels of NMDA-receptor co-agonists may be useful for early diagnosis of psychosis.

Topic Area: Ultra High Risk / Prodromal Research

B97
Attrition Rates in Treatment Trials: A Systematic Review and Meta-analysis of Clinical High-risk for Psychosis Interventions

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Attrition is a complex issue affecting study validity. Our objective was to synthesize the relative attrition rates in trials conducted in clinical high-risk (CHR) for psychosis populations. We searched the following electronic databases: MEDLINE, Embase, PsychINFO, CINAHL and EBM with no date, geographic or language restrictions. Inclusion criteria was any treatment-based randomized controlled trial (RCT) conducted in CHR samples that reported attrition. Relative attrition rates were calculated using random-effects meta-analysis, stratified by time, and reported as odds ratios (ORs), proportions, and 95% confidence intervals (CIs). Twenty-one RCTs met our inclusion criteria. The mean age was 19.4 years and 56% were male. Attrition rates between cognitive behavioural therapy and control groups were not statistically different at 6-months (OR = 1.13, 95% CI = 0.80-1.60, n = 729, trials = 6), 12-months (OR = 1.08, 95% CI = 0.81-1.44, n = 842, trials = 7) or 24-months (OR = 0.75, 95% CI = 0.52-1.07, n = 540, trials = 3). All other treatment interventions: integrated psychological therapy (24-months; OR = 0.59; 95% CI = 0.28-1.24, n = 162, trials = 2), omega-3 (6-months: OR = 1.05, 95% CI = 0.69-1.60, n = 512, trials = 3; 12-months: OR = 0.97, 95% CI = 0.64-1.46, n = 512, trials = 3), cognitive remediation therapy (2-months: OR = 1.13, 95% CI = 0.37-3.41, n = 157, trials = 3), and glutamate modulators (4-months: OR = 1.52, 95% CI = 0.40-5.82, n = 52, trials = 2) were not statistically different from controls at any time-point. When accessing overall study attrition, the pooled attrition rate was 25% (95% CI = 16%-34%) with significant heterogeneity between types of treatment ($p<0.001$). Attrition rates did not statistically differ between treatment and control groups, however an overall attrition of 25% in CHR trials is high relative to other populations. Future research is warranted to prevent potential biases associated with high attrition rates.

Topic Area: Ultra High Risk / Prodromal Research

B98
Comparability of the Global Functioning: Social and Role Scales in North American and International High-Risk Samples

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Functioning deficits are prominent features of psychotic disorders and contribute to reduced productivity and lower quality of life. Further, research has shown that problems with social functioning, including forming and maintaining relationships, and role functioning, involving work/school achievement, are present prior to the onset of psychosis, in the high-risk phase. As part of the North American Prodrome Longitudinal Study (NAPLS), two comparably anchored yet independent measures of social and role functioning, the Global Functioning:Social (GF:Social) and Global Functioning:Role (GF:Role) scales (Cornblatt et al, 2007), were developed specifically to assess these domains in high-risk youth. The brief, summary scales have been validated and shown to be reliable in US samples. Results from NAPLS and the Recognition and Prevention Program in the US consistently have found mean GF:Social and GF:Role scores of 5-6 (out of 10, moderate to serious impairment) for high-risk subjects and 8-9 (good to above average functioning) for healthy controls, with significant differences between groups. Additionally, the GF: Social score has been found to predict psychosis conversion in several studies. However, it is unclear to what extent these findings hold internationally. This presentation will compare published findings from high-risk samples collected in Italy, Finland, Denmark, Australia, and Korea to North American samples. In particular, the GF scales mean scores, correlations with high-risk symptoms, and usefulness as predictors of psychosis conversion will be examined. If comparable, the findings will support conclusions about functional deficits in the prodrome established in North America and support the generalizability of the measures across cultures.

Topic Area: Ultra High Risk/Prodromal Research

B99
Personality Organization and Sense of Self in Individuals at Ultra-high Risk for Psychosis and First-episode Psychosis

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Purpose: Data on personality organization and sense of self in at risk mental state and early stages of psychosis is highly valuable but sparse. The aim of this ongoing project is to explore personality functioning and sense of self in individuals at ultra-high risk for psychosis (UHR) and with first-episode psychosis (FEP).
Materials and Methods: All UHR individuals were identified using the Comprehensive Assessment of At Risk Mental State (CAARMS), some additionally using the Schizophrenia Proneness Instrument for Adults (SPI-A). The Structured Clinical Interview for DSM Disorders (SCID I and II) was applied. Personality functioning and sense of self were assessed with the Structured Interview for Personality Organization (STIPO) and the Examination of Anomalous Self-Experience (EASE). Data of UHR (n = 8), FEP (n = 8), borderline personality disorder (BPD) individuals (n = 18) and healthy controls (HC, n = 15) were compared.
Results: UHR patients showed a significantly lower level of personality organization ($p < .001$), significant deficits in identity integration ($p < .001$) and sense of self ($p \leq .05$), but not a different quality of object relations compared to HC ($p = .18$). UHR individuals had a significantly higher level of personality organization ($p = .022$), a better identity integration ($p = .027$) and a higher quality of object relations ($p = .04$) compared to BPD individuals. There were no differences in these variables between UHR and FEP patients ($p > .05$). Self-disorders (EASE) of UHR patients did not significantly differ from FEP and BPD patients.
Conclusion: These findings suggest that personality organization and sense of self in UHR and FEP individuals lie on a spectrum between healthy and BPD individuals.

Topic Area: Ultra High Risk/Prodromal Research

B100
Group and Family Based Cognitive Behavioral Therapy for Youth at Risk for Psychosis: From Research to Real-Word Practice

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To decrease the severity of symptoms and functional impairment in youth at high risk of developing psychosis we have established a comprehensive Group and Family-based Cognitive Behavioral Therapy Program (GF-CBT). GF-CBT, which is grounded in theory and research on information processing in delusions, decision making, memory and behavioral change, teaches youth at-risk strategies for reducing biased information processing in order to prevent the formation of delusional beliefs. Families learn CBT techniques to support, encourage and maintain use of these skills at home. Two mixed methods studies were completed: a pilot open trial to evaluate the program's feasibility and a pilot randomized controlled trial to evaluate its efficacy, as compared to symptom monitoring, over a 2-year follow-up. Nineteen youth ages 12-25 and 20 family members participated. Results support the feasibility and preliminary efficacy of GF-CBT, as evidenced by high levels of program satisfaction and significant remission rates among GF-CBT participants, with the majority no longer meeting ARMS criteria post-CBT, and maintaining recovery at the follow-up. At post-treatment GF-CBT group showed greater decreases in positive and negative symptoms (CAARMS) as well as improvements in functioning (SOFAS). The difference between groups increased over time. As part of the SAMHSA funded project to improve outcomes for as many as 2,000 youth and their families affected by, or at risk of, early onset psychosis in the State of Missouri, GF-CBT has been implemented in 3 DMH clinics. GF-CBT state-wide implantation, including clinician training and "Train-the-Trainer" procedures to allow sustainability of the intervention will be discussed.

Topic Area: Ultra High Risk / Prodromal Research

B101
Randomized Controlled Trial on Early Detection and Intervention for Women at-risk of Psychosis in Hong Kong

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Cognitive-behavioral therapy for psychosis (CBTp) is the first-line psychological intervention for treating early psychosis. Following this line of intervention, different groups of researchers and clinicians have developed CBT for "At-risk mental states" (ARMS) with emphasis on normalization and adaptive interpretation of positive psychotic symptoms. Although the prevalence rate of psychosis did not show any gender bias, the age of onset for women is usually late. Instead of dopamine dysregulation in teenage psychosis, poor affective and cognitive functioning (such as mood disturbances, biased cognitive appraisal) and later life risks (such as social isolation, unemployment) are more likely to play a central role in the late onset of psychosis in women. Therefore, psychological intervention and tangible social support would be the viable seamless intervention for pre-psychotic phase in women of social disadvantage. Partnering with three local community non-government organizations, this study aims to minimize the risk of psychosis transition among women of incipient psychosis. Identification of the service recipients will take reference of the definition of ARMS. A multisite randomized controlled trial is conducted to evaluate the effectiveness of a group CBT protocol, which is designed to equip women at ARMS to handle their pre-psychotic thinking adaptively using a gender-specific evidence-based approach. Women participants of age 18-64 are randomized to receive either group CBTp plus tangible social support or to receive psychoeducation (PsyEd) plus tangible social support. Both the group CBTp and PsyEd consisted of 8 consecutive weekly sessions with a booster session 4 weeks after the last session.

Topic Area: Ultra High Risk/Prodromal Research

B102
Personality Traits of Prodromal Psychosis

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Objective: The traits of personality associated with the development of psychosis remains unclear. Therefore we aimed to explore personality traits at prodromal psychosis.

Methods: Participants were 65 ultra high risk for psychosis (UHR) individuals, 44 patients with first episode of schizophrenia (FES), and 60 healthy controls. Eight UHR individuals transitioned to psychosis (UHR-T), while 27 did not during one-year follow up (UHR-NT). The Minnesota Multiphasic Personality Inventory (MMPI) was administered to all subjects at baseline.

Results: The UHR and the FES groups demonstrated significantly higher scores on the eight scales (Scale 1, Hypochondriasis; Scale 2, Depression; Scale 3, Hysteria; Scale 4, Psychopathic Deviate; Scale 6, Paranoia; Scale 7, Psychasthenia; Scale 8, Schizophrenia; Scale 0, Social Introversion) as compared with the healthy control group. The UHR group showed significantly lower scores on the Scale 6 and the Scale 8 than the FES group. The UHR-T group showed significantly higher scores on the Scale 6 and the Scale 8 than the UHR-NT, but there was no significant difference between the UHR-T and FES groups. The UHR-T group had significantly higher score compared with the UHR-NT and the FES groups on the Scale 7.

Conclusions: The high risk state for psychosis was characterized by more attenuated persecutory ideas, poignancy and bizzare sensory experiences in comparison to the onset of psychosis. On the other hand, the high risk and the first episode of psychosis were similar in severity of depressive state, anxiety, introversion and physical complainants. Furthermore, the subjects with prodromal state, namely who later developed psychosis, already exhibited the comparable psychotic features to and more severe anxiety than the first episode patients at the baseline.

Topic Area: Ultra High Risk/Prodromal Research

B103
Video Therapy: A New Protocol Aimed to Strengthen the Self Perception in High-Risk Adolescents

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The authors deal every day with High-Risk adolescents patients and underline the importance of prevention. The present work is the continuation of a pilot study presented at Iepa Congress in Milan (2016) that used the Video Therapy technique. We believe that this technique promotes in HR patients the comparison between how they see themselves and how they perceived to be seen by others. The final aim of the Video Therapy is the strengthening of the self components which are believed to contribute to prevent the psychotic onset. Also in the current study the methodology is confirmed to be simple, economic and easy to apply for the practitioners. Beside that the use of Tablet has been found interesting for adolescents since largely used in their daily life. The purpose of this study is to record this new intervention method in which an innovative protocol has been structured and the sample has been enlarged. The sample is composed of adolescents with an age between 12 and 18 years old attending four Video Therapy sessions, followed by a standard interview and homework. Pre and post intervention questionnaires were administered. The results suggest that in treated patients there might be an increased internal self-perception and a better accordance of the self.

Topic Area: Ultra High Risk / Prodromal Research

B104
Isolated Hallucination Does Not Predict Psychosis: Insight from a Longitudinal Study in a Clinical Population at High Risk for Psychosis

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Perceptual abnormalities (PAs) such as auditory hallucinations are one of the most common symptoms of psychotic patients. However, it remains unclear whether symptoms of sub-clinical PAs also play a key role in predicting psychosis. In an ongoing prospective follow-up study of individuals at a clinical high risk (CHR) of psychosis, we evaluated the potential of first-time experience of PAs and/or thought content disorders (TCDs) to predict psychosis. Conversion to psychosis was the major focus of this follow-up study. A total of 511 CHRs were recruited, of whom 443(86.7%) completed the clinical follow-up of at least 6 months and up to 2 years. CHRs were divided into four groups according to the presence of PAs and/or TCDs. At the follow-up endpoint, 39(19.9%) CHRs in the "TCDs-only" group, 2(8.3%) in the "PAs-only" group,45 (17.0%) in the "TCDs-and-PAs" group, and 1(3.8%) in the "None" group converted to psychosis. Survival analysis revealed a higher conversion rate in CHRs with TCDs compared with those with PAs only. CHRs with isolated PAs had shown a higher level of dysphoric mood at baseline compared with those with TCDs. About 89% TCDs contents were related with their experienced PAs. The isolated PAs are not strongly associated with increased susceptibility to psychosis.

Topic Area: Ultra High Risk/Prodromal Research

B105
The Impact of Age on the Validity of the Prime Screen in a Sample of Help-seeking Adolescents

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Research indicates that duration of untreated psychosis is implicated in the prognosis of psychotic disorders. Extending the concepts of early interventions established among those in their first episode of psychosis, the field has moved towards prevention through efforts to uncover signs of clinical high-risk (CHR) prior to full illness development. Brief self-report screening instruments offer promise in furthering feasible early identification efforts for at-risk youth. Current efforts, however, are limited by high false positive rates. Identifying moderators of screener accuracy is a potential first step to improving identification and prevention efforts. We investigated the moderating effect of age on self-reported attenuated positive symptoms from the Prime Screen and clinician diagnosed CHR status. Participants (N = 134) were racially diverse help-seeking adolescents from the community. Results suggested the presence of a trending linear-by-quadratic interaction between age and Prime Screen symptoms (b = -0.04 χ^2 (1) = 3.75 p = .053). Exploratory analyses revealed number of items endorsed to optimally predict CHR diagnosis decreased with age (youngest group cutoff = 5 items; middle age group cutoff = 3 items; oldest age group cutoff = 1 item). Although younger participants endorsed more risk items on average, follow up analyses suggested that the Prime Screen was a more accurate predictor of clinician-diagnosed risk among older participants relative to their younger peers. The current study builds on the literature identifying moderators of psychosis-risk screener accuracy, and highlights the potential limitations of CHR screening tools in younger populations.

Topic Area: Ultra High Risk/Prodromal Research

B106
Self-disorders, Clinical Symptomatology, Functioning and Trauma in Clinical High Risk (CHR) for Psychosis

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We investigated the prevalence of phenotypic variants of self-disorder (SD), i.e. anomalous self-experiences (ASEs), and the associations between ASEs and positive, negative and disorganization symptoms, global functioning, diagnoses and childhood trauma, in a clinical high risk (CHR) for psychosis sample. Thirty-eight subjects were included, 31 CHR (according to ultra-high risk and/or cognitive disturbances (COGDIS) criteria), and seven with non-progressive attenuated psychotic symptoms. ASEs were assessed with the Examination of Anomalous Self-Experience (EASE). Positive, negative and disorganization symptoms were assessed with the Structured Interview for Prodromal Syndromes (SIPS), functioning with the Global Assessment of Functioning Scale–Split version (S-GAF), trauma with the Childhood Trauma Questionnaire (CTQ), and diagnoses with the Structured Interview for DSM-IV Axis I diagnoses (SCID-I), and according to DSM-IV-TR criteria for disorders not included in SCID-I. The total level of ASEs was in line with the level reported in other CHR-samples, and did not differ significantly between the ordinary CHR-group and the non-progressive symptoms group. ASEs were significantly correlated with positive, negative and disorganization symptoms, and with the CTQ-subscale emotional neglect, but not with global functioning. Only negative symptoms explained a significant amount of the variance in the regression models. Compared to mood and anxiety disorders, the level of ASEs was significantly higher in schizotypal personality disorder and in dissociative disorders. Our results demonstrate a particularly strong link between ASEs and negative symptoms. The link with emotional neglect supports previous reports that environmental stressors may contribute to the development of ASEs.

Topic Area: Ultra High Risk/Prodromal Research

B107
Lower GABA Levels in Prefrontal Cortex in Individuals at Clinical High Risk for Psychosis Who Did Not Remit

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Objective: We aimed to investigate whether GABA levels in clinic high risk (CHR) for psychosis were associated with subsequent clinical outcome.

Methods: GABA levels referenced to water were measured in the medial prefrontal cortex (mPFC) with MEGA-PRESS sequence using 3-Tesla proton magnetic resonance spectroscopy in 94 CHR participants and 52 healthy controls, the severity of prodromal psychotic symptoms and cognitive function were assessed with SIPS and MCCB, respectively. Clinical assessment was repeated in 85 CHR subjects at about one-year follow-up. The clinical outcomes of CHR subjects were remission (no longer meeting CHR criteria) and non-remission (still meeting CHR or converting to psychosis).

Results: At 1 year follow up, 50 CHR subjects belong to the remission group and 35 belong to the non-remission group. The baseline GABA levels in the mPFC in the non-remission CHR were significantly lower than that in healthy control subjects (non-remission CHR vs. HC: 2.25 $\pm$ 0.039 vs. 2.46 $\pm$ 0.049, p = 0.022), and there was no significant difference between the remission CHR and healthy control subjects (remission CHR vs. HC:2.42 $\pm$ 0.05 vs. 2.46 $\pm$ 0.049, p = 0.10). In addition, baseline mPFC GABA levels were positively correlated to speed of processing performance in MCCB (rho = 0.384,p = 0.023) within non-remission CHR, which was absent in subjects at remission CHR or healthy controls subjects.

Conclusions: An abnormally lower GABA level in the medial prefrontal cortex could suggest a worse prognosis among CHR subjects. The finding supported the key role of GABAergic dysfunction in the pathophysiology of developing psychosis.

Topic Area: Ultra High Risk/Prodromal Research

B108
Automated Speech Analysis to Predict Development of Psychosis: A Novel Endpoint in a Randomized, Phase II Trial of BI 409306 in Attenuated Psychosis Syndrome

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Although individuals with attenuated psychosis syndrome (APS) can be identified, reliable prediction of frank psychosis onset among them remains elusive. Improving the capacity to predict those at highest risk for conversion to psychosis would have important ramifications for early identification and preventive intervention, potentially critically altering the long-term life trajectory of people with emergent psychotic disorders. Subtle disorganization in speech has consistently been identified as predictive of psychosis (i.e., with classification accuracy of ~60%) among young people identified as clinically high-risk. BI 409306, a potent and selective phosphodiesterase-9 inhibitor that improves NMDA signaling, is under development for early intervention in APS. An ongoing multinational, double-blind, parallel-group study will assess the efficacy, safety, and tolerability of BI 409306 in patients with APS (16–30 years of age). Patients will be randomized (300 planned, 1:1) to BI 409306 or placebo for 52 weeks. The primary endpoint is time to first episode psychosis. Secondary endpoints will assess functional capacity, cognition, and disease symptoms. Novel automated speech analysis, an exploratory biomarker of brain plasticity, will also be assessed. Patients will participate in audio-recorded interviews (baseline, Weeks 18, 42, 52). Audio recordings and transcripts will be analyzed to extract acoustic parameters and generate speech graphs and semantic features. Classifiers will be applied to determine the optimal combination of acoustic, graph-theoretical, and semantic features to predict psychosis. This novel speech analysis, as part of a clinical trial, may provide valuable data to aid early detection of APS. Recruitment is ongoing. Funding: Boehringer Ingelheim (NCT03230097).

Topic Area: Ultra High Risk / Prodromal Research

B109
Can Biofeedback Videogames Engage Youth at Risk for Psychosis and Facilitate Interpersonal Connection and Reduced Stress Reactivity? Lessons from a Feasibility Trial of Computer Aided Learning for Managing Stress (CALMS)

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Although the peak onset of psychotic disorders occurs during adolescence and early adulthood, the majority of treatments for youth at clinical high risk (CHR) for psychosis are designed for adults. There is an urgent need for treatments that will effectively engage youth. Many CHR, despite poor academic and social engagement, spend hours each day engaged in complicated videogame play. We sought to determine if videogames could provide an effective medium for engaging and treating this population. To do so, we conducted a feasibility trial of Computer Aided Learning for Managing Stress (CALMS), a 12-week family therapy designed to engage high-risk youth and their parents. Using biofeedback embedded in cooperative videogame play, we aimed to enhance resilience to stress and reduce interpersonal conflict. Of youth-parent pairs who consented to the study, 63% completed the treatment. Participants showed a moderate decrease in perceived stress (Z = -0.67), conflict (Z = -0.60), and criticism (Z = -0.75) from baseline to follow-up, as well as a nearly significant increase in sociomotor synchrony (p = 0.08). We report self-report data on treatment credibility, user experience, and interpersonal interactions. Pilot data on heart rate and motor synchrony are also presented as potential new targets for social interventions incorporating multiplayer videogame play. Findings to date confirm the ongoing need to effectively engage adolescents and young adults and the potential of videogames for enhancing interpersonal engagement, including with parents. We present recommendations for further development and use of videogames in treatments for this population.

Topic Area: Ultra High Risk/Prodromal Research

B110
Early Detection of Risk for Psychosis: Overview of Screening Tools for the General Population

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Early detection and treatment of psychotic symptoms might be relevant to prevent long-term, disabling outcomes of psychotic disorders. Implementation of screening tools improves possibilities of intervention in the prodromal clinical stages of psychotic disorders and plays a crucial role in the strategy of prevention in mental health. Several validated brief questionnaires can be adopted as screening tools for further diagnostic interviews in the help-seeking population; nonetheless, the role of screening instruments for the general population is still in its infancy. The aim of this review was to identify screening instruments for clinical high risk (CHR) of psychosis eligible for wide population comparing questionnaires validated for detection of risk of psychosis. A literature search was conducted to assess the diagnostic performance of different screening tools. Among 14 screening instruments selected, 5 self-report questionnaires validated for the general, non help-seeking population were identified. Sensibility and specificity of YPARQ-B, PROD-screen, BQSPS, CAPE-42 and APSS were summarized and test-characteristics of these tools were described. In conclusion, considering the highest levels of accuracy and sensitivity, the most suitable instruments for screening CHR in the general population were identified and described. Future studies are needed to assess whether the widespread use of such tools in young, non-help-seeking individuals can significantly advance early detection strategies.

Topic Area: Ultra High Risk / Prodromal Research

B111
Children and Adolescents at Risk for Psychosis: Baseline Imapirment of Processing Speed in Converted Group

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Background: Cognitive impairments were observed in young-adults at risk for psychosis who later developed a psychotic episode. Scarce studies were published of children and adolescent populations, despite the importance of this period in defining the neurodevelopmental model of psychosis. The aim of this study is to determinate baseline cognitive differences between adolescents at clinical high risk (CHR) who convert (CHR-P) or who did not convert (CHR-NP) to a psychotic disorder.

Methods: Multi-site, naturalistic and longitudinal sample of CHR help-seeking were recruited from two hospitals from Barcelona. Inclusion criteria were having at least one of the three CHR criteria (positive attenuated psychotic symptoms, brief limited psychotic symptoms or genetic risk syndrome) assessed by Structured Interview of Prodromal Syndromes (SIPS). Patients were clinically followed 18 moths. General Intelligence, logical verbal memory, verbal learning, visual memory, working memory, processing speed, visuospatial abilities, sustained attention and executive functioning were assessed by a comprehensive neuropsychological battery at baseline. Pair-wise differences were performed to show differences at baseline between CHR-P and CHR-NP.

Results: A total of 70 patients were followed (23 CHR-P and 47 CHR-NP) and cognitive assessed at baseline. No differences in socio-demographic characteristics at baseline were founded between CHR-P and CHR-NP. No differences in general intelligence were observed. CHR-P show lower score in a coding task than CHR-NP at baseline ($p = 0.045$).

Conclusions: Processing speed was significantly impaired at baseline in CHR-P group compared to CHR-NP group, reinforcing the importance of taking into account cognitive variables as treatment target.

Topic Area: Ultra High Risk / Prodromal Research

B112
Children and Adolescents at Risk for Psychosis: Transition and Baseline Characteristics

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Objective: The aim of this study is to determinate transition rates and baseline differences between adolescents at clinical high risk (CHR) who convert (CHR-P) or who did not convert (CHR-NP) to a psychotic disorder.

Methods: Multi-site, naturalistic and longitudinal sample of CHR help-seeking were recruited from two hospitals from Barcelona. Inclusion criteria were having one of the three CHR criteria (positive attenuated psychotic symptoms, brief limited psychotic symptoms or genetic risk syndrome) assessed by Structured Interview of Prodromal Syndromes (SIPS). Socio-demographical, clinical and neuropsychological variables at baseline 6, 12 and 18 months were registered. Pair-wise differences were performed to show differences at baseline between CHR-P and CHR-NP.

Results: A total of 70 patients were clinically followed. Mean age at baseline was 15.29 $\pm$1.6, and 45 were females (64.2%). At 18 months follow-up, 23 (32.8%) patients developed a psychotic disorder. No differences in socio-demographic characteristics at baseline were founded between CHR-P and CHR-NP. In terms of clinical symptoms and functioning, CHR-P show lower scores in the Global Assessment of Functioning at baseline ($p = 0.034$), a trend tendency of higher presence of anxiety diagnosis at baseline ($p = 0.057$) and a trend tendency of higher scores of the sub-item of grandiosity assessed by SIPS ($p = 0.079$) than CHR-NP.

Conclusions: 32.8% of children and adolescents at risk developed a psychotic disorder during 18 months of follow-up, showing transition rates higher than those presented in children and adolescent samples in Europe (Tor et al., 2017), but similar to those showed in adult samples (Schultze-Lutter et al., 2015).

Topic Area: Ultra High Risk / Prodromal Research

B113
Lifetime Suicidal Behaviors and Psychotic-like Experiences in the General Population: The Role of Childhood trauma, Depression and Cognitive Biases

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Background: Psychotic experiences are far more prevalent in the population than psychotic disorders and are associated with a wide range of depressive, anxiety and behavioral disorders, as well as increased risk for psychotic disorder. Recently, psychotic experiences have been highlighted as a potentially valuable clinical marker of risk for suicidal behavior. The aim of our study was to investigate relationships between suicidal ideation and behaviors, psychotic-like experiences, depression, childhood trauma and cognitive biases.
Methods: A total of 3495 (2199 females; mean age 26.39, SD = 4.71) individuals in the general population (psychotic disorders were excluded) were assessed with self-report scales that measure traumatic life events (The childhood experience of care and abuse questionnaire), psychotic-like experiences (Prodromal Questionnaire), cognitive biases (Davos Assesment of Cognitive Biases Scale), suicidal ideation and behaviors and a history of depression diagnosis. We proposed an explanatory model of the relationship between trauma and suicidal ideation, that takes psychotic-like experiences into account. Our model was tested with path analysis.
Results: The direct effect of childhood trauma on suicidal ideation (β = 0.505, $p < 0.001$) was significantly reduced after psychotic-like experiences, history of depression and cognitive distortions were included (β = 0.292, $p < 0.001$)). The direct effect of childhood trauma on suicidal behaviors (β = 0.421, $p < 0.001$)) was significantly reduced after psychotic-like experiences, history of depression and cognitive distortions (β = 0.221, $p < 0.001$). **Discussion:** The results of our study suggest that psychotic-like experiences, along with other variables in our model, are related to suicidal ideation and attempts. Understanding this association has the potential to critically bolster suicide prevention efforts.

Topic Area: Ultra High Risk / Prodromal Research

B114
The Association between Sleep Disturbances and the at Risk Mental State: A Systematic Review

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Background: Sleep disturbances are one of the most commonly reported symptoms proceeding the onset of frank psychosis. Yet, the relationship between specific sleep difficulties and early symptoms and functioning is still unclear.
Aims: This review explores sleep quality, quantity and circadian rhythms and their associations with symptoms and functioning in Ultra High Risk (UHR) samples. A meta-analysis will be carried out if there is sufficient comparable data available.
Methods: This review included a comprehensive search of six databases (including MEDLINE and PsycINFO) and hand searches of journals. Eligible studies included UHR individuals aged 16-35 years old. All studies provided data on sleep disturbances or disorders. Case studies and case reviews were excluded.
Results: 5,960 studies were identified; 102 full texts were checked for eligibility. Fourteen studies met the inclusion criteria (total sample = 1170 participants). UHR individuals experienced poorer sleep quality including reduced sleep efficiency, restless sleep and higher nightmare frequencies. Sleep quantity was reduced with increased movements, longer Wake After Sleep Onset and increased sleep latency in UHR groups compared to controls. Reduced Total Sleep Time was associated with positive symptoms. Studies reported a relationship between disrupted circadian rhythms (including sleep pattern disruption and day-night reversal) and positive symptoms. There were associations between sleep pattern and functioning cross-sectionally and longitudinally.
Conclusions: There are distinct differences in how sleep quality, quantity and circadian rhythms relate to symptoms and functioning in UHR groups. Significant variations in how sleep is measured across studies highlights a need to assess sleep more consistently in UHR samples.

Topic Area: Ultra High Risk/Prodromal Research

B115
Treatment Delays in Youth with a First Episode of Psychosis: Relationship to Pre-Onset Sub-Threshold Symptoms

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Purpose: The duration of untreated psychosis (DUP), or the time between illness onset and initiation of treatment, is key to symptom remission and recovery for a first episode of psychosis (FEP). The World Health Organization suggests that specialized treatment for psychosis be initiated within the first 3 months of the illness' onset. As a result, research has focused on factors that are associated with DUP. One such variable, until now unexamined, is the presence or absence of a clinical high-risk state (CHR) prior to FEP onset. CHR states may render the pre-psychosis phase more severe, thus potentially altering the pathways to care of help-seeking individuals.
Methods: Using retrospective symptom recall and pathways to care data from the Circumstances of Onset and Relapse Schedule for 382 individuals, we determined whether the presence of a CHR state prior to a FEP significantly lengthened the duration of the prodrome phase, duration of untreated illness (DUI), and DUP (including the time to first help-seeking contact).
Results: Those experiencing a pre-onset CHR state endured a longer prodrome ($p = .002$), a longer time between illness onset and first help-seeking contact ($p = .0046$), and a longer DUI ($p = .0214$).
Conclusions: These findings suggest that a CHR state prior to a FEP can have an important impact on an individual's propensity to initiate contact with services, and consequently lengthen the time that their illness is left untreated.

Topic Area: Ultra High Risk/Prodromal Research

B116
GABAergic Dysfunction in Early Adolescents with Subclinical Psychotic Experiences

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Schizophrenia and psychosis are characterized by the impairment of GABAergic function. Although results are mixed, some previous MR spectroscopy (MRS) studies have demonstrated decreased brain GABA levels in patients with schizophrenia as well as in ultra-high-risk individuals. The question remains, however, whether such impairment may underlie the vulnerability to develop psychosis or the epiphenomena caused by medication exposure or illness chronicity. Subclinical psychotic experiences (SPEs) are sometimes present in adolescents in the general population, and increase the risk to develop psychosis in young adulthood. Investigations into association between SPEs and GABA levels in the general adolescents would answer the question. Here, we measured GABA+ levels in the anterior cingulate cortex (ACC) in a subsample (aged 10.5–13.4 years) of a large-scale population-based cohort using MRS (MEGA-PRESS), because the ACC is a key region of executive cognitive control and emotional regulation, which are sometimes impaired in patients with psychosis. In addition, we explored the alterations in ACC GABA+ levels related to SPEs (N = 215). The MEGA-PRESS data were analyzed by using the Gannet software. The results showed that adolescents with SPEs had significantly lower GABA+ levels in the ACC ($p = 0.043$). We suggest that GABAergic dysfunction already existing in early adolescence may be a neural basis of premorbid state for the development of psychosis.

Topic Area: Ultra High Risk / Prodromal Research

B117
Functional Network Changes Following Cognitive Training in Individuals at Risk for Psychosis

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Targeted cognitive training (TCT) has been proposed as a potential intervention to address behavioral deficits and has been shown to improve cognitive functioning in individuals at clinical high risk for psychosis (CHR). This study tests whether social cognitive focused TCT would alter the connectivity functional networks engaged in facial emotion processing, especially those involving the amygdala and superior temporal sulcus (STS). 14 CHR subjects (7 male, mean age = 21.9) and 14 matched healthy control subjects (HC) were included in the study. CHR subjects completed 40 hours (8 weeks) of targeted cognitive and social cognitive training using Lumosity (http://www.lumosity.com) and SocialVille (http://www.positscience.com). Resting state fMRI was acquired as well as fMRI during performance of an emotion recognition task. Changes in emotional face processing network were evaluated using seed-based connectivity analyses and psychophysiological Interaction (PPI).Individuals in the TCT group showed significant improvements on measures of social cognition. Prior to training, CHR individuals demonstrated hyperactivity in the left orbitofrontal cortex, posterior cingulate cortex and amygdala but this hyperactivity was reduced somewhat after training. CHR individuals also showed differences from controls in amygdala connectivity with the temporal and fusiform gyrus as well as reduced STS connectivity with prefrontal, temporal and posterior cingulate cortex. These results suggest that targeted cognitive training may be effective in altering functional network connectivity in networks associated with psychosis risk and may be a useful tool for prevention or early intervention in individuals at risk for psychotic disorders.

Topic Area: Ultra High Risk/Prodromal Research

B118
Psychosis-spectrum Screening among Adolescents Admitted to a Psychiatric Inpatient Unit

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Identification of youth in the early stages of psychosis is critically important, as early intervention is linked to better long-term outcomes and untreated psychosis is associated with poor prognostic factors. Given that many individuals with psychosis report receiving services for a range of psychopathology during adolescence and prior to the onset of full-threshold psychosis, risk screening within pediatric mental health settings is an important step in identifying at-risk youth as early as possible. This study investigated two approaches to psychosis-spectrum screening among psychiatrically hospitalized adolescents. The screening methods evaluated include: 1) the PRIME, a measure of psychosis-risk symptom severity, and 2) the Thought Problems scale of the ASEBA Youth Self-Report (YSR) form, a scale designed to measure unsafe and strange thinking linked to multiple psychiatric disorders, including psychosis. Screening scores were compared to interview-based assessment within two samples: 1) a standard intake sample (n = 300) that used the Childhood Inventory of Psychiatric Syndromes to evaluate psychotic disorders, and 2) a pilot sample (n = 50) of youth with positive PRIME screens who were further assessed using the Structured Interview for Psychosis-risk Syndromes to evaluate psychosis-risk and full-threshold disorders. Results suggest that within this acute setting, there is a need for psychosis-spectrum evaluation. The PRIME and Thought Problems scale may be valid screens for psychosis symptomatology, as both screens statistically predicted symptom scores and diagnoses. Results support the use of psychosis-spectrum screening methods on adolescent inpatient units, a practice that could facilitate monitoring and treatment for early psychosis symptoms.

Topic Area: Ultra High Risk/Prodromal Research

B119
Glutamate and GABA in UHR

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Background: Disturbances of the neurotransmitters glutamate and GABA have long been suspected to be involved in the pathophysiology of psychosis. These disorders have also found been found in people at UHR, making it a promising area for early detection. Cognitive deficits in schizophrenia are present prior to the onset of psychosis, and may be linked to perturbed glutamate and GABA function. Data suggest that this link is already present in UHR states.
Methods: Participants: UHR individuals who meet the CAARMS criteria recruited from Mental Health Services in the Capital Region of Denmark and matching healthy controls. Examinations: 1H-MRS of the ACC and thalamus. Diagnostic and psychopathological tests: CAARMS, SCID, SOFAS, PSP, Cornblatt, SANS, BPRS, MADRS, YMRS, CGI, PAS, SPI-A, AQoL Cognitive tests as part of collaborative studies.
Results: So far 124 UHR individuals and 49 healthy controls have been scanned (April 2018) Preliminary analysis of the baseline data finds no significant difference in glutamate levels (in ACC and thalamus) in UHR patients compared to matched healthy controls. Baseline data remains to be analysed in relation to relevant subgroups of patients e.g. based on clinical outcome. GABA analysis and analysis of follow-up data are also yet to be performed. Data will be ready for the meeting, and will be presented.
Discussion: More studies are needed in this field, since results so far have been diverging.

Topic Area: Ultra High Risk / Prodromal Research

B120

This abstract has been withdrawn.
[Correction added on 17 September 2018, after print publication: the content of the poster abstract B120 has been withdrawn.]

B121
Progression of Hallucinatory Experiences in Those with Post-traumatic Stress Disorder

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Trauma in early life has been posited as a significant environmental predictor for the later onset of psychotic symptoms. Prior studies have shown trauma prevalence to be significantly higher in those with psychotic disorders when compared to both psychiatric and familial controls, with similar rates of trauma among those with attenuated symptoms. The current study analyzed the progression of psychotic-spectrum symptoms in a sample of help-seeking participants (12-22) with post-traumatic stress disorder (n = 27) and without (n = 58), referred for evaluation to a psychosis-risk specialty clinic. Using the positive symptom sub-scale of the Structured Interview for Psychosis-risk Syndromes (SIPS), participants were assessed with both a baseline evaluation and a six month follow-up for psychosis-spectrum symptoms. At baseline, only the group with PTSD's hallucinatory experiences mean score was above the attenuated symptom threshold rating, and was also 27% higher than the mean rating of the group without PTSD. At follow-up, hallucinatory experiences in the PTSD group decreased significantly on the SIPS ($t = 3.91$, $p < .001$), while those without trauma remained low throughout the six month follow-up. This suggests that, while those with PTSD may be more prone to perceptual abnormalities, the passage of time is associated with an attenuation of these symptoms, a pattern not seen in the group without PTSD.

Topic Area: Ultra High Risk/Prodromal Research

B122
White Matter Organization and Cognition in Patients at Ultra-high Risk for Psychosis: Preliminary Results from the FOCUS-trial

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Introduction: The patterns of structural brain abnormalities found in schizophrenia have fueled suggestions, that disturbed interaction between cortical regions may affect higher cognitive functions. This interaction is subserved by the white matter (WM) networks of the brain. Our previous studies on patients at ultra-high risk for psychosis (UHR) have indicated WM-alterations associated to clinical symptoms and level of function. However, to which extent WM-alterations are also associated with cognitive deficits in UHR-patients is unclear. WM-networks can be examined in vivo by diffusion weighted imaging (DWI), which is a magnetic resonance imaging (MRI) technique, considered the method of choice to non-invasively study aspects of WM-organization.

Objective: We aim to examine 1) If WM organization of UHR patients is disrupted compared to that of healthy controls; 2) If WM organization is associated with cognitive deficits in UHR-patients.

Methods: The FOCUS trial is a randomized, controlled trial comparing cognitive remediation and social-cognitive training versus standard treatment for UHR-patients. Here we present cross-sectional, preliminary baseline data, and we examine group differences on DWI-parameters between 120 UHR-patients and 50 healthy controls (HC). Applying multivariate statistics, we additionally analyze associations between DWI parameters, and cognition assessed by neuro- and social-cognitive measures (BACS, CANTAB, TASIT, ERT, HiSoC, SCSQ).

Results: Preliminary results indicate significant global and widespread patterns of WM-abnormalities in UHR-patients compared to HC. Analyses on associations between disrupted WM-organization and potential cognitive deficits in UHR-patients are currently running and will be presented.

Topic Area: Ultra High Risk / Prodromal Research

Poster Session C, Wednesday, October 10, 11:30 a.m. – 1:00 p.m., Essex Ballroom

C1
Discrimination and Risk of First-episode Psychosis among Immigrants

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Over four decades of research have found higher rates of psychosis among immigrants and ethnic minorities, yet the mechanisms underlying this increased risk remain unknown. Hypotheses related to selective migration, misdiagnosis, genetic factors, or neurodevelopment injuries have not been supported yet. Rather, available evidence suggests social stressors such as experiences of perceived and actual discrimination. In a sample of 1,129 cases of first-episode psychosis (27.5% immigrants) and 1,499 ethnicity-matched controls (19.5% immigrants) from the European Network of National Schizophrenia Networks studying Gene-Environment Interactions (EU-GEI) study using the Major Experience of Discrimination Scale (12 items on being treated unfairly in employment, education, housing, medical care, public transport, and interactions with police and courts), this preliminary case-control analysis found increased risk of psychosis among migrants (aOR 1.59, 95% CI 1.32-1.92, $p < 0.001$) and separately for cumulative experiences of major discrimination (aOR 1.25, 95% CI 1.16-1.35, $p < 0.001$), after adjusting for age, sex, and catchment site. While more than half of cases (58%) and more than half of migrants (77%) did not experience a single major experience of discrimination, mean levels of cumulative experiences of major discrimination were significantly higher among cases than controls ($t(2152) = -6.05$, $p<0.001$), and significantly higher among migrants than natives ($t(2152) = -5.18$, $p < 0.001$). Taken together, these findings suggest that higher levels of cumulative discrimination might partially explain the increased risk of psychosis among migrants, indicating these are preventable mental health disparities to target for early detection and intervention.

Topic Area: Psychosis NOS

C2
Psychotic-Like-Experiences, Magical Thinking and Internalizing and Externalizing Behavior in a Family High-Risk Study

Maria Henriksen[1], Cindy Liu[1,2], Elena Molokotos[1,3], Raquelle Mesholam-Gately[1,2], John Gabrieli[4], Susan Whitfield-Gabrieli[4], Matcheri Keshavan[1,2], Larry Seidman[1,2]

[1]*Beth Israel Deaconess Medical Center*, [2]*Harvard Medical School*, [3]*Suffolk University*, [4]*Massachusetts Institute of Technology*

Magical thinking and fantasy are a common part of childhood and they also share some similarities with Psychotic-Like Experiences (PLEs). However, PLEs confer increased risk for later psychotic disorder. In this study, we investigated the associations between PLEs, magical thinking, externalizing and internalizing behavior in biological children of healthy parents (HC: healthy controls) and of parents with a diagnosis of psychosis (FHR: family-high risk). FHR and HC samples were matched on age, education, race, and sex, with a sample consisting of 17 HC and 18 FHR ages 7-12. The measures administered included: Psychotic-Like Experiences (PLE), Magical Thinking Questionnaire (MTQ), Interpersonal Reactivity Index (IRI) and Child Behavioral Checklist (CBCL). No significant group differences were detected in reported PLEs or magical thinking. T-tests comparing groups revealed more internalizing and externalizing problems in FHR compared to HC children. Partial correlations, controlling for SES indicated that some associations between PLE and subscales of the CBCL, IRI and MTQ differed according to group. Fisher's R-to-Z tests indicated a significant or marginal difference between the two groups on only the associations between PLE and IRI Personal Distress and PLE and CBCL Externalizing. Our results indicate that PLEs may be associated with a different set of experiences and behaviors in FHR and HC children. It is possible that PLEs in FHR and HC subjects may be related to distinct mechanisms. More studies are needed to determine extent to which some profiles of psychosis-like experiences and magical thinking may be more predictive of later problematic outcomes by group.

Topic Area: Psychosis NOS

C3
Factor Structure of the Scale for Assessment of Negative Symptoms in Ethiopia

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The Scale for Assessment of Negative Symptoms (SANS) is a rating scale that measures negative symptoms in patients with schizophrenia (Andreasen 1982). It organizes individual symptoms within five broader categories: affective flattening or blunting, alogia, avolition-apathy, anhedonia-asociality, and attention. Previous factor analyses have found the variables from these categories organize into three overarching factors. However, these studies have been performed primarily in Western, high-income countries. We performed an exploratory factor analysis (EFA) using baseline SANS results ($n = 320$) from a clinical trial examining the efficacy of combined folate and B12 for patients with schizophrenia in Ethiopia. In our EFA we extracted a three factor solution, which was rotated using an oblique promax rotation. The three factors corresponded broadly with the subscales of (1) alogia, (2) affective flattening or blunting, and (3) avolition-apathy, anhedonia-asociality, and attention, with several elements of affective flattening or blunting loading into factor 1. Our results further support a three factor model of the SANS, though with differences from previous literature in how items are distributed. This difference in distribution may represent the influence of cultural variation between our studied population in Ethiopia and previously studied Western populations on schizophrenia symptomatology.

Topic Area: Psychosis NOS

C4
Negative Symptom Severity Determined by SANS is Associated with Poor Quality of Life in Patients with Schizophrenia

Arthur Su[1], Tithi D. Baul[2], Christina P.C. Borba[1,2], David C. Henderson[1,2]

[1]*Boston University School of Medicine*, [2]*Boston Medical Center*

Quality of life (QOL) measurement has become an established component of mental health outcome assessment, and there is growing interest in QOL in studies of treatment response of schizophrenia. However, the influence of sociodemographic, clinical, and treatment factors on QOL has yet to be fully defined. Research into these factors can serve to guide clinical management and lead to better overall outcomes. We sought to determine whether QOL had associations with severity of symptoms and lifestyle/metabolic profiles in patients with schizophrenia. The participants were 42 individuals with schizophrenia with symptom severity assessed by the Positive and Negative Syndrome Scale (PANSS) and Scale for the Assessment of Negative Symptoms (SANS). We administered the clinician-observed Quality of Life Scale (QLS) and collected metabolic markers of interest (e.g. BMI, fasting glucose, hemoglobin A1C, lipids, anthropometric measurements). We performed Spearman's rank-order correlations among QLS, PANSS, SANS, and metabolic variables. We found strong significant negative correlation between QLS and SANS ($r = -0.8132$; $p < 0.001$). Multiple linear regression modeling showed significant association between QLS and SANS ($t = -9.01$; $p < 0.0001$) after controlling for sociodemographic and metabolic factors. The SANS score accounted for 63% of variance, and one point increase in SANS resulted in a clear decrease in QLS (βest = -0.937). Our results demonstrate that negative symptom severity is a strong indicator of QOL when controlling for metabolic variables. Further research and stratification of symptoms or metabolic markers is warranted and can help elucidate clinical or preventative approaches for managing schizophrenia.

Topic Area: Psychosis NOS

C5
Community Treatment Orders-why the Controversy?

David Kantor[1]

[1]*Services and Housing in Peel*

Community treatment orders (CTOs) as discussed in international literature are often described as ineffective or at best, of questionable benefit. Yet they are being initiated in increasing numbers. This apparent paradox can be explained by an analysis of the geographic differences in both the criteria for initiation of a CTO, as well as the consequences of enforcing it. In Ontario Canada CTOs are being initiated with increasing frequency. A review of 50 patients subject to CTOs demonstrated a dramatic decrease in time in hospital for patients post initiation of a CTO. The primary contributing factor to this finding is the opportunity to maintain a non-compliant patient's medication without interruption thus preventing relapse, rather than involuntary administration of medication being possible only after signs of relapse. This opportunity is available as a result of the local mental health laws regarding involuntary treatment, and it is the geographic variations in these laws that account for the disparate opinions about CTO effectiveness.

Topic Area: Psychosocial Interventions

C6
Surviving Mental Illness from the Ground Up

Kendra Fisher[1]

[1]*mentallyfit*

I am a past member of Team Canada's National Hockey Program, I was forced to walk away from the team after a diagnosis of Depression, Anxiety, Panic Disorder, OCD and Agoraphobia. I am the epitome of exactly what happens when early intervention, education and preventative health interventions aren't realized soon enough. I was stuck in my apartment for 5 years following my diagnosis, spent the next 5 years learning about what I was living with and how to find a balance between coping tools, therapy, medication, and self help, in order to find a place of recovery. In recovery, I realized I was part of the reason others didn't know to get help, or that there was help at all. So I started sharing my journey.

Topic Area: Psychosocial Interventions

C7
The "Reggio Emilia At-risk Mental States" (ReARMS) Project: 2-year Follow-up Results of Individual Cognitive-behavioral Therapy in Ultra-high Risk Individuals

Andrea Raballo[1], Lorenzo Pelizza[2], Michele Poletti[2], Silvia Azzali[2], Federica Paterlini[2], Ilaria Scazza[2], Sara Garlassi[2], Michela Fabiani[2], Francesca Fontana[2], Rosanna Favazzo[2], Veronica Barbanti Silva[2], Enrico Semrov[2]

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Objective: Several studies had shown the effectiveness of combined interventions (i.e. cognitive-behavioral therapy [CBT] + Pharmacotherapy) in first-episode psychosis (FEP) (NICE, 2004). More controversial are the evidence about the stability of therapeutic outcomes in Ultra-High Risk (UHR) individuals (Raballo, 2015). CBT, adapted for UHR subjects, appeared to be effective at 18 months follow-up, with a risk reduction of about 50% (van der Gaag, 2017). Aim of this study is to evaluate the effectiveness of CBT in UHR adolescents attending to neuropsychiatry services in the Reggio Emilia Department of Mental Health (Italy).
Methods: The "Reggio Emilia At-Risk Mental States" (ReARMS) project is an early detection/intervention infrastructure for UHR subjects that provides (1) a phase-specific individual CBT, (2) a family psychoeducation, and (3) a case management oriented to early recovery. In the present study, we focused on a subgroup of UHR individuals (n = 40), aged 13-18 years, who only received individual CBT. This is the first structured program of early detection/intervention for adolescents at UHR in Italy.
Results: After 24-month follow-up period, UHR subjects showed significant improvements in both psychotic symptoms (i.e. PANSS Positive Symptoms [median: 10 vs 16; $p < 0.001$], Negative Symptoms [median: 12 vs 19; $p < 0.001$], and General Psychopathology [median: 24 vs 37; $p < 0.001$]) and daily functioning (measured by the Social and Occupational Functioning Assessment Scale [SOFAS] [median: 65 vs 45; $p < 0.001$]).
Conclusions: Although our sample is still relatively small to draw definitive conclusions, it is emerging good clinical and functional outcomes for UHR adolescents receiving CBT within ReARMS project.

Topic Area: Psychosocial Interventions

C8
Social Experience Changes Myelination in the Prefrontal Cortex: An Animal Study of Psychosocial Intervention for Autism Spectrum Disorder

Manabu Makinodan[1], Kosuke Okazaki[1], Tsubasa Morimoto[1], Naoko Kishimoto[1], Junya Ueda[1], Yasuhiro Matsuda[1], Toshifumi Kishimoto[1]

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Autism spectrum disorder (ASD) is a neurodevelopmental disorder characterized by impaired social interaction, poor communication skills, and repetitive/restrictive behaviors. Recent studies have suggested that early intervention can alleviate the symptoms of individuals with ASD. However, it remains unclear whether early rehabilitative intervention can restore brain structures such as myelin. Therefore, we employed a mouse model of ASD (BTBR mice) that show asocial behaviors and hypomyelination in the medial prefrontal cortex (mPFC) to investigate whether interaction with social peers (C57BL/6J mice) affects myelination. The housing with C57BL/6J mice after weaning through adulthood thickened myelin in the mPFC, but not in the motor cortex, of BTBR mice. The axonal diameter was not altered by cross-rearing with C57BL/6J mice in either the mPFC or the motor cortex. These results suggest that early rehabilitative intervention may alleviate myelin dysfunction in the mPFC as well as clinical symptoms in individuals with ASD.

Topic Area: Psychosocial Interventions

C9
A Broader Examination of Cognitive Emotion Regulation Strategies across Psychopathology in Individuals with First-Episode Psychosis: Preliminary Findings from a Multiethnic Sample

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Background: Habitual use of maladaptive cognitive emotion regulation strategies, in response to stressful life events, is associated with risk for psychopathology. However, little is known about the relationship between cognitive emotion regulation strategies and a broad range of psychopathology as experienced by individuals with first-episode psychosis (FEP). The present study investigates the association among cognitive emotion regulation, psychotic, depressive, anxiety, and post-traumatic stress disorder (PTSD) symptoms in a sample of individuals with FEP.

Methods: A total of 50 newly diagnosed (≤3 months of antipsychotic medications) individuals with schizophrenia spectrum disorders, who were seeking treatment for FEP at a tertiary psychiatric hospital in Singapore, completed self-report measures of cognitive emotion regulation, depression, anxiety, and PTSD symptoms. Severity of psychotic symptoms was assessed on the Brief Psychiatric Rating Scale. Medical variables extracted: Duration of untreated psychosis, psychiatric comorbidities, and family history of mental illness.

Results: A series of multivariate regression models adjusting for medical variables, revealed that positive symptoms were associated with more catastrophic thinking (R^2 = .27, p <.05), PTSD symptoms were associated with more rumination, catastrophic thinking, and other-blame (R^2 = .85, p <.001), depressive symptoms were associated with more catastrophic thinking and other-blame (R^2 = .76, p <.001), and anxiety symptoms were associated with more catastrophic thinking (R^2 = .75, p <.001).

Conclusion: The present study sets the stage for further investigation of the mediating and moderating effects of cognitive emotion regulation, that may better explain the relationship between stressful life events and psychopathology in individuals with FEP.

Topic Area: Psychosocial Interventions

C10
Be Outspoken and Overcome Stigmatizing Thoughts (BOOST): A Group Treatment for Internalized Stigma in First-episode Psychosis

Melissa Milanovic[1], Michael W Best[1], Michael Grossman[1], Christopher R Bowie[1]

[1]*Queen's University*

Nearly half of individuals experiencing psychotic disorders report moderate to high levels of internalized stigma, which can significantly interfere with the recovery goals of patients. Despite a growing awareness of the negative clinical outcomes of internalized stigma, few interventions have been designed to specifically address this issue in first episode psychosis. Therefore, the goal of the present study was to examine the efficacy of a novel treatment for this specialized population: BOOST (Be Outspoken and Overcome Stigmatizing Thoughts). BOOST is an eight-session group intervention that combines cognitive restructuring, assertive communication skills, and peer support. Participants (N = 10) recruited from an early psychosis intervention clinic received BOOST in a pilot non-controlled, open-label study. BOOST significantly improved internalized stigma, p = .04; self-esteem, p = .02; and satisfaction with life, p = .03. Results from this pilot study suggest that in addition to reducing internalized stigma, BOOST effects might transfer to other proximal and distal outcome measures. We are currently evaluating the BOOST intervention in an ongoing larger randomized controlled trial with the aims of providing more definitive evidence regarding efficacy of the role of combined peer support and cognitive behavioural intervention for reducing internalized stigma.

Topic Area: Psychosocial Interventions

C11
Role of Executive Function in Response to a Problem-solving Based Psychoeducational Intervention in Adolescents with Psychosis: The Pinsa Trial Revisited

Francisco Camino Sánchez[1], Maria Mayoral[2], Carmen Moreno[2], Ana Ruíz-Sancho[3], Celso Arango[2], Marta Rapado-Castro[2,4]

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An improvement in negative symptoms and a reduction in the number of visits to the emergency department have previously been observed in a problem-solving based psychoeducational group intervention (PE) for adolescents with psychosis and their parents, relative to a non-structured group intervention (NS).One of the factors that may be playing a role on the response to PE treatment is executive function, a crucial cognitive domain for problem solving performance. The present study aims to examine the role of executive function in response to PE treatment in comparison with a NS group. Correlation analyses were used to examine the associations between changes in clinical/functional variables (2-years follow up minus baseline)and changes in cognition(z-scores) within each treatment group. In order to analyse the predictive value of changes in cognition over clinical/functional outcomes, linear and multiple regression models were conducted. A total sample of 28 individuals (Mean age: 16,14 ; range [14-17]) were randomized to PE (N = 11) and NS (N = 17). We found an association between an improvement in executive function performance and a reduction of positive [F(2.6) = 7.04 p = 0.02 R = 0.602] and negative symptoms[F(1.7) = 3,21 p = 0.11 R = 0.315]; an improvement in general functioning [F(1.7) = 8.1 p = 0,025 , R = 0.537] and a reduction in the number of visits to the emergency department [F(1,7) = 5,32 p = 0.05 R = 0.432] in the PE group. No associations were found in the NS group. Our results suggest that executive function may play a role in the specific symptom reduction, improved general functioning and diminished number of visits to emergency department two years after the intervention observed in the PEgroup. This may have implications in the development of new areas of clinical intervention focusing on the role of cognitive functioning in response to psychosocial treatments in psychosis

Topic Area: Psychosocial Interventions

C12
Reducing Mental Health Stigma among Young Adults in Japan

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[1]*Kyoto University*, [2]*Light Ring*, [3]*The University of Tokyo*

Introduction: Mental health continues to be stigmatized in Japan, often preventing people with mental health trouble from seeking out treatment. Light Ring, a nonprofit organization, aims to reduce the stigma against mental health disorders and also cultivating social support through educational programs at colleges. Light Ring. believes that empowering people close to young adults who are suffering mental health disorders through the advocacy of paraprofessionals constitutes an effective method to prevent mental illness of young adults.
Objectives: This study aimed to evaluate the effectiveness of the program in promoting mental health awareness for young adults held by Light Ring.
Methods: A structured self-report questionnaire was administered to young adults at the participating colleges in Tokyo. The degree of stigma against mental health disorders was measured using a Japanese version of the Reported and Intended Behavior Scale (RIBS-J). The degree of social support was measured by Social Support Questionnaire (SSQ). Help seeking behavior was assessed by three questions: "Do you think people should consult a specialist when they have mental health trouble?" "Are you willing to consult a specialist when having mental health trouble?" and "How easily can you talk about your mental health troubles with your families or friends?" RIBS-J at baseline and follow-up were used to measure outcomes. Cross-sectional and longitudinal analyses were performed. Ethical approval was obtained from the Kyoto University ethics committee.
Results: The experimental group (74 students, M/F: 18/55) from two colleges was compared against a control group (62 students, M/F: 26/36) from one college.

Topic Area: Psychosocial Interventions

C13
Multi Family Groups in Early Psychosis Care

Jef Lisaerde[1], Martine Lambrechts[1], Liesbeth Decoster[1], Hella Demunter[1], Lut De Rijdt[1], Ludi Van Bouwel[1]

[1]*UPC KULEUVEN*

Background: There is a rich history of multi-family groups (MFG) in the care for psychosis. We explore how the MFG of our in- and outpatient early psychosis care program is related to this tradition, and the benefits of the use of MFG in early psychosis care will be discussed.
Methods: A qualitative research based on (1) Interviews of participating family members conducted by an independent researcher (2) Observations of the conducting therapists and (3) Research of the existing literature concerning MFG in psychosis care (Mc Farlane, Asen, Badaracco).
Results: Meaningful particularities are found in the characteristics of our group, regarding composition, structure and position of the therapist. The interviews reveal that parents experience the group as very supportive. The open character of the group results in sharing many lived experiences, positively welcomed by the participants, but slowing down the possibility to work in depth on certain themes. As therapists we experience difficulties in involving psychotic adolescents in the group.
Discussion: A psychotic crisis is an invitation to understand the interindepency relations in the family and how the unbearable suffering, present in patient and parents, infects these relationships. During the recovery of a psychotic crisis, there are different needs in family and patient. Depending on the composition of the group, the therapeutic aim can shift from working in the interdependent relationships (family group) to 'holding the holding environment' (parent group). This study indicates that a heterogenic MFG is a specific and complementary tool in the care of early psychosis.

Topic Area: Psychosocial Interventions

C14
Mind Strategies for Healthy Thinking and the Prevention of Distressful Episodes

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[1]*MAD-Sense*

Simple techniques developed from the practice of mindfulness and neuro linguistic programming (NLP) can be applied in self help mode to disrupt, interrupt and prevent distressful experiences associated with the hearing voices experience and other information:emotion disturbances. Bayes' Theorem of Perception and Paul Gilbert's description of our emotional systems can be integrated to describe the relationship between stimuli (new information) and the flow of emotions as we process information predictively from perception to interpretation. NLP helps us control our information processing and the emotions that result. Mindfulness helps us ground our interpretations in the real world social contexts in which we live and thrive. These ideas help us model madness as the struggle to process and interpret hallucinatory stimuli and understand madness in neuroplastic terms. With this understanding simple NLP and mindfulness techniques can be applied in a self directed way in a form of mind stimulation therapy to correct the information:emotion flow (InfoMotion) and object relationships that are destabilized by the weirdness of hallucinatory stimuli. Learn how… 1. Everything flows from the phenomenology, which we can observe directly 2. We can learn to control our reaction to it and… 3. Shape a mindful response that… 4. Works with our cognitive and confirmation bias to… 5. Develop confidence in self and in the world we live in. By understanding this InfoMotion flow we can learn to anticipate it and use the same NLP techniques to prepare for and prevent distressing episodes.

Topic Area: Psychosocial Interventions

C15
Psychometric Properties of the Functional Remission-instrument in Patients with Early Psychosis and Later Stadia of Serious Mental Illness

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[1]*Pro Persona Mental Health*

Functional recovery is increasingly important as a treatment goal for patients with psychotic disorders. There are many questionnaires that measure functional status, but there is no instrument to easily monitor functional remission in clinical practice. The Dutch National Remission working Group has developed such an instrument and named it Functional Remission-instrument (FR-instrument). The instrument enables the professional to score within one minute three areas (daily activities, housing, and social relations) on a three point scale (0 = independent; 1 = semi-independent; 2 = dependent). This results in a total score of 0 to 6, where score 0 is considered functional remission.

Methods: We assessed the psychometric validation of the FR-instrument in 1525 patients in various stadia of severe mental illness, including early psychosis (n = 462). We used relevant items from the Health of the Nation Outcome Scale (HONOS) and the Manchester Short Assessment of quality of life (MANSA).

Results: The internal consistency for the early psychosis stadium was fairly good, and for the later stadia moderate. The inter-observer reliability was moderate. With regards to convergent validity there was a low correlation with the HONOS items on social functioning. With regards to divergent validity there was a low correlation with the HONOS items on symptoms. Patients in functional remission reported a higher quality of life on the MANSA.

Discussion: The FR-instrument is well applicable in the early stadium of psychosis. The categorical result seems more suitable for reporting on groups of patients, while the dimensional score may support the evaluation of individual treatment.

Topic Area: Psychosocial Interventions

C16
Plan D – Introducing a Cognitive-behavioural Group Therapy Program for Individuals with Depersonalisation and Derealisation

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Depersonalisation and Derealisation (DD) are defined as a feeling of unreality and detachment from or unfamiliarity with the surrounding, individuals or objects are experienced as unreal, dreamlike, foggy, lifeless or visually distorted while reality testing remains intact. DD cause significant distress and are associated with poor functional and psychosocial outcomes. The limited number of studies indicates that cognitive-behavioural therapy (CBT) carried out in an individual setting has some positive intervention-effects for patients with DD regarding their symptom-levels. However, there is also evidence suggesting that DD patient's treatment needs are not sufficiently met by existing interventions. In particular, patients with DD worry a lot about their mental health and are frightened of becoming crazy or losing their mind. Furthermore, they are embarrassed and often try to hide their symptoms. Thus, they frequently experience feelings of helplessness and accompanying depressive symptoms. To address these specific treatment-needs, a special group therapy program for DD patients (assessed by Schizophrenia Proneness Instruments) is being conceptualized and offered as a complementary therapy at the early detection of psychosis service in Bern. In this pilot project, we will use an open group-format including 4-6 patients. The main intervention techniques are based on CBT-techniques and include: stress-management, normalizing, psychoeducation, lifestyle interventions and other relaxation-techniques, such as mindfulness training. As to our knowledge no standardized group-intervention program for DD exists, this novel intervention represents a promising opportunity to influence long-term outcomes and course of DD.

Topic Area: Psychosocial Interventions

C17
Milieu Therapy at a First Episode Psychosis Program

Zachary Faas[1,2]

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At PREP (Prevention and Recovery in Early Psychosis) West, an outpatient Coordinated Specialty Care program for individuals experiencing first episode psychosis in Western Massachusetts, a vibrant and therapeutic milieu provides the foundation and centerpiece of our clinical services. The milieu has been intentionally designed to foster interpersonal and community connection, promote the development of symptom management skills, support increased independence and autonomy, and encourage engagement in meaningful and pleasurable activities. The dynamic interaction between the milieu and more traditional clinical services, such as psychotherapy groups, individual and family therapies, and psychiatry, is unique and often profound. Anecdotally, we have found that participation in the milieu can lead to a reduction in negative symptoms, increased capacity to cope with positive symptoms, and improve engagement in treatment. Some of the core features of our milieu include: weekly community meeting; family-style community lunch; participant-led cooking group; community outings (hiking, college visits, volunteering, etc.); PREP leadership group for interested participants to take on leadership opportunities and have increased ownership of the program; semi-structured free-time activities. This presentation, which will be given by the program's Clinical Psychologist, will include a detailed discussion of the milieu at PREP West is and how it has developed over the life of the program, and how it interacts with other treatment components. The presenter will share anecdotes and case examples that highlight the value of the milieu, and may share client testimonials. Finally, the presenter will review the practical challenges, both clinical and logistical, that maintaining a milieu presents.

Topic Area: Psychosocial Interventions

C18
What are Wellbeing Treatments for Psychosis and Where are They Hiding?

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The WHO defines mental health "as a state of wellbeing in which every individual realises their potential, can cope with normal stresses of life, can work productively, and is able to make a contribution to the community". Wellbeing has a wide range of determinants ranging from personal well-being to economy. There is evidence for the impact of wellbeing interventions on promotion of mental health. Systematic reviews of their impact could bring new data and quantification of their effectiveness. We aimed to describe approaches encompassed under the umbrella of randomised trials of 'wellbeing interventions' in general and in psychosis and to contribute to efforts made in creating a working ontology for systematic review search strategies. A broad MEDLINE electronic search strategy was developed in 2018 to identify randomised studies assessing the effects of wellbeing interventions in general and in psychosis There were 288 articles identified and only one related specifically to psychosis. Types of interventions captured were heterogeneous and included psychological interventions, complementary therapies, exercise, lifestyle interventions, nutrition, art, community engagement, psychosocial interventions, peer support, parenting interventions. If there is to be investment in plans to increase wellbeing it is important we know what we mean by the term wellbeing interventions. Currently, there is evidence that diverse interventions with heterogeneous outcomes fall under this term. The search terms and the ontology of treatments from this early research will help future reviews find some focus and represents a valuable starting point for work in this important but broadly-defined–area.

Topic Area: Psychosocial Interventions

C19
Using Short Message Service as a Means of Engagement in Early Psychosis

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Clinical disengagement of youth in early episode clinics continues to be a significant barrier to recovery as evidenced by alarming rates of treatment non-adherence and clinic drop-out. This disengagement leads to longer durations of untreated/partially-treated illness, which in turn leads to higher rates of symptom burden, re-hospitalization, and poorer functional outcomes. Solutions have included increased access to clinicians either via telephone or in person, however financial limitations often undermine these efforts. This has caused a shift toward the use of SMS due to its low cost and popularity as 95% of youth in North America send and receive SMS messages daily. The current study is a blinded, longitudinal, randomized control trial examining the efficacy of a simple weekly SMS-survey on youth engagement in an early episode clinic. Subjects will be eligible so long as they are eligible for clinical care and will be followed over 9 months. They will be randomized to receive one of two kinds of weekly SMS-surveys: active (questions of general wellbeing, attendance and medication adherence) or sham (no relevant subject matter). For subjects in the active group, responses may trigger clinician follow-up if necessary (ex. the patient reports distress). Weekly surveys will be sent via a third-party public provider but will be generated and stored by a secure online database. The study has begun recruitment as of January this year and will have preliminary 6-month findings to present.

Topic Area: Psychosocial Interventions

C20
Can an 8-week Psychotherapy Group Work for an Early Psychosis Patient Population? Yes and Here's How

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Contextual CBT approaches to psychotherapy have demonstrated themselves to be effective in quickly leading to improvements in functioning. Rather than symptom reduction or getting rid of difficult thoughts, the focus of these interventions typically involves changing our relationship with thoughts, feelings, and other internal experiences while increasing our engagement in important life activities. Change is understood to take place through the mechanism of increased psychological flexibility, the source of suffering and psychological difficulties identified within this transdiagnostic approach to psychotherapy. As psychosis commonly involves social withdrawal, group interventions are particularly relevant for providing opportunities for social connection while teaching skills for relating differently to uncomfortable or distressing internal experiences. Recent research has supported the value of contextual CBT approaches for psychosis including the importance of reducing experiential avoidance and enhancing psychological flexibility. This presentation will provide an overview of the 8-week contextual CBT psychotherapy group that has been running at an outpatient first episode psychosis clinic since 2017, including the process of delivering this treatment. Patient attendance and satisfaction were high, suggesting this treatment as accessible to a first episode psychosis population. Findings from a pre-post design will show the impact of this treatment on patient self-reported general distress and functioning, mindfulness, recovery, and psychological flexibility, as assessed by means of repeated measures ANOVAs. In addition, 3-4 month follow-up data will provide information on the sustainability of the treatment impact. Other program innovations including a monthly booster group will be discussed.

Topic Area: Psychosocial Interventions

C21
An Integrated Cognitive Behavioral Approach to Address Comorbid Trauma and Psychosis within Coordinated Specialty Care

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Purpose: Youth who have trauma related symptoms may be at greater risk of experiencing early psychosis symptoms. However, trauma is often poorly diagnosed in individuals with psychosis, psychosis treatment does not target trauma symptoms, and youth with psychosis are often excluded from trauma-based treatment. We developed a comprehensive model, using evidence-based cognitive behavioral principles, to assess, conceptualize, and treat youth with both psychotic and trauma-related symptoms.

Methods: Youth, ages 12-30, enrolled in the UC Davis Early Psychosis Coordinated Specialty Care (CSC) Program and diagnosed with both psychotic and trauma-related symptoms were provided via Trauma Integrated Cognitive Behavioral Therapy for Psychosis (TI-CBTp). The Clinical Global Impressions (CGI) Scale and Global Functioning (GF) Scales were collected at baseline and follow-up to examine impact of treatment on outcomes.

Results: Since July 2014, 18 individuals with comorbid psychosis and trauma related symptoms were identified and provided TI-CBTp as part of CSC care. 75% had psychotic disorder diagnoses (onset within past 2 years); 25% were at Clinical High Risk for psychosis. 56% met criteria for PTSD; 44% reported notable trauma symptoms but did not meet PTSD criteria. At baseline, cases demonstrated markedly severe clinical and serious psychosocial impairments. At follow-up (N = 7; avg = 9.42 months), 86% of cases demonstrated improvement in overall clinical severity on the CGI and 57% improvement in GF. Data on long-term follow-up and additional outcome domains will be presented.

Conclusions: Youth with psychotic and trauma-related symptoms can be appropriately treated using TI-CBTp. CSC intervention programs should directly treat trauma to improve client outcomes.

Topic Area: Psychosocial Interventions

C22
Enhancing OnTrackNY Services by Including Peer Specialists

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Purpose: Expanding evidence supports the incremental benefit and contributions of peer specialists in the recovery of individuals experiencing behavioral health challenges. While the types of activities of peers have evolved, the most recent emphasis has been on supporting peers in roles that are distinct from other team members, attempting to avoid peers performing clinical responsibilities. OnTrackNY committed to developing a peer role within coordinated specialty care that preserves the peer perspective when embedded within the model.

Methods: A team of peer leaders including a lead trainer and key consultants began by working on a manual that built on other peer practices such as Intentional Peer Support and principles for working with first episode psychosis. Numerous iterations of the manual were considered and modified. Once the manual was finalized, attempts were made to hire and train half-time peers at each site:

Results: Key issues requiring multiple iterations in manual development were 1) developing a consensus of specific tasks for the role; 2) delineating concrete supervision practices for team leaders; and 3) providing a framework to increase team collaboration and address power dynamics. To date, 11 of 21 peers have been hired. Critical issues in implementation have included concretizing responsibilities that refrain from using a clinical perspective, identifying strategies for engaging youth, helping teams grapple with culture shifts associated with inclusion of peers, and providing supervision guidelines for setting expectations and providing oversight.

Conclusions: Peer specialists enhance services provided by OnTrackNY. Training challenges remain in translating manualized concepts into real world practices.

Topic Area: Psychosocial Interventions

C23
Patients with Schizophrenia Who Have Specific Personality Traits Showed High Real-world Functioning in spite of Reduced Functional Capacity

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To achieve early recovery among patients with schizophrenia, real-world functioning needs to be improved. Numerous studies have shown that real-world functioning depends on functional capacity which indicates ability to perform everyday living tasks. However, some patients with schizophrenia were found to have high real-world functioning despite their reduced functional capacity. We hypothesized that they have specific personality traits, based on previous studies which showed that personality traits were one of the endophenotypes of human beings which affect behavior in real-world settings. Measures used in this study were TCI-R for personality traits, UPSA-B for functional capacity, and SFS for real-world functioning. A total of 46 stable outpatients with schizophrenia (17 males and 29 females, mean age 39.3) were recruited and 18 patients showed lower functional capacity than the score indicated by a previous study. Furthermore, of those 18 patients, they were divided into two groups by the average score of real-world functioning; 13 landed above and 5 landed below the average. Then the groups' personality traits were compared. The group of individuals with high real-world functioning but low functional capacity showed significantly lower Harm Avoidance (HA) level than the other group of individuals with low real-world functioning and functional capacity (mean HA score, 59.7 vs 76.4). This result suggests that unworried and extroverted behaviors based on low HA contributed to maintain high real-world functioning in spite of reduced functional capacity. A psychosocial treatment considering personality traits may be able to improve real-world functioning meaningfully contributing to successful recovery.

Topic Area: Psychosocial Interventions

C24
"It felt good to give something back": A Thematic Analysis of Supporters' Experiences of Peer to Peer Family Member Support

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DETECT is an early intervention in Psychosis service in Ireland covering a urban population of approximately 375,000. The DETECT Information and Support Course (DISC) is a psycho-education intervention designed for family members of people recently diagnosed with a first episode psychosis, running since 2006. An innovative family Peer support programme was set up in 2015. Peer support is offered to family members who have recently completed DISC who can meet and talk with a trained volunteer (a peer supporter) who has had a similar experience in the past. The programme was designed and developed in conjunction with a multi-stakeholder advisory group, initiated following feedback from family members including service users, family members. Training in Motivational Interviewing techniques and self-care was delivered to the supporters and all were police vetted.

Methodology: This study employed a Thematic Analysis qualitative methodology to explore the effectiveness of the program and the experiences of participants. Following a period of supporting 15 families, interviews were conducted with 7 peer supporters. Findings; The data revealed themes of: "It felt good to give something back ", 'helped me understand my own experiences' and "would have grabbed it with both hands" had the support been available when my relative was ill.

Discussion: In addition to helping families, providing peer support allows peers to continue their journey of recovery cognisance. The reciprocal nature of the relationship facilitates personal growth, increases self-esteem and sense of empowerment for the family peer worker. As a result relationships with family members can often improve.

Topic Area: Psychosocial Interventions

C25
High Supported Employment & Education Engagement in NAVIGATE Patients

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This data examines a NAVIGATE participant's overall engagement, as well as amenability to disclose his or her mental illness, including whether or not to allow the Supported Employment and Education Specialist (SEE) to correspond with schools and/or employers, to determine successful school and employment retention. The two Twin Cities M Health NAVIGATE teams collected SEE fidelity data for 6 and 12 months, following 15 patients from each team with a diagnosis of schizophrenia spectrum disorder or psychosis unspecified. The measurements included engagement in the number of community appointments, each individual's work and school goals, amenability to disclose the need for SEE support with schools and employers, level of family support, level of teacher and employer support, the number of jobs gained and/or lost, and whether or not an individual has achieved their school and/or work goal. In comparison to national data pulled from the RA1SE-ETP study, the Twin Cities NAVIGATE teams showed higher initial engagement in SEE services and increased obtained goals. Potential contributing factors to this success might include casual SEE meet-and-greet at the point of patient entry into NAVIGATE, assertive community engagement, experienced and certified CESP SEE specialists, utilization of Individual Resiliency Trainers (IRT) in engagement, coordination and support with Director of Family Therapy (100% of patients live at home), and co-located NAVIGATE teams in a shared work space.

Topic Area: Psychosocial Interventions

C26
Introduction to Metacognitive Reflection and Insight Therapy: A novel Approach to Treating poor Insight in Early Phase Psychosis

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Poor insight, or illness awareness, is prevalent throughout the course of psychosis. However, early phase psychosis (EPP) represents a vital window of opportunity for interventions to target and improve insight. Improving insight during EPP could have a significant impact on an individual's treatment engagement, course and severity of illness, and functioning. A number of modalities are already being implemented to address poor insight in EPP, however most have limited effectiveness. A novel intervention to improve insight in EPP, Metacognitive Reflection and Insight Therapy (MERIT), is therefore being investigated. MERIT is an integrative metacognitive therapy consisting of eight elements to assist clients in improving their ability to form complex ideas about themselves and others and to use this knowledge to respond to psychological problems. This presentation will detail the principles and elements of this intervention and review recent evidence to support its implementation in EPP.

Topic Area: Psychosocial Interventions

C27
The Appreciation of Humor in Care by Young Adults with Emerging Mental Illness

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The use of humor in health care and particularly in psychiatry has already given rise to questions about its role in recovery or as a factor of resilience. The curative dimension of humor has been considered by the majority of therapeutic currents (Chapman & Chapman-Santana, 1995; Rengade, 2014; Van Hemelrijck et al., 2012) while its acceptance by patients has been studied less. In order to further explore the subjective appreciation of humor by patients, we submitted a 30 item questionnaire to 28 patients who attend our unit for young adults (18 – 25 years old) with emerging mental illness. The questionnaires explored 4 domains: humor appreciation, humor vector and context, positive aspects of humor, and negative aspects of humor. Items were scored on a 5 point Likert-type scale (-2: complete disagreement; -1: partial disagreement; 0: neither disagreement nor agreement; 1: partial agreement; 2: complete agreement). The main results are a general good acceptance of humor. Positive characteristics of humor are generally well appreciated and negative ones are partially recognized. Patients think that humor should not be restricted to patients but that care givers should be allowed to be humorous. The context in which humor is done is also important because it is well tolerated in therapeutic groups but less in individual sessions.

Topic Area: Psychosocial Interventions

C28
The Provision of Educational and Employment Focused Interventions in Early Detection for Psychosis Services within the South London Catchment Area

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Early Detection for Psychosis Services such as Outreach and Support in South London (OASIS) have been successful in providing psychological intervention and psychosocial support to young people experiencing early signs of psychosis. Despite this, studies have repeatedly shown that vocational and functional recovery in the clinical high risk for psychosis population are still dramatically low. The recent UK National Audit for Schizophrenia highlighted substantial variations in service delivery of vocational support with over half of service users not having their vocational needs met. Therefore, the aim of this project is to evaluate the presence and quality of educational and employment focused interventions within the OASIS services, in order to inform future research and interventions focused on supporting young people with early signs of psychosis in their path to vocational recovery. The specific objectives are to compare current practice (i) to standards defined by the National Institute of Care Excellence (NICE) guidelines; and (ii) to principles defined by Individual Placement and Support (IPS), the most evidence-based vocational support approach. The OASIS caseload electronic records are screened. Data collected include sociodemographic general characteristics, assessment of employment and educational status and support needs, interventions received, contacts with schools, employers and external vocational providers, employment and educational status at the end of service provision. Data is analysed using t-tests and chi-squares. Preliminary results suggest that the NICE standards of practice and IPS principles are partially met. Identifying weak areas in current practice is fundamental to provide clear guidance and inform future interventions.

Topic Area: Psychosocial Interventions

C29
Use of Social Media by Young Adults with Schizophrenia

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Schizophrenia is a complex clinical syndrome manifested by cognitive, behavioral, and emotional difficulties that commonly interfere with social relationships. For young people with this disorder, social isolation can be particularly harmful. With social media, young adults with schizophrenia may have increased opportunities to establish and maintain social relationships. We surveyed 39 young adults (ages 18-35) with schizophrenia and a comparison group of young adults without a mental illness to compare patterns of social media use, examine the impact of use on social support and well-being, and inform the potential for web-based resources. Almost everyone in our study indicated that they were a member of a social networking site, with the majority on Facebook. Young people with schizophrenia were more likely to use social media apps that were less interactive, such as YouTube or online games. Participants with schizophrenia were also more likely to meet someone in person that they first met online using Facebook. Social media use was not correlated with amount of contact with friends and family, level of loneliness, size or satisfaction with support networks, or perceived stigma. However, greater online gaming was associated with an increase in the perception of social support from friends. Half of the respondents with schizophrenia were interested in using a social media platform specific to people with mental illness. In qualitative interviews, people discussed the potential for social media to be a "double edged sword." It offers new avenues for connection but comes with the risk of feeling rejected or ignored.

Topic Area: Psychosocial Interventions

C30
Comparing Three Forms of Early Intervention for Youth with Borderline Personality Disorder (the MOBY Study)

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Background: The primary aim of this trial is to evaluate the effectiveness of three forms of early intervention for borderline personality disorder (BPD) in terms of adaptive functioning. Each treatment is defined by combining either a specialised or a general service delivery model with either an individual psychotherapy or a control psychotherapy condition.

Methods: Help-seeking 15-25 year-olds with BPD were randomised to one of three treatments: (1) the specialised Helping Young People Early (HYPE) early intervention model plus up to 16 sessions of individual cognitive analytic therapy (CAT); (2) HYPE plus up to 16 sessions of a control psychotherapy ('befriending'); (3) general youth mental health (YMH) care plus up to 16 sessions of befriending. At the 12-month primary endpoint, the primary outcome is adaptive functioning (measures of social adjustment and interpersonal problems).

Results: 139 participants were randomised (HYPE+CAT n = 46; HYPE +befriending n = 46; YMH+befriending n = 47). Data analysis is currently underway and will be completed by July 2018.

Discussion: The results of this trial will help to clarify the comparative effectiveness of a specialised early intervention service model over and above general youth mental health care, along with the contribution of individual cognitive analytic therapy over and above specialised general clinical care in early intervention for borderline personality disorder. Consequently, the findings will also inform the level of training and competency required for effective delivery of early intervention services. Trial registration: ACTRN12610000100099 on 1 February 2010.

Topic Area: Psychosocial Interventions

C31
Barriers in Implementation a Manualized Family Intervention in a Specialized First Episode Psychosis Treatment Program

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Background: The evidence for manualized psychoeducative family intervention (MFI) in first episode psychosis (FEP) is well-established. Risk of relapse is diminished. Caregivers report satisfaction with treatment and less burden. In spite of this, data have shown that less than half of the families receive MFI.

Aim: To identify barriers in the implementation and acceptance of manualized family interventions for FEP. Design: Participants included in an early-psychosis service (OPUS) with an ICD-10 diagnosis of F20-F29 (excl. F21), aged 18-35 years, in Psychiatry Region Zealand, Denmark. Inclusion period 1.4.2011–31.3.2013. All patients and their relatives are offered MFI, such as multi-family groups or single-family intervention. Reasons for not attending MFI were assessed at 3-year follow-up. Preliminary results: Seventy-two out of 130 patients (55 %) were assessed at follow-up. There were no significant differences between included or not-included patients in follow-up on gender, age or baseline psychopathology at baseline, except for drug abuse, which was significantly higher for the not-included. Fifty-seven percent of the included accepted participating in an MFI. Of those not participating in an MFI, two patients refused to include their relatives in the treatment. Twenty-seven percent had bad compliance or short OPUS treatment. Twenty-eight percent received need-based family intervention. Only 21 % could be attributed to factors in the organization of care (e.g. lack of resources).

Conclusion: Although only around half of the participants receive MFI, most of them receive family intervention of some kind. Future studies should focus on need-adapted family interventions and improving treatment compliance.

Topic Area: Psychosocial Interventions

C32
Psychosis Aware: Anonymous Online Screening as a Form of Early Intervention

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Background: The onset of psychosis commonly occurs between ages 16 and 25. This is also the age when young adults typically seek increased independence from parents or other caretakers. The changing family dynamic can make it difficult to identify psychosis during the early phases of onset. Yet, research indicates that early detection and treatment can dramatically change outcomes and prognoses, and that the longer the syndrome goes undetected the more severe the disruption to education, work functioning and social connections. Psychosis Aware is an online screening platform that facilitates early identification and intervention through anonymous online screening. Psychosis Aware adapts the Prodromal Questionnaire 16 (PQ-16) into a brief, user-friendly screen that can be taken by individuals concerned about themselves or a loved one. This tool was created by the nonprofit Screening for Mental Health (SMH) and launched to the public in November 2017. It has the unique value proposition of helping a person to anonymously identify the need for further clinical evaluation, connecting them to local clinical services, and providing educational materials to support their understanding of the syndrome.
Discussion: We will describe preliminary data of tool usage, including utilization, demographic and clinical trends and implications for help-seeking behavior. We will explore whether this online screening tool reaches populations who might otherwise be missed due to geographic location, lack of access to traditional healthcare options, and diverse cultural and socioeconomic backgrounds. The advances, and ongoing challenges, in collecting online utilization data will also be discussed.

Topic Area: Psychosocial Interventions

C33
Adventure Therapy for Early Psychosis: 3-year Results

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Purpose: Early intervention services (EIS) improve early psychosis outcome however a significant number of persons do not engage or respond to usual interventions and do not achieve functional remission despite EIS. Adventure therapy (AT) offers an alternative approach to improve engagement and recovery.
Methods: 26 participants of AT summer program (6 weekly preparatory 2 hours session + 4 days expedition) of 2 EIS. Participants and their clinicians completed scales measuring self-esteem, therapeutic alliance, self-efficacy, functioning, and substance use before, at the end and 6 months after the outdoor expedition. Qualitative interviews were also conducted and analysed to extract mediating factors leading to recovery.
Results: 6 months after the expedition, slight improvements are observed on the different measures. The sense of achievement perceived by the participants seems a central aspect of the positive outcome.
Conclusions: AT appears to be a complementary intervention which can be integrated in EIS and can benefit participants who do not respond to regular EIS interventions. Further research is warranted to understand the specific ingredients of AT that mediates its possible impacts and to compare it to other type of interventions.

Topic Area: Psychosocial Interventions

C34
Can the Australian Mental Health First Aid E-learning Blended Module Be Applied in Saudi Arabia through a Culturally Competent Version?

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Early intervention in mental health is a key aspect in elevating mental health literacy amongst people, hence, people experiencing or at risk of developing mental health issues, such as depression, which has the third highest burden of all diseases globally. Previous studies outlined the importance of mental health promotional programs as an eminence mean for early intervention, which will help maximise people's ability and performance, to enhance their potential in life, and to manage their challenges with more resilience. Therefore be an active contributing member in the community. One of these programs is Mental Health First Aid (MHFA) which was developed in Australia in 2000, then was adopted by many countries, such as Saudi Arabia in 2012, through the National Committee for the Promotion of Mental Health (NCMH) as a traditional face to face training. In 2016, MHFA AU launch the blended e-learning module .This study will explores the application and use of that module in increasing mental health literacy and improving the challenges associated with mental health issues such as stigma, help-seeking attitudes and behaviours, recovery and resilience. This study will also focus on the cultural aspects and current challenges that are found to plays a major role in limiting the traditional delivery module that is class based in Saudi Arabia. As a result, understanding these factors and the exploring the blended e-learning Australian module will help to develop a culturally suitable module for Saudi Arabia, which will be utilized through culturally competent module that is analogous to the Australian module. With an easy application through smart devices such as mobile phones.

Topic Area: Psychosocial Interventions

C35
Satisfaction of Cognitive Behavioral Therapy for At-risk Mental State was Associated with Improvement of Emotional Symptoms

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Background: In our open-label cognitive behavioral therapy (CBT) study of Japanese individuals with at-risk mental state (ARMS) (Matsumoto et al., 2018), we found significant improvement in many psychiatric symptoms after therapy. However, the factors associated with the participants' satisfaction regarding CBT remain unclear.

Methods: Thirteen participants with ARMS (mean age: 18.7 ± 3.6 years; five males) were recruited at outpatient clinics of four Japanese university hospitals. All participants received 50-min weekly CBT sessions with a maximum of 25 sessions over six months (mean: 16.5 ± 5.1 sessions). We assessed the participants using the Client Satisfaction Questionnaire (CSQ), Positive and Negative Syndrome Scale (PANSS), Beck Depression Inventory-Second Edition (BDI-II), and State-Trait Anxiety Inventory Form (STAI).

Results: Single regression analysis revealed that the participants' satisfaction was associated with the improvement of depression and anxiety but not with the total and positive symptom scores of the PANSS. Multiple regression analysis revealed that improvement of anxiety was the only factor that was significantly associated with the participants' satisfaction ($p < 0.001$).

Discussion: Engagement is one of the most important components of CBT for ARMS, and satisfaction with therapy is important to maintain a good relationship between the therapist and patient. Therefore, the therapist should focus on alleviating emotional symptoms, particularly anxiety, in individuals with ARMS when delivering CBT. These findings should be considered provisional because of the small sample size and lack of a control group.

Topic Area: Psychosocial Interventions

C36
The Development of Mental Health Literacy – Program Educational Program for University Students

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Background: A variety of problems in mental health occur in youth. Early intervention is preferable to obtain good results. But education concerning early prevention is insufficient in Japanese curriculums.

Purpose: The purpose of this study is the development and practice, and effects evaluation of program in order to improve mental health literacy for University school students.

Methods: We developed three educational programs in a University in Japan. Program A was focusing on usual student's life stress and coping with it and was administered by a mental health professional. Program B focused on WRAP and was administered by a mental health consumer and Program C focused on types of distress and benefits of the counseling and was administered by a psychologist. We evaluated pre- and post- intervention focusing on help-seeking attitudes scale (ASPH) as related scales of mental health literacy between intervention groups and control groups.

Results: Intervention group consisted of 200 students, with a control group of 108 students. Program A significantly improved to an ASPH of 31.2 to 33.1 on average pre- and post- intervention ($p < 0.001$). Program B also improved significantly from 33 to 36.2($p = 0.026$)and C from 29 to 31.8($p = 0.001$). But there were no significant differences in the control groups.

Conclusion: In each program we found the effect of improvement mental health literacy, especially in program C. The message from the standpoint of consultant was clearly positive. Considering the effect of each program there is a need to develop even more various programs.

Topic Area: Psychosocial Interventions

C37
VIA Family – an Integrated, Specialized and Family Based Intervention for Children Born to Parents with Severe Mental Illness

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Children born to parents with severe mental illness have an increased risk of developing a mental illness themselves. They have a higher frequency of neurocognitive, motor, emotional and behavioral problems already during childhood and are at same time at risk of growing up under adverse circumstances. An early, preventive strategy focusing on the whole family and the child's specific needs is often suggested, but evidence is lacking. A randomized controlled study will be carried out in a selected area of Copenhagen. 100 families will be invited to participate and will be allocated to either VIA Family (intervention) or TAU (treatment as usual). At least one of the parents must have been diagnosed with a severe mental illness (schizophrenia spectrum disorder, bipolar disorder or recurrent major depression). Children must be between 6 and 12 years old. The intervention group will be assigned to a multicompetent team consisting of a child- and adolescent psychiatrist, a psychologist, a nurse with experience from adult psychiatry, a social worker from the municipality and a family counsellor or pedagogue from the municipality. The team will offer the family psycho education about the mental illness, parental training (Triple P) and a case manager who they can turn to in all kinds of matters. Intervention will last 18 months. Primary outcome measures are C-GAS (functioning) and CBCLscores (dimensional psychopathology). Secondary outcome measures will be days absent from school during the last 6 months, family functioning, and a quality of life measure for all family members.

Topic Area: Psychosocial Interventions

C38
Evaluation of a Sensory Modulation Group in a Specialist Community Youth Mental Health Setting

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Sensory modulation is a recovery-orientated intervention designed to support individual self-management of distress. Participants learn to regulate levels of arousal through experience and utilising input from the following sensory modalities; touch, taste, sight, sound, smell, vestibular and proprioception. While sensory modulation is increasingly being used in mental health settings in Australia, little research has been undertaken on this intervention with a youth population in a community mental health setting. Therefore, the aim of this study is to evaluate the implementation of a structured eight-week sensory modulation group for youth who are in the early stages of mental ill-health. The group aims to promote self-awareness, self-regulation and self-care. A case study design will be adopted utilising mixed methods. Results from qualitative measures and quantitative measures including the Sensory Modulation Self-Rating Tool, Goal Attainment Scale and Sensory Profile will be presented. It is anticipated that participants will have an increased knowledge of sensory modulation, and greater self-awareness of sensory preferences and identified sensory input, which will assist in managing distress and optimising levels of arousal.

Topic Area: Psychosocial Interventions

C39
Activity-Regulated Cytoskeleton-Associated Protein and Response to Cognitive Behavioral Therapy in First-Episode Psychosis

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Research suggests that early treatment for psychotic disorders is instrumental to improving long-term illness outcomes. Yet, outcomes to early intervention for psychosis are heterogeneous, which suggests a need for further research to identify predictors of who will be most responsive to treatment. One promising predictor variable is the gene activity-regulated cytoskeleton-associated protein (ARC). ARC has been previously related to risk for schizophrenia, as well as other domains of functioning in human and nonhuman samples. More recently, ARC has been shown to predict the magnitude of response to metacognitive remediation therapy among individuals with first-episode psychosis; possibly due to its role in mediating neurobiological processes underlying learning and memory. The current study seeks to expound upon the results of this previous study and investigate the relationship between ARC gene expression and cognitive behavioral therapy symptom response in a sample with first-episode psychosis.

Topic Area: Psychosocial Interventions

C40
Adolescent and Young Adult Consumer-clinician Relationships in Mental Health: A Pilot Study Based on Lived Experience

Nathan Schwirian[1], Victoria Hendel[2], Nicole Varca[2], Christian Rosa Baez[1], Susan Landy[1], Linda Larson[1], Irving Wu[1], Melissa Alford[1], Jonathan Delman[4], Matcheri Keshavan[2,3], Larry Seidman[2,3], Raquelle Mesholam-Gately[2,3]

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Individuals with a lived experience of mental illness and researchers have known that the therapeutic alliance between clinicians and mental health consumers is likely associated with better symptomatic and functional outcomes. However, few instruments have been developed by collaboration with people with lived mental health experience and researchers to assess consumer-clinician relationships and quality of life (QL). We examined the relationship between therapeutic alliance and QL expressed by adolescent and young adult mental health consumers in the earlier courses of their illness. Mental health consumers aged 20-34 (N = 16) completed interviews with researchers and consumer investigators with lived experience. Interviews involved questionnaires developed by the consumer-researcher team about the consumer-clinician relationship (Treatment Relationship Inventory; TRI) and quality of life (modified version of the World Health Organization QL assessment; mWHO-QOL). Correlational analyses compared total scores and subsections of the TRI and mWHO-QOL. Average total scores for the TRI and mWHO-QOL were significantly and positively correlated ($rs = .555$, $p = .026$). Additionally, specific subsections between the instruments also showed significant correlations (range of $rs = .532$ to $.620$, all $ps < .05$). These pilot findings suggest a strong therapeutic alliance is related to better QL in adolescent and young adult mental health consumers. Additionally, certain characteristics of the therapeutic alliance and QL have a stronger association than others. Further research in collaboration with consumers can help to elucidate the predictive nature of therapeutic alliance on quality of life in early phases of illness and inform more effective approaches to early intervention by targeting aspects of therapeutic alliance early in treatment.

Topic Area: Psychosocial Interventions

C41
Developing New Impact Measures for Open Dialogue Informed Early Intervention: A Delphi Process Project

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Purpose: As the number of Open Dialogue (OD) adaptations and implementation projects continue to grow, it is important that researchers identify or develop measures with the sensitivity to capture client and family impacts expected in the context of OD. To date, most published research has utilized otherwise conventional, standardized measures. To address this gap and enable high quality evaluation efforts, we developed and piloted two novel impact measures.
Methods: An online Delphi Process approach was used to develop OD impact measures for both families and clients. 15 experienced US-based practitioners formed the initial Delphi Process group and the measures were subsequently refined with additional stakeholder input and then piloted to assess psychometric properties and validity/reliability.
Findings: Delphi Process participants underscored key impact areas, such as 'deepened appreciation for multiple explanatory frameworks' and 'greater tolerance of diverging client-family views', that substantively diverge from items and domains found in extant outcome measures. Pilot testing affirms basic convergent/divergent validity and reliability.
Conclusion: Conventional outcome measures may be ill-suited to capture the range and type of impacts that experienced OD providers expect or have observed; future large scale testing of the novel measures developed for this project may help address the need for more sensitive and appropriate metrics.

Topic Area: Psychosocial Interventions

C42
Optimizing Transition to the Community Following Treatment in Early Psychosis Programs: Preliminary Findings of a Prospective Intervention Study

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Given the risks associated with the onset of psychosis in youth, the importance of early intervention is well recognized. Despite the effectiveness of early psychosis intervention (EPI) programs to meet the needs of youth, gains made in these programs are often not sustained following the transition from EPI services to engagement in the community. To the best of our knowledge, there are few studies that address optimal follow-up care in community settings following EPI. As such, our research group has developed an innovative multi-component intervention to sustain the recovery process for youth experiencing psychosis, as they transition from EPI to community-based care. Currently a prospective cohort study is being undertaken to assess the effectiveness of a manual-based individual and group CBT/MI informed intervention that spans pre-and post-transition from EPI services. Data has been collected from 39 participants who received treatment in three early intervention programs in Canada (Ontario and Nova Scotia). These participants were recruited prior to the introduction of the intervention (comparison group) and were identified as ready for discharge. Data were collected using standardized measures including quality of life (SQLS), self-esteem (RSE), mental health symptoms (SCL-90-R) and functional level (SOFAS and GAF). Results suggest that participants identified as being ready for discharge had achieved optimal levels of recovery. This manual-based CBT/MI informed intervention to further the growth and benefits attained in the EPI programs is currently being implemented at the 3 sites. The intervention and data from this intervention on maintenance of personal recovery will be discussed.

Topic Area: Psychosocial Interventions

C43
Metacognitive Remediation Therapy: Clinical Benefits, Treatment Satisfaction, and Cost-Effectiveness among Individuals with First-episode Psychosis

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[1]*The Ohio State University*

Within psychotherapy research, there is growing interest in psychosocial interventions that target metacognitive skill development as the mechanism for therapeutic change. One example of such an intervention—metacognitive remediation therapy (MCR)—is a form of individual psychotherapy designed to facilitate growth in two components of metacognition (i.e., knowledge of cognition and regulation of cognition) as well as address common barriers that may hinder implementation of these metacognitive skills in real-world settings (e.g., difficulties in arousal regulation and deficits in motivation/self-efficacy). Within this presentation, we will review data from past studies of MCR among individuals with first-episode psychosis demonstrating the beneficial effects of this intervention on metacognitive functioning and subsequent downstream improvements in health-related quality of life and cognitive, occupational/educational, and social functioning. Moreover, we will highlight recent research on treatment satisfaction among individuals with first-episode psychosis participating in MCR and the cost-effectiveness of incorporating MCR within Coordinated Specialty Care programs for first-episode psychosis. Finally, we will review data from two recent demonstration projects investigating the feasibility of modified versions of MCR (i) for delivery in inpatient psychiatric settings and (ii) to promote smoking cessation among individuals with psychotic disorders. In total, the results of these studies highlight the promise of MCR as a clinically-beneficial and cost-effective treatment for individuals with first-episode psychosis.

Topic Area: Psychosocial Interventions

C44
Needs and Impact of Supported Employment for Young Adults Recovering from Emerging Mental Illness: A Naturalistic Study

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Social inclusion is a basis for recovery for individuals suffering from mental illness (Davidson et al., 2001). Individual Placement and Support for employment, is a recommended psychosocial treatment for individuals with mental illness wishing to work (Dixon et al., 2010). It has also shown benefit for support to training and education for young adults after a first episode of psychosis (Rinaldi et al., 2010). This naturalistic observational study sought to follow and measure, over a period of 24 months, supported employment interventions among 53 (69%male) outpatient individuals treated in the Young Adult Psychiatry Unit of the Geneva University Hospitals. The mean age was 21.3 years (sd = 2.5) and the mean level of education was 13.3 years (sd = 1.8). Each individual benefited from the support of both the mental health team, as well as a coach providing IPS structured support for training, education and/or work. Coaching interventions were evaluated, as well as coaching related activities attained by each individual. These were related to clinical data including global diagnostic categories, overall improvement and types of interventions necessary. As in other studies, our results suggest a beneficial impact of coaching for attaining training, education and/or work. More specifically, results showed that individuals with more advanced stages of mental illness received more intensive coaching. Moreover, preliminary correlation analysis showed that intensity of coaching was related to the rate of activity.

Topic Area: Psychosocial Interventions

C45
Practicing Mindfulness Using Virtual Reality Simulations of Potentially Stressful Daily Activities: An Innovative Approach to the Treatment of First Episode Psychosis

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The main therapeutic applications of virtual reality (VR) for people presenting psychotic features focus on social skills training, AVATAR therapy or cognitive behavior therapy combined with VR that facilitates cognitive restructuring, exposure or cognitive training. The possibilities of VR are multiple and other applications deserve considerations. One example is mindfulness-based interventions, which shows growing interest and support.

Objective: The long term goal of this research is to propose a treatment program that would allow people presenting first episodes of psychosis to practice mindfulness skills in virtual environments depicting progressively challenging day to day activities and stressors. The aim of the current project is to assess the acceptability and feasibility of a few sessions combining mindfulness-based interventions for schizophrenia and immersions in VR. For this poster, we will present the treatment manual and results from our pilot patients.

Methods: The sample consists of five participants suffering from schizophrenia recruited from a first episode psychosis clinic. The mindfulness-based intervention program proposes five 60-minute sessions. Participants are invited to practice mindfulness skills in a virtual restaurant depicting everyday life situations that can be challenging for patients suffering from psychosis. The therapist: (a) coaches and supports the participants in learning the skills before the immersion, (b) helps the patient through guided-mastery techniques to apply the skills in progressively challenging VR immersions, (c) provides post-immersions feedback to improve patient's awareness of the situation and how to apply the skills, and (d) facilitates generalisation through examples of how to apply the skills between sessions.

Topic Area: Psychosocial Interventions

C46
Exploring the Usefulness of the Work Readiness Questionnaire (WoRQ) to Predict Return to Work/to School in a Recent-onset Psychosis Population

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The Work Readiness Questionnaire (WoRQ) is a short scale for clinicians to assess their patients' ability to work. The WoRQ can be completed quickly, but to our knowledge, there has been no study to assess its predictive value in a recent-onset psychosis sample. We examined whether the WoRQ prospectively predicts return to work or to school 6 months after baseline, in 22 participants from a first-episode clinic. Inclusion criteria were: (1) diagnosis of schizophrenia spectrum psychotic disorder; (2) ≤five years of treatment for psychosis disorder; (3) no occupation (school/work) or only part-time occupation (24 hours/week or less); (4) the desire to improve their occupational status. The WoRQ was assessed at baseline by participants' psychiatrist. Participants were contacted 6 months after baseline to collect information about their occupational status (school/work). A logistic regression was performed to evaluate if the clinical judgment at the WoRQ (yes/no) could predict improvement of participants' occupational status (yes/no). The model is marginally statistically significant, χ^2 (1df, N = 22) = 3.404, p = .065. The WoRQ predicted 21.6% of the variance of occupational status' improvement (Nagelkerke R^2 = .216), with a global percentage prediction of 75% (sensibility = 42.9%; specificity = 92.3%). In conclusion, the WoRQ is a promising tool to predict return to work/to school in a recent-onset psychosis population, considering the results obtained despite the small sample size. Other items relevant to return to work/to school, such as motivation and cognitive impairments, could be added to increase psychometric qualities of the WoRQ.

Topic Area: Psychosocial Interventions

C47
Exploring the Feasibility and Acceptability of Recovery-focused Psychosocial Intervention for Adolescent and Young Adults with Mental Illness: Trial Protocol

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[1]*University of Tokyo*

Aim: This study aimed to explore the feasibility and acceptability of recovery-focused intervention for adolescent and young adults (AYAs) with mental illness (trial protocol).
Methods: We interviewed participants on their personal recovery, conducted a qualitative analysis of the interviews, and then developed psychosocial interventions based on the analysis results.
Results: Interviews with adults with mental illness (n = 30) revealed the importance of 1) being aware of one's own value, 2) sharing this awareness with the service user and the family, and 3) conducting shared decision making. We developed recovery-focused psychosocial interventions to support the awareness (using Personal Values Questionnaire II-J) and sharing values toward promoting personal recovery. We planned to explore the feasibility and acceptability of the program using a waiting-list control condition. Thirty-two AYAs with mental illness attending day care will undergo eight one-hour sessions of the program or treatment as control. The primary outcome will be recovery, determined using "The Questionnaire about presses of recovery, WHO 5 Well-being Index and WHO Disability Assessment Schedule 2.0 at baseline, post-intervention, and six months later. We also plan to assess the attitude of staff using The Recovery Knowledge Inventory and The Recovery Attitudes Questionnaire. Qualitative data will be collected at post-intervention to explore the participants' experiences of the trial.
Discussion: The results of the feasibility and acceptability of the intervention will be presented in the poster program.

Topic Area: Psychosocial Interventions

C48
Early Psychosis Intervention: A Co-Designed Introduction to a Community Based EPI Team

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Goal: To introduce and connect individuals in a meaningful way to the EPI team, peers and wellness as a critical concept in Recovery. The EPI Standards of Care (Ontario, Canada) identify developing coping strategies, developing resilience and establishing social relationships or connections as a key aspect of recovery. (EPI MOHLTC standards 2011).
Process: Co-design programming alongside the people who will use it. Co-design gives voice to EPI clients through sharing their experiences and thoughts in a structured and safe process, enabling EPI services to be more tailored to needs of people in the service.
Concept: Three times a year new and existing clients to the Canadian Mental Health Association (CMHA) Early Psychosis Intervention (EPI) Program attend Wellness Wednesday to (i) create a Wellness Toolkit. Components include a series of stations (crafts, puzzles, writing, painting, beading, music) and activities (ice-breakers, mindfulness, walks, helpful apps, team games) where clients rotate through stations building their Wellness Toolkit (ii) connect with peers (iii) meet EPI staff team members (iv) build confidence and comfort to participate and co-lead other EPI activities and (vi) engage family participation.
Outcomes: It engages clients and families in other activities the EPI program holds throughout the year with an on-going calendar series of social activities such as snow-tubing, laser tag, hiking, cooking and picnics. This approach has resulted in clients meeting up on their own and starting their own groups such as a book club and writing group, in addition to increased coping skills and greater family satisfaction with service

Topic Area: Psychosocial Interventions

C49
Less is More? An Australian RCT Comparing Dose Reduction of Anti-psychotic Medication to Maintenance Treatment

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Background: Treatments for first-episode psychosis (FEP) patients are increasingly oriented towards meaningful recovery. Treatment guidelines recommend remitted patients receive 12-24 months antipsychotic maintenance treatment (AMTx) before dose reduction is attempted. But there is growing debate about the timing and extent of dose reduction. This is because of the potential impact medication may be having on functional recovery and reductions in brain volume. This adds to the list of physical health, tolerability, and acceptability problems, as well as persistent poor social and vocational outcomes in psychosis noted with AMTx.
Methods: Our randomized controlled trial, within a specialist early psychosis treatment setting, will test the whether a dose reduction strategy (DRS), in combination with our evidence based intensive recovery treatment (EBIRT), leads to better vocational and social recovery than continuous AMTx + EBIRT over a 2-year period in 180 remitted FEP patients. Additionally we will examine the effect of DRS vs AMTx on physical health, brain volume and cognitive functioning. In terms of safety this study will determine whether the group receiving DRS + EBIRT will be no worse off in terms of psychotic relapses over 2 years follow up.
Results: This poster will present the method, rationale and hypotheses of this new study.
Discussion: This study will provide evidence as to whether an alternative recovery treatment leads to improved functioning and safer outcomes in young FEP patients, and the first controlled experiment of the effect of exposure to AMTx on brain volume changes in this population.

Topic Area: Psychosocial Interventions

C50
Intervening on Negative Voices in Daily Life: Preliminary Findings of the Temstem RCT

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Background: While most voice hearers benefit from antipsychotic medication or cognitive behavior therapy, additional effective interventions are needed to reduce the burden of experiencing AVH, especially in everyday life. 'Temstem' is an easily accessible and usable smartphone application that was developed by designers in close cooperation with voice hearers and experts. By using language games, Temstem aims to reduce distress and improve social functioning.
Methods: A single-blind multicenter RCT with two arms: 'Temstem + AVH monitoring' versus 'AVH monitoring'. Participants are adult patients with AVH and are recruited in outpatient units. Primary assessment in daily life is made by experience sampling method (ESM) and daily monitoring with the PsyMate app. There are three 6-day ESM periods: at baseline (week 0-1), post-treatment (week 5-6) and follow-up (week 9-10). In addition, during the entire 10-week study period, all participants monitor their AVH two times a day with a short assessment via the PsyMate app. Participants in the Temstem + AVH monitoring condition are provided with the Temstem app from weeks 1-6. Other assessments made at baseline, post-treatment and follow-up are based on questionnaires and a clinical interview.
Results: The preliminary results of this study (the study is scheduled to be completed in July 2018) will provide an evaluation of the effectiveness of Temstem, a non-invasive and easily accessible app for voice hearers, and insight into the determinants of optimal use.
Conclusions: If Temstem is found to be effective, many voice hearers can be reached at low costs.

Topic Area: Psychosocial Interventions

C51
Staff Experiences of Peer-supported Open Dialogue Network Meetings

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Introduction: This study aimed to evaluate staff experiences of Peer-Supported Open Dialogue (POD) informed Network Meetings (NM) in a Community Psychosis Service. It was part of a two-part evaluation which assessed the views of both staff and service users. POD is adapted from Open Dialogue, which is both a psychotherapeutic intervention and a way of organising services.
Methods: Eleven staff members from different professional backgrounds enrolled on a POD training programme took part in a semi-structured interview designed to elicit qualitative data regarding their experiences of co-facilitating NMs. Interviews were then transcribed by two researchers and the six-phase approach to thematic analysis outlined by Braun and Clarke (2006) was followed.
Results: Several themes emerged from the data. Staff highly valued the therapeutic approach, and there was a sense that co-facilitating NMs required a new way of connecting with service users. POD allowed clinicians to behave in ways that they felt were more closely aligned to their professional values than current structures and ways of operating allowed. A variety of organisational issues were raised which were seen to limit the potential of POD within the service.
Discussion: Participants said that POD and NMs contained many useful elements but that these did not necessarily match the resources available within the Community Psychosis Service. There is value in examining how the culture of services can be shaped to allow clinicians to act more consistently in line with their professional values. Recommendations are made to inform further implementation and development of Open Dialogue.

Topic Area: Psychosocial Interventions

C52
Early Identification and Intervention of Attenuated Psychosis Syndrome in Asian American Populations

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Background: Subtle pre-illness clinical, psychosocial, neurocognitive deficits, and brain structural alternations have been reported in the attenuated psychosis syndrome (APS). Thus, the detection and intervention of the APS preceding the onset of florid psychosis creates a window of opportunity of prevention of psychotic disorder. This has the potential to prevent suffering for individuals and families, as well as losses in social and educational/ role functioning. An important challenge for treatment of APS is balancing the potential benefits of early identification and treatment with the risks of false positives and labeling individuals who may not be developing psychosis. This challenge can be particularly complex when working with populations such as Asian American families, who bear a highly stigmatized concept of mental illness.
Methods: A thorough literature review is conducted to identify themes on APS among Asian American populations.
Results: The presentation consists of the following components/ themes: 1) Introducing demographic information of Asian Americans in the United States, as the fastest growing immigrant population in the country, their educational achievement, economic status, and challenges; 2) Discussing common Asian American cultural beliefs of the etiology of mental illnesses and psychotic spectrum disorders (APS in particular) and barriers to clinical services; 3) Presenting the APS in the Asian American context, common help-seeking behaviors and motivating factors to services; and 4) Using culturally sensitive approaches to assessing and providing intervention to Asian Americans with APS.
Conclusion: Researchers and clinicians should be aware of the implications and guidelines of working with Asian Americans with Attenuated Psychosis Syndrome.

Topic Area: Psychosocial Interventions

C53
"Individual Placement and Support" Provides Advantages for Early Psychosis Clients

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Purpose: Although the Individual Placement and Support (IPS) strategy has achieved 'gold standard' status for enhancing employment among older clients in the later stages of mental illness, the nature and timing of its contributions to younger clients in the early stages of illness is less understood. This randomized controlled trial assesses the effectiveness of the IPS model of employment support in a population-based sample of early-psychosis clients.
Methods: We have recruited 109 clients from the Fraser Health Early Psychosis program; 55 clients received one year of IPS support and 54 received 'treatment as usual' (TAU). A variety of employment, clinical, and service-use outcomes were assessed at 6- and 12-months; this presentation describes employment outcomes.
Results: Over 12 months, clients who received IPS in addition to TAU more often worked (80%) than did those receiving TAU alone (60%; chi-square = 4.50, p = .03). However, there was no significant difference in the number of days worked (58.7 days in IPS, versus 46.4 in TAU; p = .33).
Conclusions: When EPI clients are ready to look for work many are successful, compared to clients in later stages of illness. In our early psychosis clients, IPS increased the likelihood of getting work, but did not significantly affect job tenure. Further analyses will assess the nature and timing of differential employment outcomes attributable to IPS.

Topic Area: Psychosocial Interventions

C54
What are the Main Concerns of Families about Individuals at Clinical High Risk State?

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Family factors, such as family environment and family communication, may contribute to symptoms and functioning among CHR individuals, and family-focused interventions appear to be effective for improving outcomes in this population. However, previous studies seldom mentioned the main concerns of the families. Our SHARP team established a 'WeChat' group for family members of CHR individuals at the end of March in 2015, aiming to provide mutual support among close relatives of individuals with sub-threshold positive symptoms and functional decline. Until to 27 June 2016, 171 family members of 108 CHR individuals joined the group. From 1 April 2015 to that day, 22,007 valid messages were sent through 'WeChat', which have been exported and saved to analyze the main concerns of the families. Family members frequently talked about functional recovery and medication with the group. Generally, after CHR individuals` first visit, family members would go through three stages at which we can implement family-based intervention. At the first stage, family members lack knowledge of psychosis and CHR states and related medication. For example, they may deny the existence of symptoms or say the CHR individuals probably pretend to get sick in order to achieve their purposes. At the second stage, they fear for CHR individuals` futures and repeatedly asked "can they go to school?", "can they live a normal life?", and "can they marry and have kids?". At the third stage, family members would express complaints about CHR individuals` laziness, careless, and irritability. In a word, providing family-focused intervention they need, such as real-time professional explanations and targeted psychological therapy, would be more helpful.

Topic Area: Psychosocial Interventions

C55
Clinical High Risk of Psychosis in Low- and Middle-income Countries: Current Status and Future Challenges

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Background: There are few published studies on clinical high risk status of psychosis (CHR) in low- and middle-income countries (LMIC). Here, we aim to review and synthesize the data from these published studies.
Methods: A literature review was conducted using keyword searches on PubMed, Embase (Ovid), PsycINFO, Web of Science, and published posters in the International Conference on Early intervention in Mental Health, in addition to personal contacts. The inclusion criteria mandated studies provide data on the clinical high risk population. In turn, the primary outcome was the current available intervention services for CHR while secondary outcomes were the epidemiology, phenomenology, and biologic markers of the CHR subjects in LMICs.
Results: In total, 53 studies were identified, which focused on intervention (8), epidemiology (13), phenomenology (19), and biological markers (13) in CHR. The main findings of these studies are summarized in this review.
Conclusion: Contrary to the high-income countries (HIC), the vast majority of LMIC are significantly lagging behind in the field of research on CHR status and only a few countries were able to achieve some academic and clinical progress. Academic institutions in HICs are urged to build partnerships with mirroring institutions in LMICs to help close that gap.

Topic Area: Psychosocial Interventions

C56
Dropout Rates in Psychological Therapy for Generalized Anxiety Disorder: Systematic Review and Meta-analysis

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Background: Generalized anxiety disorder (GAD) is among the least studied anxiety disorders, despite being among the most prevalent. Psychological therapy is a common treatment approach. Premature termination, or dropout, from therapy is problematic in that it can be associated with worse outcomes, service inefficiencies and can disproportionately affect disadvantaged populations. Yet, no research has systematically determined a weighted mean dropout for GAD and explored predictors of dropout.
Methods: The literature was systematically reviewed using Medline, Embase and PsycINFO databases. Forty-five studies, involving 2224 participants were identified involving individual therapy for GAD.
Results: Meta-analysis yielded a mean dropout rate of 16.99% (95% confidence interval 14.42%-19.91%). The Q-statistic indicated significant heterogeneity among studies. Moderator analysis and meta-regressions indicated no statistically significant effect of client age, sex, symptom severity, comorbidity, treatment type, study type (randomized trial or not), study quality, number of sessions or therapist experience on dropout rates.
Discussion: Overall, dropout from psychological therapy can be expected in approximately one in six clients with GAD. There was no consistent predictive effect of any of the client, therapist of treatment variables studies in this review. More clear specification of the definition of dropout, reasons for dropout, and investigation of multiple correlates can assist in progressing future research.

Topic Area: Psychosocial Interventions

C57
Psychotherapy in First Episode Psychosis: Description of a Multimodal Group Intervention Program

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In 2017, the Québec Ministry of Health and Social Services published an evidence-based frame of reference to support the implementation of early intervention services for first episode psychosis (FEP). This framework posits cognitive behavioral therapy (CBT) as an essential component of FEP treatment. For many years, the J.-P. Mottard clinic for FEP in Montréal has been offering a multimodal group intervention program that takes into account the heterogeneous needs of young adults with FEP. This poster presents the theoretical basis, objectives, components, and challenges of this program. Each year, 32 to 36 participants are divided into 4 groups of 8 to 9 people, depending on their difficulties, competencies, and level of functioning. The groups meet weekly for 2 hours over a period of 9 months. The sessions are led by two professionals trained in CBT and psychosis. Importantly, the participants are met individually to personalize their therapeutic objectives, while ensuring consistency with the other treatments received at the clinic. The program, standardized in its form while being constantly personalized for each participant, aims at acquiring knowledge and skills to support recovery. It integrates various components, including motivational interviewing, psychoeducation, behavioral activation, gradual exposure to dreaded social situations, social skills training, CBT for residual psychotic symptoms, and cognitive remediation. To date, our clinical observations confirm the effectiveness of this program. A next step will be to validate these observations with standardized scales and identify predicting factors related to recovery.

Topic Area: Psychosocial Interventions

C58
Applying the Rorschach Comprehensive System to Optimize Intervention: A Case of Mother-daughter Pair with Psychotic Symptoms

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It is often difficult to take a medical history from patients suffering from severe psychotic symptoms. In such cases, the Rorschach Comprehensive System (CS) sometimes gives beneficial information about those patients. In this presentation, we illustrate an application of the CS to a mother and daughter who were living alone with each other for years and whose histories were difficult to identify through interviews. The daughter, who was suffering from chronic schizophrenia and mental retardation, was admitted to the hospital because of worsening symptoms. One week later, the mother intentionally overdosed on sleeping tablets and admitted herself to the same hospital, complaining about auditory hallucination and heart pain. CS was first administered to the daughter and then to the mother by an experienced psychologist. Their protocols shared some of the same responses, including a unique answer, “a Biwa” (a Japanese traditional string instrument) on the Card VI, indicating their longtime symbiotic lives. However, the protocol analysis showed substantial differences between their mental states: The daughter’s protocol had one Texture (T) answer, whereas the mother’s protocol had no T answer but two Food (Fd) answers, revealing that the mother cannot satisfy her daughter’s dependent demand. This case shows that despite being simple and short the mother and daughter’s CS protocols provided us useful information about their psychological experiences and thus helped us choose optimal intervention strategies.

Topic Area: Psychosocial Interventions

C59
The Role of Self-compassion, Shame and Guilt in 'Emotional Over-involvement'

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Familial expressed emotion (EE) has a well established association with outcomes in mental disorders. Although work on attributions has helped understand what drives some EE behaviours, an important component, emotional over-involvement, is not well understood. A number of small scale studies indicate the importance of shame and guilt in the maintenance of EOI; both factors targeted in compassion focussed therapies. Informal family carers (n = 72) were recruited via Twitter, carer groups and webpages. A cross-sectional design using self-report measures was used to examine the relationship between emotional over-involvement and guilt and shame, and to examine the potential moderating effect of self-compassion on this relationship. Multiple linear regressions revealed unique main effects of self-compassion, guilt and shame on EOI scores, but no significant moderating effects of self-compassion on the relationship between guilt and shame, and EOI. Methodological issues are discussed as well as implications for the refinement of family based interventions.

Topic Area: Psychosocial Interventions

C60 Talking Minds: Co-designing an Educational Web-resource for Early Psychosis

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The initial weeks following a first episode of psychosis can be challenging and overwhelming for young people and their families. Supporting them to access good quality information that is easily understood is essential for engagement, adherence and recovery. We will describe the development of the New Zealand Early Psychosis Web Resource–Talking Minds (www.talkingminds.co.nz) from conception, co-development with young people to implementation. We will share our experiences on platform choices and partnerships with service users, designers, clinicians and media content producers. We will also specifically discuss some of our learnings from designing web-resources for people actively experiencing psychotic symptoms.

Topic Area: Psychosocial Interventions

C61 Pre-implementation Evaluation of a New Psychoeducational Tool for Patients with First Episode Psychosis

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Individual psychoeducation, despite being the most prevalent component of early intervention services, is rarely a subject for studies. While it has been shown to improve the prognosis of individuals with first episode psychosis (FEP), there is no widely accepted content or practice standards specifically in the field of early interventions. A new psychoeducational tool for this population and their families has been developed and evaluated based on Rogers' theory of diffusion of innovation. The research aimed to evaluate the appreciation, adoption and use of this new tool with experienced professionals working in the FEP clinics in Québec, Canada (n = 25). The results indicate that professionals agree with the rational that led to its development, in particular the difficulty of adhering to pharmacological treatment in the absence of standard psychoeducation. The degree of appreciation as well as the degree of adoption are relatively high. The factors that may have contributed to this rate were examined, namely mental health professionals opinion of the relative benefits, compatibility, complexity and anticipated effects of the tool. When using the tool, professionals report that patients have made positive comments. Indeed, images, metaphors and graphics are generally appreciated, however some images are more controversial. In conclusion, the results make it possible to improve the tool on the basis of experience and to plan the conditions for success of its future implementation. Better integration of the concept of recovery and the contribution of customers for the choice of images should be considered to make the tool more accessible.

Topic Area: Psychosocial Interventions

C62 A Brief Coping-Focused Intervention for Distressing Voices Blended with Smartphone-Based Ecological Momentary Assessment and Intervention: Findings from Two Case Studies

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Digital technologies such as smartphones show promise for supporting and enhancing psychological treatments for distressing experiences such as hearing voices. One way in which this is achieved is by utilising digital tools within standard therapy settings to improve the efficacy of therapeutic components and establish linkages to daily life. Blended therapies, involving both standard face-to-face therapies along-side digital technologies, have shown benefit in the treatment of persisting mental health problems such as psychosis. Two promising technologies are termed ecological momentary assessment and intervention (EMA/I), which typically use smartphone apps to assess experiences as they arise in their natural environment and deliver interventions at these moments to provide immediate therapeutic support. In addition, analysis of EMA data can give rise to individualised symptom profiles that might improve understanding and inform more tailored interventions. In this study, a highly novel intervention approach was developed involving four face-to-face sessions blended with EMA/I between sessions to improve coping with distressing voice hearing experiences. As an initial stage of development, two participants with persisting voice hearing experiences completed the intervention at a Melbourne-based clinic specialising in the treatment of hearing voices. Feedback was primarily positive regarding different elements of the intervention, particularly the use of EMI to assist with day-to-day self-management of voices and the use of EMA data to inform functional analysis in session. Some reliable clinical improvements were observed, suggesting this intervention approach has potential clinical utility in the psychological treatment of distressing voices and potentially other severe mental health difficulties.

Topic Area: Psychosocial Interventions

C63
Psychosocial Impact of Infertility - A Super Specialty Clinic-based Study

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Objective: As per assessments done by WHO 60 to 80 million couples suffer from infertility affecting 8 -12% of couples worldwide. The aim of this study was to assess the effect of infertility on quality of life, psychopathology, and stress of female infertile patients with respect to fertile control patients group. This is one of the first studies to be conducted in the Indian context to assess the quality of life and psychopathology among infertile couples.
Methods: Female patients (suffering from infertility and fertile patients suffering from other obstretics/gynaecology disorders) visiting the OPD of one of Kolkata's IVF centers were selected by simple random sampling. Respondents completed Bengali standardized versions of MINI, Becks Depression Inventory–to measure intensity of Depression; Becks Anxiety Inventory- to assess anxiety. SF -36 (22) and SCL-90-R–to assess quality of life, Psychopathology and sexual satisfaction.
Results: Preliminary findings indicate that infertility in couples has a detrimental effect on mental health and quality of Life. From the our statistical analysis it can be interpreted that there is a significantly increased levels of depression and anxiety levels among the infertile patients in comparison to the fertile patient group. Our results also show that there is statistically significant difference in psychopathology among the infertile patients in comparison to the fertile patient group, there is very significant impairment in quality of life in the infertile group in comparison to the fertile patient group.
Conclusion: Infertility is a growing medical problem with 8-12 percent of married couples suffering from this ailment. In the South Asian context this poses as a serious stress factor in our society as majority of couples cannot avail expensive Artificial Reproductive Therapy such as IVF due to high costs and high failure rates. It is imperative that healthcare policy making institutions place greater emphasis on access of infertility treatment to general masses at lower cost.

Topic Area: Public Policy

C64
The Impact of Deprivation on the Health & Employment Opportunities of People Living with Psychosis in Scotland

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It is estimated that only 8% of people with psychosis are in employment in the UK, and people with severe mental illness (including psychosis and schizophrenia) are six to eight times more likely to be unemployed than the general population (NICE, 2015). The low levels of employment for people with long-term mental health conditions are a major public issue in Scotland. They affect not only the national economy and public expenditure, but most importantly, individual welfare. Many efforts to raise employment rates for this group have been made, through employment service reform as well as health interventions. Access to health care and level of education may be important factors, which influence long-term health in various ways Employment in meaningful work can provide a purpose and structure in life that positivity affects self-esteem, wider community participation, and social inclusion. Equally, unemployment or unstable employment could limit opportunities and have a negative effect on physical health, social inclusion, health choices, and worsening mental health outcomes (Bouwmans et al, 2015). Reflecting on preliminary review findings and initial data analysis of longitudinal datasets on individual health and employment histories, as well as drawing from personal experience, this poster will explore ways in which personal, local and national deprivation may affect health choice and access, as well as the subsequent effect on employment opportunities, such as loss and return in individuals living with psychosis in Scotland.

Topic Area: Public Policy

C65
A Scoping Review and Critical Appraisal of Guidelines for Early Intervention Services for Psychosis: A Focus on Family Involvement and Family Interventions

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Rationale: Despite wide acknowledgement of the benefits of family involvement and interventions in improving outcomes among persons with early psychosis, challenges remain in implementing these in specialized early intervention services (EIS). Unclear program mandates in EIS clinical guidelines have been identified as a barrier to involving families. It is therefore necessary to critically appraise the recommendations of existing EIS guidelines with respect to family involvement and intervention in services. The current study addresses this need.
Methods: We conducted a scoping review of clinical practice guidelines for EIS for psychosis published from 2000 to present. Identified EIS guidelines were evaluated using the Appraisal of Guidelines, Research and Evaluation II instrument comprising six major quality domains: scope and purpose, stakeholder involvement, rigor of development, clarity of presentation, applicability, and editorial independence. The extracted data were synthesized using descriptive quantitative and qualitative techniques.
Results: Most guidelines were developed in Western countries. Preliminary results suggest that guidelines were adequate with respect to scope and purpose and editorial independence, for instance, by describing program objectives, conflict of interests, etc. Stakeholder involvement and rigor of development were inadequately described, resulting in uncertainty regarding whether family-related guidelines were evidence-informed and which stakeholders' inputs informed these. Guidelines generally fared least well with respect to clarity of presentation and applicability. Family involvement guidelines were ambiguous (e.g., families/carers "must be involved wherever possible") and thus difficult to operationalize into service delivery or audit criteria. Implications for improving guidelines and EIS delivery with respect to inclusion of families will be presented.

Topic Area: Public Policy

C66
Early Intervention in Psychosis: A Systematic Review of Cost-effectiveness Studies

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Background: Early intervention in psychosis (EIP) has been developed as an approach to improve the prognosis of people with psychotic disorders and has been claimed as a more efficient model of care. However, the evidence is not definitive and doubts have spread regard the economic outcomes of EIP services amid the usually constrained mental health budget. Therefore, we aimed to review the cost-effectiveness evidence of EIP services worldwide.
Methods: We systematically reviewed the economic literature about EIP following the PRISMA statement guidelines. Studies were selected according to previously stated criteria and analysed using standardised critical appraisal tools for trial-based economic evaluations and modelling studies.
Results: A total of 16 studies were selected after applying the eligibility criteria. Most of them were economic evaluations within clinical trials. The overall evidence was consistent in the cost-effectiveness of EIP compared to standard care for first-episode of psychosis and prodromal symptoms. Such evidence has been replicated among different health systems, mainly in high-income countries. The methodological quality of such evidence, however, was moderate and there was significant heterogeneity across the studies.
Discussion: Despite some limitations in the current literature, there is consistent evidence about the value of investing in EIP services. This model of care has demonstrated to be cost-effective, although more research is needed, mainly in low-and-middle countries (LMICs) where some of these services are already being implemented.

Topic Area: Public Policy

C67
Early Intervention for Young Adult Veterans with Psychosis: Recovery-Oriented Care within the San Francisco VA Health Care System

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Individuals who enter the U.S. Armed Forces are at risk for the onset of psychosis, given their age as young adults and the likelihood that they will encounter high levels of stress and trauma. Among U.S. military Veterans, 4% who receive care through the Veterans Health Administration (VA) have a diagnosis of schizophrenia. The Department of Defense (DoD) and VA systems are uniquely positioned to conduct early assessment, diagnosis, and intervention for Veterans with early psychosis, given the embedded structure and universal access to care. Effective early intervention could limit durations of untreated psychosis and lead to more positive prognoses. This study examines young adult Veterans with psychotic disorders referred for evidence-based psychosocial services within the San Francisco VA Health Care System (SFVAHCS). Data was collected over a 1-year period, examining Veterans under age 35 referred to a recovery-oriented outpatient program and/or individual CBT for psychosis (N=33). While 60% of active duty service members are between 17 and 24 years old when they are first diagnosed with schizophrenia, we found that on average, Veterans did not get referred for recovery-oriented care until around age 30. Veterans who were newly referred were 93% male and 40% had a co-occurring PTSD diagnosis. Psychosocial services utilized included individual CBTp, group psychotherapy (i.e. SST), case management, supported employment, supported education, peer support, and family education/support. Opportunities for increased outreach and coordination of specialty care for early psychosis within the SFVAHCS are explored, and implications for DoD/VA policy changes will be discussed.

Topic Area: Public Policy

C68
Predicting Population-level Need for Early Treatment Programmes in First Episode Psychosis: The Advanced Psychiatric MAPping Translated into Innovations for Care [PsyMaptic-A] Study

James Kirkbride[1], Tao Ding[2], Rebecca Dliwayo[1], Pia Wohland[3], David Osborn[1], Paul French[4], Gianluca Baio[2], Peter Jones[5]

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Introduction: Early treatment programmes for first episode psychosis [FEP] benefit patients, but require evidence-based estimates of need in the population to effectively plan services. We developed new population-level prediction models using small-area epidemiological data.
Methods: Data from three major FEP studies (AESOP, ELFEP, SEPEA) were combined in various Bayesian hierarchical Poisson models to estimate risk, by age, sex, their interaction, ethnicity, cannabis use and small-area deprivation, population density and social fragmentation. Informative priors were included based on systematic reviews. Model 1 contained age group, sex and ethnicity. Model 2 also included neighbourhood-level deprivation and social fragmentation. Model 3 substituted social fragmentation for population density. Posterior mean and 95% credible interval (95%CrI) were used to present predicted counts and incidence rates for the 2016 population in England. These were compared with observed national FEP data from the NHS. Analyses were performed using INLA in R.
Results: In 2016, 8,280 people with FEP were in contact with secondary mental healthcare services in England. All model predictions were larger than this figure, ranging from 11,326 (95%CrI: 7,731-18,771) in Model 3 to 16,252 (95%CrI: 11,076-23,920). Predicted incidence rates from Models 2 (36.4 per 100,000 person-years; 95%CrI: 25.3-55.2) and 3 (32.1; 95%CrI: 21.9-53.2) were consistent with the observed pooled rate in England from a meta-analysis (31.7; 95%CI: 24.6-40.9).
Conclusions: Small-area epidemiological data can be used to accurately predict incidence at a national level to inform commissioning of treatment programmes for FEP. Higher predicted FEP counts than observed in England may indicate significant unmet population need.

Topic Area: Public Policy

C69
Building Bridges & Pathways: Improving Service Access for Young People

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Review of selected Government and non-Government services in NSLHD in 2016 indicated that there were no clear referral pathways between the services resulting in delays; and no processes for transferring or sharing information resulting in duplication of assessments. A clinical redesign project was completed with the goal of improving referral pathways and communication between three early psychosis services, two headspace centres and a non-Government agency providing drug & alcohol services to young people. A group of key stakeholders from the participating services worked together to develop referral and decision-making pathways, supported by education & training, and worked collaboratively to overcome barriers to the smooth transition of young people between their services. Following the roll out of a training program, 90% of clinicians indicated that they had the confidence and skills to complete a CAARMS assessment, increasing the opportunities for early detection of psychosis.. Decision making pathways were developed including screening, assessment and referral. These were implemented and evaluated. Feedback from clinicians and young people was positive, indicating that the streamlined processes were effective. Data showed the successful transfer of young people between services and increased collaboration, joint decision-making and referrals. In addition, a suite of assessment tools was identified to assist with clarification of diagnosis, and written information about the assessment process was developed for young people. Processes and assessments are now in place to increase early detection of psychosis and improve pathways for young people between services. Communication and collaboration are well established between the participating services.

Topic Area: Service System Development and Reform

C70
Youth Mental Ill Health and High School Completion in Rural Australia

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The prevalence of mental ill health is high for Australian young people and the onset of depression, anxiety and first episode psychosis (FEP) commonly occurs when the individual is at school. The prevalence is reported to be highest for rural young people and barriers to treatment exist. Current evidence suggests that 40% of young people experiencing depression or anxiety disorders are not completing secondary school. Further evidence shows that over 50% of individuals who experience FEP do not finish secondary school. This study employed a survey methodology to explore the experience of rural and regional Secondary School Principals, Deputy Principals, Teachers and School Counsellors in working with students who experience mental illness (depression, anxiety, at risk mental state, early psychosis and suicide risk) in their school, in the state of Victoria, Australia. It also aimed to establish if they assessed that mental illness was having a negative impact on secondary school completion and whether they had access to effective early intervention mental health services for their students. This presentation will review the evidence of youth mental ill health and its impact on secondary school educational attainment. Survey results will be discussed. Recommendations for future school services to increased early intervention and reduce school dropout due to mental ill health will be explored.

Topic Area: Service System Development and Reform

C71
Coordinated Specialty Care: Adaptations and Lessons Learned from Rural and Frontier Early Psychosis Programs

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The United States is undergoing a significant expansion of Coordinated Specialty Care (CSC). One substantial change that accompanies this expansion is the federal government's mandate to use health care reform block grant funding to serve first episode psychosis populations. The large-scale research initiative examining coordinated specialty care, known as Recovery After an Initial Schizophrenia Episode (RAISE), through National Institute of Mental Health (NIMH), increased public awareness that meeting the needs and achieving the benefits and positive outcomes from early psychosis services is achievable. Nationally, there are several successful early psychosis treatment models to look toward for viable programming and service options. Oregon's Early Assessment and Support Alliance (EASA) stands at the forefront of programs implementing and adapting early psychosis services to fit the needs and demographics of rural and frontier communities. Oregon's unique geographic make up, and the need to provide services to individuals regardless of where they live, has launched the expansion of EASA into rural and frontier communities. The presentation will look to Oregon's EASA model to review how that model is being implemented and the lessons learned from rural and frontier adaptations. Considerations include the role of cultural frameworks, use of technology, task driven staffing patterns, training, seasonal considerations, community outreach, engagement, billing, access, mobilizing existing agency, and utilization of community resources. Presenters will share their experience in working with these communities using lecture, case examples, and collaborative discussion with attendees, to promote ideas on how early psychosis programs can successfully encompass rural and frontier regions.

Topic Area: Service System Development and Reform

C72
From Treatment as Usual to Evidence-based Treatments in Adolescent Psychiatry: Re-structuring the Care with Time-limited, Disorder-specific therapies in Helsinki University Hospital

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Background: Availability of evidence-based treatments, developmentally designed for specific mental health disorders in adolescents, has increased remarkably. However, in public psychiatric services, re-structuring the content of treatment according to evidence-based medicine, is a challenge due to organizational and professional-cultural barriers and a long tradition of providing treatment as usual. Increased number of referrals to Helsinki University Hospital's (HUH) Adolescent Psychiatry leads to greater need of fast, intensive, effective, time-limited, evidence-based treatments in the future to avoid the chronic development of illness.
Methods: In HUH, Department of Adolescent Psychiatry (adolescents at 13-17 years of age) with a catchment area of ca. 1.2 million inhabitants, the distribution and prevalence of psychiatric disorders was first analyzed. A significant percentage of personnel was trained to provide evidence-based, time limited, disorder-specific therapies to main disorder categories. The referral system within department was re-organized to allow a quick transfer for the adolescents after their clinical assessment at first admission to disorder specific teams.
Results: To date in HUH, choices for evidence-based, time limited, focused treatments cover therapy models for anxiety (CBT, brief psychodynamic therapy), depression (CBT, IPT-A, brief psychodynamic therapy), social phobia (group CBT), psychosis risk (CBT), trauma (trauma-focused CBT), substance abuse (MDFT), ADHD and Asperger (Mymind) and emotion regulation/suicidality (DBT).
Conclusions: After recent implementation of treatment-models, next step is to conduct scientific research of the effectivity of treatments to evaluate the usefulness of models in local clinical practice.

Topic Area: Service System Development and Reform

C73
Assessing Fidelity to Coordinated Specialty Care for First Episode Psychosis in the US Federal Block Program Grant with the First Episode Psychosis Fidelity Scale

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The United States Federal Government has allocated funding to State Mental Health Services for the implementation of First Episode Psychosis Services through the US Department of Health and Human Services, Substance Abuse and Mental Health Services Administration (SAMHSA). To evaluate the funded programs SAMHSA commissioned a longitudinal study of 38 sites. The sites were selected to represent ten regions of the US and includes, rural, urban, and mixed areas. The study employs a mixed method design using qualitative and quantitative data. the main goal is to evaluate whether programs that follow the CSC model have better outcomes. Adherence to the CSC model is being assessed with the First Episode Psychosis Fidelity Scale. Individual client outcomes will be assessed with symptom ratings scales and global measures of functioning and quality of life. The First Episode Psychosis Fidelity Scale is 31-item scale which assesses access, quality of psychosocial and pharmacological interventions, and team functioning. It covers the six components of care identified in the CSC care model, which was tested in the Recovery after an Initial Schizophrenia Episode study. To establish fidelity ratings, data will be collected by review of program administrative data, audit of selected health records, and semi-structured telephone interviews with key program health care providers. The scale will be administered at baseline and one year. The study will describe the degree to which programs deliver services that adhere to evidence-based practices and establish standards and norms for the first episode psychosis fidelity scale.

Topic Area: Service System Development and Reform

C74
Does Early Intervention for Psychosis reduce hospital admissions and bed usage in Ireland?

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Research has shown that patients with first episode of psychosis (FEP) respond better to specialized treatment within 6 months of onset. A pilot early intervention service (EIS) was set up within the South Lee Mental Health Service (SLMHS) in Cork in 2016. The aim of the study is to evaluate if EIS was associated with: 1) Lower rates of hospital admissions at first presentation to the service 2) A lesser number of hospital admissions within 6 months of presentation, and 3) A reduced number of bed days overall. Files of those who presented with FEP to the SLMHS from January 2016 to February 2017 were identified and a retrospective case review carried out. A between participants design was employed to compare demographics, clinical characteristics and hospital admissions for those admitted to EIS and community mental health teams (CMHTs). Forty patients were assessed. There was no significant difference in demographics. Hospital admissions varied significantly between the groups: There were fewer admissions at first presentation ($\chi 2$ (1) = 6.51 p = 0.01) and within the first 6 months of presentation ($\chi 2$ (1) = 5.56 p = 0.02) for those who presented to the EIS. There was also a significant difference in total number of hospital bed days (U = 131, p = 0.047), with the EIS group having fewer. The results show that EIS is associated with fewer hospital admissions and fewer bed days overall. EIS is associated with better patient outcomes in the first 6 months of treatment and a reduction in economic cost.

Topic Area: Service System Development and Reform

C75
Comparison of Tele-health and Standard Clinic Based Coordinated Specialty Care Early Intervention Programs

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Coordinated Specialty Care (CSC) is a largely clinic based, early psychosis, recovery-oriented EI treatment program. An alternative to "in clinic" service models is tele-health where clinical care is provided remotely through tele-health platforms. The advantages of this model include reduced costs, bridging geographical distances and increased flexibility for when and where therapeutic sessions occur. The purpose of this presentation is to provide qualitative (lessons learned) and quantitative (comparison to standard clinic based CSC) information about a novel tele-health CSC program. We initiated a standard, largely clinic based CSC program 3 years ago with favorable outcomes achieved : admission-to-endpoint improvements in CGI-Illness severity ($F = 17.1$, $p < 0.001$), MIRECC GAF Symptom ($F = 28.2$, $p < 0.001$), Occupational Function ($F = 10.4$, $p = 0.001$), and Social Function ($F = 13.1$, $p < 0.001$), as well as reductions in hospitalizations (6 months pre-admission: 65.3%, 12-month: 4.5%) and suicide attempts (pre-admission: 4.7%, 12-month: 0%). The tele-health CSC program began in 2017 with a "hub" team (psychiatrist, therapist, team leader, data manger) in Indianapolis, IN and two "spoke" sites (Ft. Wayne, Anderson IN) each with a care coordinator/school-work specialist. The tele-health and clinic based CSC programs employed identical inclusion criteria, assessment instruments, OnTrackNY training, and outcome milestones. The first 10 participants in tele-health CSC vs. the clinic based cohort, respectively, were similar: age (21.7 vs 21.6 years), male (80% vs 77.8%), psychosis duration (54 vs 46 weeks), and previous hospitalization (70% vs. 65%)–but differed on race (Caucasian: 70% vs 56%). Outcome effectiveness comparisons of a larger tele-health sample and the clinic based sample will be presented.

Topic Area: Service System Development and Reform

C76
Creating a National Network of Early Psychosis Services with Primary Care-challenges and Successes

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Implementing Early Psychosis services with primary care and creating an Australian National Network has been a unique opportunity and has bought many challenges and learning from the process. Orygen, the National Centre of Excellence in Youth Mental Health has undertaken a significant youth mental health project at a national level. The Youth Early psychosis project project was the development within the primary care setting of six national headspace centres. Service development activities were undertaken within this project to assist with the implementation and establishment process and a major aspect for the program was establishing a national network, particularly for the leadership groups. While local and national level influences impacted the implementation process the learning from the youth early psychosis programs led to a strong need for a national network and continued advocacy of early psychosis programs. As part of the process national forums and workshops were held which proved to be of high value to the leaders and other participants with strong engagement. Having a national approach to implementation along with the evaluation of national forums and workshops for the programs provided valuable feedback to review their requirements and adapt the implementation process. Development of a national network led to reduced isolation, proved a unique way to share and trouble-shoot experiences and provided a more consistent national approach to continue to advocate for early psychosis services.

Topic Area: Service System Development and Reform

C77
Extending a First Episode Psychosis Service to Include Over 35 Year Olds: A UK Service Case Study

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In response to NHS England's direction to extend UK EIP services to those aged 36 to 65 (although evidence is lacking on clinical outcome) Sussex EIP developed a shared care model for this group. Patients were offered a 6 week assessment period led by EIP to promote engagement, minimise DUP and initiate interventions. This was to be followed by shared care with generic adult community mental health services leading for 1 year with access to specialist EIP advice and nationally recommended interventions. A mixed methods data collection was undertaken of demographic, diagnostic, service impact and staff's qualitative experience for 6 months following service implementation. 13.8% of all referrals to EIP Sussex were aged 36-65 (n = 65), with 28 subsequently identified as FEP. There were higher rates of males to females (17:11) in those with confirmed FEP. Urban areas had a higher referral rate. Thematic analysis of EIP clinician's experience indicated: dissatisfaction with providing a compromised/low fidelity FEP pathway, delays in implementing shared care with EIP taking an extended primary role, significant impact on clinical time, and greater complexity of needs in this older group including co-morbidity, traumatic bereavement, and larger family systems. Increasing the age range of EIP services was associated with greater demand and reduced fidelity to the EIP model. Staggered roll out of the pathway over time, in different geographical locations led to a lower number of referrals than expected. Shared care was overall unsuccessful and further service models for over 35s require exploring.

Topic Area: Service System Development and Reform

C78
An Assessment of the Public Mental Health Delivery System in Saint Lucia

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The study aimed to determine how perspectives and perceptions of the main stakeholders, relate to the performance of the mental health delivery system (MHDS). The study employed a mixed method approach. The principal study design utilized an interpretivist paradigm, where qualitative methodology formed the principal study design supported by a complementary quantitative method. The data collection tools included the quality of life survey: brief version, the Accountability and Performance Indicators for Mental Health, Service and support, and a qualitative interview guide. The units of analysis included persons suffering from severe mental illness, policy makers, programme managers, health providers working in clinical and non-clinical service delivery settings and three treatment settings. The situation of the mentally ill including their quality of life was defined as poor. The main stakeholder roles were identified as service delivery and collaborative governance. The MHDS assessment summarised the performance of the system as inadequate while the majority of the policy makers and programme managers defined the system performance as satisfactory. The findings of this study indicate that the perceptions, perspectives and expectations of stakeholders relate to the performance of the MHDS system by creating an environment which can define and support the implementation of critical success attributes and also indirectly enable barriers to progress and change. Information from the stakeholders and the MHDS assessment reveal challenges but also opportunities to design and implement recovery oriented mental health delivery systems that can better assure access to quality services to all persons in need of care.

Topic Area: Service System Development and Reform

C79
Productivity in an Early Psychosis Intervention Program: An Electronic Data Collection and Analysis Software Pilot

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The Early Psychosis Intervention Program (EPIP) is a clinical service based at the Institute of Mental Health (IMH), Singapore. Patients accepted into the program are aged 16 to 40 years old, and are newly-diagnosed with a first episode of psychosis. They are followed up for a period of up to three years, and receive active intervention from a multidisciplinary team, including psychiatrists and case managers. As a state-funded service, EPIP has consistently maintained an assessment system to obtain feedback on patient outcomes, as part of program evaluation. A battery of tests including, but not limited to, Positive and Negative Symptom Scale (PANSS), Patient Health Questionnaire 9 (PHQ-9), and sociodemographic information are administered at fixed time points in each patient's treatment journey. Information from these ratings has been stored in a nationally registered standing database, since EPIP's establishment in 2001. While the current method of manual data collection is thorough and adequate, it is unfortunately significantly time-consuming, labour-intensive, and costly. As part of the movement towards increased productivity, a software pilot has been launched to better support the existing ratings system. The proposed platform routinely delivers electronic questionnaires to the relevant stakeholders, and generates real-time interactive infographics for ease of clinical evaluations. This allows for increased predictive ability of a patient's recovery trajectory and meaningful case discussions, especially in an early psychosis programme, where it is critical for intervention to be timely and individualized. The effectiveness of the pilot will be based on evaluation of performance indicators, and results will be shared at the presentation.

Topic Area: Service System Development and Reform

C80
Implementation of Early Intervention in Psychosis Services in the Republic of Ireland

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In Ireland National Clinical Programmes in Mental Health have been developed by the Health Service Executive (HSE), (public service health provider) in partnership with the College of Psychiatrists of Ireland. The primary aims of all HSE Clinical Programmes such as the Early Intervention in Psychosis National Clinical Programme are standardisation of quality evidence based practise, improved access and cost effectiveness. The implementation of this national plan for Early Intervention in Psychosis (EIP) as described in the EIP "Model of Care" will reform the provision of mental health services for individuals presenting with a first episode of psychosis to ensure the provision of early detection, specialist assessment, assertive engagement and the provision of evidence based multidisciplinary interventions and follow up for three years. The emphasis is on recovery with full participation in society. This plan has been developed in collaboration with service users and their families as well as with input from all professional groups. Given the demographics and population in the republic of Ireland the model of service provision has been developed to suit both rural and urban population bases with a combination of both hub and spoke and standalone models. This service development will require significant organisational and cultural changes as well as leadership and significant resources to realise the full potential of what is detailed in the model of care. Implementation of the Model of Care to ensure service users receive a consistent quality service are the challenges faced in leading out this national clinical programme.

Topic Area: Service System Development and Reform

C81
Developing an Outcome Measurement Methodology for the New English EIP Standard

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A new national specification for Early Intervention in Psychosis teams in England was introduced in 2016 with the aim of increasing the uptake of NICE recommended therapies and improving the quality of services. This new standard necessitated a review of how outcomes could be measured. The aim was to create a pragmatic methodology for generating good quality outcome data in ordinary EIP teams and the purpose is to demonstrate how this has been achieved with the support of a regional development network. This study describes a methodology for identifying and agreeing a set of metrics which can capture recovery outcomes for EIP service users in line with the new English standard and NICE guidelines. It describes the standards, the associated outcome objectives, the process of short-listing and how a regional network involving seven EIP services from the north of England enabled refinement and consensus and the creation of a practical tool. The tool has 30 data items and measures service user progress in twelve outcome fields. These fields include symptoms, behaviour, relationships, social functioning, employment/education, subjective ratings of recovery, relapse and physical health. By presenting the tool and some examples of complete data sets and findings the aim is to show how an outcomes framework can be developed and how ordinary EIP teams can generate valuable outcome data.

Topic Area: Service System Development and Reform

C82
The Challenges of Citizen Participation in the Mental Health Sector: The Case of the Empowerment Process for Young People with First Psychotic Episodes at Prépsy

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At the heart of WHO's vision of health promotion, the empowerment of young people with a first episode of psychosis and their full integration into society is increasingly the concern of some psychiatric services. This concept was developed to allow the patient to become involved in the organization of his care and the stated objective is to have a society in which he is a full citizen in care services configured to support its autonomy and social inclusion, rather than considering it solely as a patient. It is a process by which he takes control of his own life, learns to make his own choices, and participates in decisions about him, while arming himself more to contribute to the community. Some developments in this direction have been noted in some countries and are still rare in France. In the Prépsy service, in Paris, the recognition of the young patient as an actor of his health, or even as a peer helper, goes in this direction. The Prépsy empowerment program corresponds to the acquisition by the young patient of the knowledges, skills and resources needed to implement his projects. Empowerment, for its part, thus appears as a goal of socialization actions, quality care and good assistance in the most acute phases of the treatment from which he can benefit.

Topic Area: Service System Development and Reform

C83

This abstract has been withdrawn.

[Correction added on 17 September 2018, after print publication: the content of the poster abstract C83 has been withdrawn.]

C84
Development of a Theoretical Framework for Understanding Meaning in Life in the Context of Mental Health Recovery in Western Europe

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Purpose: Meaning in Life (MIL) has been theorised since humankind developed the capacity for self-reflection and philosophical, theological, and metaphysical contemplation. The recovery oriented approach requires service system development and reform to prioritise service user defined recovery—a component of which is MIL. A wide range of disciplines have put forward theories of MIL; but as yet, no theoretical framework of MIL that integrates these diverse discourses has been developed.

Materials and Methods: A comprehensive review of differing theoretical positions adopted on MIL was conducted and is presented. A theoretical framework was formed by deconstructing prior theories of MIL, comparing and contrasting them, and identifying their implicit assumptions in the context of mental health recovery.

Results: A typology of MIL theoretical discourses was developed based on (i) whether or not MIL exists and (ii) our capacity, efficacy, and agency to build MIL ourselves. The latter is subdivided into (i) discourses which deem MIL as a purely attainable from external sources; (ii) discourses which identify individual thought and action as the only well of meaning; and (iii) theoretical positions that integrate these two perspectives.

Conclusion: Engaging with these various discourses can provide insight into the numerous political, cultural, and social influences that citizens of Western Europe are exposed to as they embark on the quest to live meaningful lives and comprehend MIL. The theoretical framework offered can be utilised to guide recovery oriented mental health research and treatment.

Topic Area: Service System Development and Reform

C85
The Implementation of Early Intervention Programs in Quebec (Canada): Opportunities, Challenges and Implication of the National Center of Excellence in Mental Health (NCEMH)

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The 2015-2020 mental health action plan published by the Quebec Ministry of Health (QMH) mentioned the objective of offering early intervention services (EIS) in all regions of Quebec province. In May 2017, the QMH invested $ 10 million to improve EIS services for psychosis. This investment was in three areas: the development of a reference framework, new teams in the less well-served regions and the involvement of the NCEMH to support the deployment of these teams. Created in 2008 to support the deployment of the ACT team, the NCEMH has the mandate to implement the best evidences-based mental health practices. The NCEMH expends its mandate to EIS services by offering: workforce development, awareness, clinical and administrative support. Previously, Quebec had a great disparity and a lack of standards in its EIS services in the 19 established existing programs. With the investments, we are near of 30 EIS programs. This paper describes the current challenges, that includes to continue the harmonization of practices from one region to another, the adaptation of the model to remote areas, and the creation of a system of accreditation to encourage and promote the best mental health practices, and the opportunities, including the support provided by the QMH (investments and reference framework) and the mandate given to the NCEMH have the objective to ensure a high level of service offered throughout the province.

Topic Area: Service System Development and Reform

C86
Overview and Preliminary Findings of the MHBG Ten Percent Set Aside National Evaluation

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[1]*Westat,* [2]*University of Maryland School of Medicine*

Effective treatments and services for young people experiencing a first episode psychosis (FEP) have been combined together into a Coordinated Specialty Care (CSC) package, which is intended to address the systemic gaps and barriers that youth who experience FEP face in accessing appropriate services. The Mental Health Block Grant (MHBG) Ten Percent Set Aside has provided a vehicle for community-based providers to fund CSC service components for clients with FEP. Approximately 250 sites nationally are receiving MHBG 10% set aside funds. The MHBG Ten Percent Set Aside National Evaluation, which is supported by the Substance Abuse and Mental Health Services Administration (SAMHSA), the National Institute of Mental Health (NIMH), and the Office of the Assistant Secretary for Planning and Evaluation (ASPE) provides an opportunity to evaluate how CSC is implemented across the country in a variety of geographic and economic settings, and across states with different local policies. All 250 CSC sites receive a survey about their services, and 37 of these are participating in more in-depth evaluation components: 1) An outcome study using a standardized set of symptom, quality of life and functioning measures to assess clients entering the program over a 12 month period; 2) a fidelity assessment to assess adherence to the CSC model; and 3) a process assessment to understand key contextual and descriptive information about the sites. In this presentation, we will provide an overview of the design and preliminary findings of the National Evaluation to date.

Topic Area: Service System Development and Reform

C87
Launching a French Speaking Branch of IEPA: A Strategy to Promote and Facilitate the Implementation of Early Intervention for Psychosis in French Speaking Countries

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Context: The early intervention paradigm isn't well implanted in French speaking countries. Although, majority of the population has gained access to Early Intervention Services for psychosis (EIS) in Quebec (Canada), challenges arise in the creation of new programs and in the scaling up of older EIS. In France, despite growing interest, less than 10 centers offer EIS. Only 2 French speaking canton in Switzerland offer EIS. Strategies to support the implementation of evidence-based EIS have been developed locally. In France, the « Transition network » organizes scientific meetings, specialized educational programs and surveys with general practitioners, youth, parents and teachers to provide some clues for EIS implementation. A task force aims to provide a toolkit and a reference framework adapted to the French national MH organization. In Québec, the "Association Québécoise des Programmes pour Premiers Episodes Psychotiques" (AQPPEP) offers mentoring, regular specialized training and continuous education (webinars, courses, conferences) in complementarity with the « Centre national d'excellence en santé mentale ». The SWEPP (Swiss Early Psychosis Project) network has organized sessions of training and an annual conference on early intervention.
Conclusion: In addition to pursuing local efforts, a French speaking branch of IEPA, was recently launched to join forces at a wider scale, in a partnership based on a common language. The aims are to promote networking, exchange practices, share tools and expertise and organize a yearly international francophone early intervention for psychosis conference, where clinicians who do not speak English could improve their knowledge about practices developed elsewhere.

Topic Area: Service System Development and Reform

C88
Development and Pilot Testing of a Novel Fidelity Instrument for Early Intervention for Psychosis (EIP) Services

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'Fidelity' refers to the degree to which a program is implemented as intended. If fidelity is not considered, studies on complex interventions, such as EIP services, can show inaccurate null results when tested in large population-level evaluations. A short, survey-based fidelity instrument that can be completed by EIP team-members would be useful for such research and program management. We report on the development and pilot testing of such a novel fidelity instrument. The instrument was developed using a literature review and expert opinion generated from a Delphi procedure. It was pilot tested in an EIP service in Montreal, Canada, to identify needed modifications and unreliable items, and test the feasibility of conducting a validation study. Three instruments completed by two EIP team-members, and one using data from a sample of patient records, were compared to assess agreement. Interviews with the respondents were conducted to understand discrepancies. Twenty-two experts from Canada and England participated in two Delphi rounds. The majority of the EIP components identified from the literature review were rated as 'important' or 'very important'. Ranking identified the 25 most important items, which then were operationalized into the instrument. The pilot study showed some items had low agreement. The two respondents often had better mutual agreement than with the 'gold standard' using patient records. The first version of the fidelity instrument had many strengths and some weaknesses. Modifications were made to improve it. A validation study appears feasible. The newly modified fidelity instrument will be presented.

Topic Area: Service System Development and Reform

C89
Transfers of Care for Students with First Episode Psychosis & At Risk Mental State: Service Evaluation & Development of Good Practice Guidelines

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Student mental health is a prominent issue in the UK. Increasing numbers of young people are entering further education, and the incidence of mental health problems in students is rising. 18-25 year olds are at the most vulnerable age for experiencing First Episode Psychosis (FEP) or At-Risk Mental State (ARMS). Furthermore, the geographical separation of university and family home, often nations apart, challenges the delivery of consistent care and treatment.
Methods: We looked at the quality of transfers involving students with FEP/ARMS into York EIP service over 1 year, defining students as aged 18-25 years in further education at time of referral. We examined the nature of the transfers between EIP teams and from other sources. We considered the quality of information, whether approved policies were followed and evidence of any gaps in care.
Results: 17 students were transferred during the year, of which only 5 were directly coordinated between EIP teams. Students were either resident locally ("home") or previously resident elsewhere ("away"). Good practice included regular telephone contact between home and away teams, clear referral summaries, and evidence of family involvement, with one or both teams, but this was inconsistent. Referral information was variable and not always summarised optimally in the local electronic records.
Conclusions: There was no consistent expectation around what constitutes best practice for safe, effective transfer or shared care between EIP services. We therefore explored this further through wider consultation with service-users, students, carers, staff and regional EIP Networks, to develop consensus guidelines for good practice.

Topic Area: Service System Development and Reform

C90
Headspace Areas vs. Non-Headspace Areas: Changes in Awareness and Medicare-defined Service Uptake Over Time

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There is a well-known mismatch between the number of young people who experience mental illness, and the number who ultimately seek help. This paper examines the awareness and help-seeking behaviours of youth in the Australian context, with the roll out of headspace services nationwide. A Computer-Assisted Telephone Interview (CATI) was used to assess the level of awareness of headspace services amongst the general Australian community, and whether this awareness has changed between 2008 and 2015. A second analysis looking at mental health-specific items from the Medicare Benefits Scheme (MBS) assessed whether service uptake in areas with an established headspace centre ('headspace area') differs from areas without ('non-headspace area'). CATI results showed that awareness of headspace has significantly increased in the general community between 2008 and 2015, more so in areas within a 20 km radius of a headspace centre. The MBS analyses revealed mental health service uptake by young people (15-25 years) to be significantly higher in headspace areas, compared to non-headspace areas; this was for both the number of patients and the occasions of service. Mental health service users were significantly more likely to be female, and aged 18-21 years. These results were independent of socio-economic disadvantage and population differences between headspace areas and non-headspace areas. Evidence shows that headspace awareness campaigns have been successful in increasing the awareness among the general community regarding the availability of appropriate mental health services for young people. Thus, these youth-friendly and accessible centres might be effective in reducing help-seeking barriers amongst young people.

Topic Area: Service System Development and Reform

C91
Establishment of a Clozapine Service within an Early Intervention (EI) for Psychosis Service

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Background: The majority of young people with a FEP will achieve remission, however a proportion will experience persistent positive psychotic symptoms despite multiple trials of different antipsychotic medications. Clozapine is indicated in treatment resistant schizophrenia, however there are often long delays in commencing clozapine. In order to address this and to manage the required monitoring, a clozapine service was established within an EI service.

Methods: This study took place at the Early Psychosis Prevention and Intervention Centre (EPPIC), which provides comprehensive care to young people aged 15 to 24 with a FEP in Melbourne, Australia. All young people who commenced clozapine between 01.04.16 and 01.03.18 were included.

Results: In total, 38 young people were prescribed clozapine, however five had commenced prior to referral and therefore 33 were commenced in the clozapine clinic, 3 of whom had not yet reached 18 weeks. The mean dose of clozapine at 18 weeks was 395 mg (±84). Mean weight at baseline: males 85.1 kg (±20); females 77 kg (±14.7), mean waist circumference at baseline: males 93.1 cm (±15); females 88 cm (±11.3). After 18 weeks treatment, the mean weight gain was 5 kg (±8.6) and the mean increase in waist circumference was 4.9 cm (±8.8). A total of 23% gained clinically significant weight (>7% gain) however 13% lost weight.

Conclusion: This service demonstrates that clozapine can be commenced in an EI service within a community setting and the protocols, procedures and staffing for the clinic will be discussed. Dieticians and exercise physiologists have been integrated to address these metabolic side effects.

Topic Area: Service System Development and Reform

C92
Individual Characteristics and Service User Feedback of Individuals Attending a New Youth Mental Health Service: CASPAR

Rachel Yang[1], Catriona Clerkin[2], Philippa Levy[1,2], Candice Jensen[1,2], Karen Chown[2], Julia Lappin[1,2], Jackie Curtis[1,2]

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There is a recognised service gap between primary and specialist mental health services in addressing the needs of youth with moderate severity mental health needs. CASPAR (Comprehensive Assessment Service for Psychosis and At Risk) is a new service which facilitates assessment and short-term intervention in young people (12-25 years) in South Eastern Sydney Local Health District (SESLHD) who are at risk of developing a major mental illness. This study provides a comprehensive descriptive profile of all clients accepted by CASPAR in its first 12 months of operation. Results will include detail of the demographics, symptoms and key psychopathology of clients at both presentation and follow-up. This will determine the extent to which clinical characteristics of clients may have changed over CASPAR's first year of care, informing the need for modifications to its inclusion criteria and assessment protocols. As feedback is essential at this stage of a new service's development, a feedback questionnaire offered to a subset of CASPAR clients will determine the acceptability of the service, and clients' perceptions and experiences of care. It is anticipated that this qualitative appreciation of clients' experiences will allow the team to tailor its service, leading to the better identification, engagement and treatment of individuals with moderate-to-severe mental health concerns.

Topic Area: Service System Development and Reform

C93
Better L8 Than Never: Use of Mobile Phones within Youth Mental Health

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A previous descriptive project aiming to investigate whether mobile phones and text messaging could enhance engagement in an Early Psychosis Programme was conducted (Scully et al., 2014) with a view to improve engagement of young consumers. System issues and clinical governance policies meant that the project was unable to proceed due to risk concerns, despite previous research suggesting the use of text messaging enhances engagement with services, and is very rarely used inappropriately (Furber et al., 2011). This highlights the lag between best practice guidelines and usual care. Following a culture shift towards positive risk taking, this investigation has run in 2018. As noted in Scully et al., 2014, this project aimed to investigate whether the use of mobile phones to directly contact staff and consumers is able to enhance engagement, and is of perceived benefit to staff and consumers. Staff and consumers of an Early Psychosis and Youth Severe Early Intervention team were surveyed regarding their views on mobile use, and whether the ability to call/text directly would improve engagement and service provision. A six-month pilot study was conducted, where consumers were provided with a direct mobile number for clinicians. Consumers were informed of the appropriate use of and limits of mobiles, and risk management policies were implemented. Staff and consumer surveys were repeated at 6 months. It is hypothesised that having direct access to clinicians via mobile numbers will increase perceived availability and approachability of clinicians, and this would therefore enhance engagement with the service. Preliminary results will be presented.

Topic Area: Service System Development and Reform

C94
SHIOK! – Improving the Physical Health of People with First Episode Psychosis in Singapore

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[1]*Institute of Mental Health*

In an effort to promote and provide better physical healthcare for young people with psychosis, EPIP has initiated SHIOK! ("Staying Healthy = Interest + Optimism + Keeping It Up!"). In the first phase of our project, we focused on creating awareness of the importance and magnitude of physical health problems amongst clients and treating team members. We conducted an internal audit to better understand the prevalence of chronic medical conditions amongst EPIP clients. We also examined the adequacy of cardiometabolic monitoring and the appropriateness of interventions performed for clients found to have medical issues. To equip our team members with the necessary knowledge and skills, we organized a series of talks by physicians, dieticians, smoking cessation pharmacists, Health Promotion Board Health Ambassadors, and Motivational Interviewing trainers. We also developed the "Positive Physical Health Resource", an intervention framework to guide mental health professionals on the management of physical health issues. In the second phase of our project, we recalibrated our focus to improving clinical processes and developing interventions for our clients and their caregivers. We liaised with the ambulatory services to ensure that clients have their anthropometric measurements and blood pressures taken at every outpatient visit. We also put in place internal processes to ensure that clients have the necessary blood investigations done at recommended intervals. Lastly, we collaborated with various Polytechnics to design and conduct nutrition and exercise related group activities and events for our clients and caregivers. The experiences of the SHIOK! journey and its impact will be shared.

Topic Area: Service System Development and Reform

C95
Building New Collaborative Models to Improve Knowledge and Healthcare in Early Psychosis: Setting of a Local Community of Practice in a French Urban Area (Lyon)

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Background: An inadequate care plan after a first episode of psychosis (FEP) can lead to severe impairment in prognosis. The multifactorial etiology of FEP implies an interprofessional, patient- and recovery-oriented care. Community of practice (COP), formed by actors involved in a collaborative process of knowledge building and spreading, could represent a promising and innovative model to engage all stakeholders in sharing their expertise and evidence based practices. We aim to develop a "FEP-COP" to improve knowledge and quality of practices in FEP.

Methods: In a proof-of-concept participatory action research, we will set-up a local COP involving stakeholders of the psychiatric healthcare and research system (professionals, researchers, students and patients/caregivers), in a French urban area (Lyon, 1,3 million inhabitants). We will assess the feasibility of this model to generate open knowledge (e.g.: pedagogic and educational contents), and collaborative research projects. The COP will be co-facilitated by senior/junior researchers and clinicians tandems and will evolve with regular or virtual meetings, community social media, and thematic subgroups. Feasibility will be measured on processes, resources and management issues, and scientific achievements.

Expected Results: We expect an impact of COP in 3 axis: (1) improvement of knowledge and perceptions on psychosis of the COP actors; (2) impact on our FEP research agenda; (3) better perceived involvement of patients and caregivers in the process of research and knowledge building within the community. In the next phase, we plan to extend our COP with national and international collaborators.

Topic Area: Service System Development and Reform

C96
The NorthBEAT Goes On: Development of a Strategic Systems Collaborative to Move Research into Action

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Context: Northern Ontario, Canada, is a region with a vast geography, scarce population, many rural and remote communities, and for many, limited access to specialized services. The NorthBEAT (Barriers to Early Assessment and Treatment) Research Project identified barriers that Northern Ontario young people face in receiving appropriate early psychosis intervention (EPI). Barriers included an isolating and disconnected system of care and a lack of knowledge about psychosis and appropriate intervention across that system of care. These findings are being put into action through a 4-year strategic initiative to address the barriers identified in the NorthBEAT research project.
Objective: This presentation introduces the NorthBEAT Collaborative, a 4-year research-to-action strategic collaborative initiative funded by the Ontario Trillium Foundation – Youth Opportunities Fund.
Process and **Results:** To date, the Collaborative has over 20 signed members across 16 organizations who are committed to help young people with psychosis in Northwestern Ontario get the help they need when they need it. The cross-sector membership includes families, youth, and providers across the education, community and social services, mental health, and health sectors. This presentation will describe the Collaborative's development and engagement process, and its activities and intended outcomes. For example, to date, we have held a knowledge exchange workshop, and established a working group to expand existing training (Psychosis 101) so that service providers across the system of care can access E-Learning EPI training materials that are relevant to their context. Emphasis will be about small successes to-date and lessons learned through our experiences as a Collaborative.

Topic Area: Service System Development and Reform

C97
Development of a Community-based Public Health Approach to Preventing Psychosis among Youth at Clinical High-risk

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Although the value of interventions designed to prevent psychotic disorders is increasingly appreciated by academic psychiatry, substantive questions remain regarding how to best implement early detection and intervention in the world beyond the university medical center. HOPE TEAM (Help Overcoming Prodromal Experiences Through Early Assessment and Management) was developed to deliver early detection of, and intervention for subthreshold psychosis to youth (ages 10-26 years) in Allegheny County, Pennsylvania, USA. Using data on community-level deprivation, we identified neighborhoods with high levels of psychosis risk factors, including racial or ethnic minority status, history of trauma, exposure to violent crime, urban setting, and poverty. We then partnered with an existing social service agency, Family Care Connection, which has offices in, and a record of decades of service to these neighborhoods, to accelerate HOPE TEAM's integration and acceptance into the local community. The first set of 50 referrals demonstrate that we succeeded in recruiting individuals for assessment and intervention who would not have presented for services at the university medical center. Compared to a medical center-ascertained sample, young people who were referred to HOPE TEAM tend to live close to the clinic (<1.2 mi), and they report higher levels of early life and current adversity (including trauma), as well as lower socio-economic status (all p's<0.05). They are also more likely to identify as racial minorities (p<0.05). Taking this data-driven, community-based approach allows us to work with a population that is highly enriched for psychosis risk, who would not otherwise be visible to clinical investigators.

Topic Area: Service System Development and Reform

C98
Integrating Early Intervention into the U.S. Public Mental Health System: Four Successful Models

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The authors present four training and technical assistance models which have led to sustainable statewide and/or regional implementation and sustainability strategies of Coordinated Specialty Care into U.S. public mental health systems in Oregon, Ohio, California, and New York. The authors discuss use of implementation science to address challenges to replicability and scalability such as varied demographics, financing configurations, and stages of program development. The authors will discuss how they have bridged research, and practice in a participatory quality improvement framework. The connection between training and technical assistance strategies and regulatory, financing and programmatic infrastructure will be discussed. The authors discuss the role of the national Psychosis Early Psychosis and Prevention Network (PEPPNET) Training and Technical Assistance Work Group in informing, increasing collective impact of training and technical assistance efforts, and addressing common challenges.

Topic Area: Service System Development and Reform

C99
Improving Physical Health Assessments and Monitoring in a First Episode Psychosis Service

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Introduction: Improving parity of esteem between physical health and mental health is a national agenda in the UK. A previous study (Das, et al 2014) within the PIER Team (a first episode psychosis service, serving 1 million population) found poor recording of physical health assessments and metabolic monitoring in patients on antipsychotic medication; compliance ranging from 25% to less than 50% in various domains. Recommendations were made for a sustainable solution, including development of a Physical Health Register, led by the Pharmacy department and a nurse-led physical health clinic within PIER team.
Aim: To measure quality improvement in physical health assessment and monitoring in first episode through service system development.
Methods: Retrospective analysis of data held by the Physical Health Clinic (January to May 2017) and Physical Health Register (January to December 2017) was completed.
Results: 115 patients went through the Physical Health Clinic, receiving physical health assessment and metabolic monitoring; this included 12 out of 85 (14.2%) newly accepted psychosis patients, who received physical health assessments and monitoring, as per recommendations. 360 patients were monitored by the Physical Health Register, between January 2017 and December 2017 (PIER caseload was 396 in May 2017), 97% of whom had screening at least once and interventions.
Conclusion: Physical Health Register has resulted in an improvement in physical health assessments and monitoring of patients with first episode psychosis. Physical Health Clinic needs to improve its uptake for newly diagnosed psychosis patients. Firming up business processes is likely to aid further improvement.

Topic Area: Service System Development and Reform

C100
Coordinated Specialty Care Workforce Development in the U.S.

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As the number of Coordinated Specialty Care (CSC) programs for first episode psychosis continues to expand in the United States, workforce challenges related to operating these programs have emerged. The existing US behavioral health workforce does not typically have relevant training and experience. Determining how to recruit, select, and retain individuals most qualified to provide CSC; establishing competencies; and developing best practices for orientation, training, continued professional development, and supervision of CSC staff are important tasks in scaling up the workforce. The aim of this project was to establish workforce best practices in CSC programs and recommendations for workforce development. We selected individuals with substantial knowledge about developing and managing CSC services from organizations reflecting the broad range of healthcare settings within the U.S. Respondents were interviewed by an experienced clinical director of a CSC program using a semi-structured protocol. They were asked to identify workforce challenges in CSC, their typical practices, and recommendations regarding: worker competencies, recruitment, selection, orientation, continuing professional development, supervision, retention, inclusion of trainees, and relevant workforce related resources. Prominent themes were identified and summarized, a draft was circulated to respondents for review and comments, which informed the final report. Respondents identified aspects of CSC that are distinct from usual care, 25 core competencies, ways in which existing educational programs do not prepare workers for providing CSC, and techniques for orienting to CSC, establishing competency, ongoing supervision, and professional development. Findings, recommendations, and implications for CSC workforce development in the US will be presented.

Topic Area: Service System Development and Reform

C101
The Implementation of Psychological Interventions in First Episode of Psychosis Services in Chile

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Psychological interventions are a crucial element of a more integrative and comprehensive approach to the treatment for young people experiencing a first episode of psychosis (FEP). These interventions contribute to a better long term functioning of these patients. However, their implementation in the Chilean public health system faces challenges: the scarcity of cognitive behavioral (CBT) trained professionals and the preponderance of a biomedical approach, especially in tertiary care institutions. Following international guidelines, the current Chilean Clinical Guideline for FEP (2017) recommends the use of CBT but does not establish specific guides for its implementation. As a means to bridging the gap in psychological treatment, we proposed and developed an alternative psychological intervention model. Our model shifts the focus to a more humanistic perspective, based on emphasizing the role of the therapist and the attitude towards psychosis from the initial stages. Additionally, a psychodynamic understanding of psychosis and the use of different techniques and approaches, such as psychoeducation, family meetings and CBT, tailored to the specific needs of each patient. The resultant model pays special attention to the emotional and functional impact of psychotic symptoms. Validation of the emotional experience of the patient provides the basis for the therapeutic relationship. We propose that this approach contributes to the recovery of the patient and could be used by any professional working with young people with a FEP, because it is more flexible, it is focused on the person beyond her symptoms, and lastly, it is in tune to the local reality.

Topic Area: Service System Development and Reform

C102
Ups and Downs of Physical Health Interventions for Young People Experiencing First Episode Psychosis: Implementation and Challenges for the Chilean Public Health System

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Cardiometabolic health has become a concern for first episode of psychosis services. In middle-income countries like Chile, the implementation of physical activity interventions is a daily challenge. Nowadays we have managed to go beyond the improvement of psychotic symptoms by following an already internationally validated paradigm shift which consists in emphasizing the idea that poor physical health in psychosis is preventable. We actively participated in the translation and local promotion of the HeAL declaration (2015) and in the Chilean adaptation of the Positive Cardiometabolic Health algorithm (2016-2017) which will be incorporated in the national guideline for use of clozapine. Our language has changed too. The incorporation of psychoeducation to patients and their families regarding the importance of physical health has been proof of that; assessments and cardiometabolic measurements have been of great importance to build a stronger awareness of the importance of physical health not just in our patients and their families but also in our professional teams. Research has also been incorporated in our effort. We conducted a study that examined the impact of exercise on the physical and mental health of young people diagnosed with non-affective psychosis (2016). Main future challenges that emerged during research were related with the effective implementation of these kind of interventions as part of mental health services provided to patients in a public health system setting. Preventative physical interventions are central and essential to our goals and its permanent implementation should be our commitment for the next years.

Topic Area: Service System Development and Reform

C103
Coordinated Supported Care for First-Episode Psychosis within a Youth-Friendly Environment: The Institute for Mental Health Research Early Psychosis Intervention Center (IMHR-EPICENTER)

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[1]The Ohio State University, [2]Institute for Mental Health Research-Early Psychosis Intervention Center (IMHR-EPICENTER)

Coordinated Specialty Care (CSC) has been shown to improve outcomes among individuals with first-episode psychosis—yet, additional opportunities for improving care for individuals with first-episode psychosis remain. To address this goal, a collaboration of colleagues from the Institute for Mental Health Research (IMHR; i.e., the sole non-profit organization dedicated to supporting mental health research in Arizona) and the Early Psychosis Intervention Center (EPICENTER) launched IMHR-EPICENTER in 2016. This new clinical program delivers CSC services within a free-standing, youth-friendly clinic designed to minimize stigma and increase motivation to access care among youth and young adults with first-episode psychosis. To date, the community-academic partnership contributing to IMHR-EPICENTER has achieved several notable financial and clinical successes. With regard to the former, IMHR-EPICENTER has launched a highly fruitful fundraising campaign and has successfully negotiated with funders of public mental health care in Arizona for increased reimbursement rates for clinical services and quarterly performance-based bonuses. Moreover, during the first year of operation, IMHR-EPICENTER has shown success in engaging youth with first-episode psychosis earlier in the course of their illness (median duration of illness = 9.50 months) as compared to the original EPICENTER program located at a traditional outpatient mental health center not geared specifically toward youth and young adults (median = 18.46 months, exact mid-p = 0.04).

Topic Area: Service System Development and Reform

C104
Mental Health Service Pathways for Individuals Meeting ARMS Criteria in a UK Early Intervention Service

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Background: From April 2016, NHS England required over 50% of people experiencing first episode psychosis (FEP) or at risk mental state (ARMS) to be assessed and engaged with services, including access to a care coordinator, within 2 weeks of referral. There was an expectation that service provision for patients with ARMS would improve greatly (Stain et al, 2017). However, due to significant pressures on services to assess and manage these patients with existing resources, patients often have to be signposted to alternative services.

Aim: To examine subsequent assessment and treatment pathways for ARMS patients referred to an Early Intervention (EI) service in the UK including acceptance to caseloads and signposting to alternative services.

Methods: Consecutive referrals to the North Warwickshire EI team in 2017 were identified. Data on demographics, referral information, identified co-morbidities, use of CAARMS assessment, and outcome of assessment were collected from the case files using a predefined proforma. Where the patient was not taken onto caseload, information on services they were referred to, were also collected.

Results: There were 111 patients referred to the service in 2017. We will present data on the patients' demographics, the distribution of common co-morbidities e.g. depression, their subsequent destination of care, and the reason for signposting, if this occurred.

Conclusion: Based on the data above, we will consider how or why patients are signposted to other services. We will attempt to draw conclusions on the implications of the new targets on EI and services to which the patient's are signposted.

Topic Area: Service System Development and Reform

C105
Training and Technical Assistance for Coordinated Specialty Care in a Public Mental Health System: Developing a Sustainable Approach

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As Coordinated Specialty Care programs proliferate across the U.S., the integration of these programs into existing adult and child/adolescent service systems becomes increasingly important. Given the multiple elements incorporated in CSC, the number of large-scale training initiatives undertaken in both adult and child/adolescent systems, and the realities of staff productivity expectations and turnover rates in community mental health clinics, states must choose their CSC training and technical assistance activities wisely. CSC draws on concepts familiar to most of us who have spent any time in the community mental health system: a recovery-oriented, strengths-based, person-centered stance; cultural and linguistic competence; trauma-informed care; 'meeting people where they are.' Its key evidence-based practices of CBT, family education, motivational interviewing, and the Individualized Placement and Support model for vocational assistance will also be familiar to many community providers. Identifying and capitalizing on local expertise in these areas, making adaptations as necessary, and determining and addressing the unique training and technical assistance needs of providers implementing CSC will help ensure that CSC programs are embraced by both adult and child/adolescent systems and are not duplicating the training efforts of either. A systematic, streamlined training approach that is responsive to the needs of staff, their host agencies, the population served, and the larger community facilitates the replication of high-quality CSC programs with minimal burden and maximum impact.

Topic Area: Service System Development and Reform

C106
Implementation of a Coordinated Specialty Care Program for Veterans with First Episode Psychosis

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Research studies have demonstrated that reduction in duration of untreated psychosis (DUP) and use of comprehensive interventions can improve long-term outcomes associated with symptom impact and quality of life. Early detection and intervention for first episode psychosis (FEP) may be improved by identifying and promoting effective practices for implementation of FEP programs, especially within complex health care systems such as the Veterans Health Administration (VHA). The Specialized Team for Early Engagement and Recovery (STEER) is a Coordinated Specialty Care program that was developed at a VHA site in Bedford, Massachusetts in 2015. Examination of STEER, which is at the forefront of implementation of FEP programs within the VHA, can offer guidance for navigating the non-linear phases of consulting key stakeholders, establishing program criteria, determining services delivered, coordinating a team, promoting the program, collaborating with providers in the VHA or community-based agencies, and evaluating impact. Measures intended for continuous program evaluation and tracking progress of Veterans include program census, sources of referrals, services utilized, duration and frequency of engagement in services, duration and frequency of hospitalizations, symptom change, quality of life, and engagement in meaningful life activities. Preliminary data collected in the first three years of implementation of the STEER program will be presented. Discussion will highlight unique implications for Veteran service users and challenges for program development within the VHA. Future directions that may advance FEP intervention within the VHA will be explored (e.g., collaboration with peer support specialists and other sites within each Veterans Integrated Service Network, or VISN).

Topic Area: Service System Development and Reform

C107
Shared Decision Making and Court Ordered Treatment: Lessens Learned After a Year

Alicia Cowdrey[1], Shasa Jackson[1]

[1]*MIHS First Episode Center*

In 2017, Maricopa Integrated Health System (MIHS) in Arizona, developed the First Episode Center, a coordinated specialty care team for young people with their first episode of a primary psychotic disorder. MIHS operates a large safety net hospital system and primary care centers, as well as serves as the involuntary hospital system for people who are evaluated for forced mental health treatment. Most of our referrals have come from our involuntary inpatient units, which then requires us to monitor the outpatient treatment for one year. The evidenced based principles of this early intervention program are person centered care, recovery, and shared decision making, which are in direct opposition of mandatory court ordered treatment. As well, the MIHS First Episode Center was developed to match the traditional Arizona case management model with guidance from the OnTrack New York model, which is more therapy based. Over the year that our program has been running, we have learned to use different techniques to blend the oppositions and help our young people move forward with their brain health, their goals, their treatment, and instill hope for their future.

Topic Area: Service System Development and Reform

C108
Lost in Translation: Supporting Evidence-informed Commissioning of Youth Mental Health Services in Primary Care

Cassie Redlich[1], Craig Hodges[1], Craig Hamilton[1], Heather Stavely[1], Sian Lloyd[1], Ruby Callanan[1]

[1]*Orygen, The National Centre of Excellence in Youth Mental Health*

In Australia, Primary Health Networks (PHNs) are currently responsible for the regional planning and commissioning of a range of primary mental health care services for young people. In recent years, this has expanded to include services for young people experiencing or at risk of experiencing severe mental illnesses including early psychosis, and with complex presentations requiring a greater intensity of service than has traditionally been delivered at the primary care level. Orygen, The National Centre of Excellence in Youth Mental Health has been funded by the Department of Health to provide PHNs with guidance, support and expert advice on planning and commissioning evidence-informed services for this group of young people. But how can the translation of evidence into practice best be supported in a context where evidence for service models is mixed, and where the needs and preferences of stakeholders and young people must also be incorporated in service design? This poster will provide an overview of the evidence for models of service for young people with complex mental health needs, the framework and strategies that Orygen has adopted to support evidence-informed commissioning of services, and the extent to which evidence has informed the service models that are currently operating across the country. The poster will also cover some of the challenges and enablers experienced by commissioners in accessing and using evidence when designing youth mental health service models.

Topic Area: Service System Development and Reform

C109
Access to Mental Health Services for Homeless Youth: ACCESS-Open Minds–RIPAJ, Montreal, Canada

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Homelessness is associated with psychological distress and risk of mental disorders in youth. Homelessness contributes to, triggers, and is a consequence of mental illness and addiction. These problems have major impacts on functioning-- impairing relationships, the ability to live independently, and the capacity to work/complete schooling. They increase suicide risk, dangerousness, antisocial behaviour, and legal problems. Paradoxically, few adapted social services are available and these youth are less likely to access traditional mental health services. Inspired by evidence suggesting that outreach teams offering intensive integrated interventions in the community can increase accessibility to mental health services as well as their effectiveness, we built a homeless youth services network. Since its inception in 2001 in Montreal (Canada), the RIPAJ (Réseau d'intervention de proximité auprès des jeunes de la rue/Homeless Youth Network) is in constant evolution and brings together community organizations, primary care clinics and specialized psychiatric services. This integrated network facilitates access to doctors, nurses, psychologists, social workers and psychiatrists, helping youth overcome homelessness and attain well-being. Teams meet regularly and are present in youth-friendly environments. Working in continuity and collaboration, they offer the most appropriate and adapted services to youth. ACCESS Open Minds pan Canadian research sets measurable goals to reduce unmet needs, ensure rapid access to mental health evaluations and high-quality treatments. Being part of ACCESS OM has brought a new wave of transformation in RIPAJ, increasing the engagement of youth and families to work collaboratively with clinicians, administrators and decision makers to improve access to services.

Topic Area: Service System Development and Reform

C110
Cases, Non-cases, or Non-non-cases: An Examination of Spillover Effects of a Targeted Early Identification Intervention for First Episode Psychosis

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Purpose: Targeted case identification (TCI) efforts in first episode psychosis (FEP) aim to simplify the referral pathways of people experiencing an FEP, and to provide rapid access to treatment during the illness' initial phases. Nonetheless, TCIs may have unintended consequences. Here we explore the spillover effects of a TCI for FEP on a) referral pathways for "non-cases" and b) those at clinical high-risk for psychosis (CHR).

Methods: Using a historical control design, referral information from the pre-TCI (from January 2003 to December 2006) and post-TCI (from June 2006 to May 2009) phases was collected via administrative data and clinician notes from a catchment-based early psychosis service in Montreal, Canada.

Results: The TCI led to a 17% increase in eligible FEP referrals ("cases"), with a disproportionately large increase (55%) in referrals who were ineligible for FEP services ("non-cases"). Of 334 non-cases, 125 (37%) did not meet FEP diagnostic criteria, and 39 (11%) were eventually referred to an adjacent CHR service. Of these 39, 10 (26%) were lost to follow-up after initial screening for FEP, while 29 (74%) were successfully screened. Twenty-four (83%) of those screened had a CHR state ("non-non-cases"), and were followed for an average of 13 months.

Conclusions: TCIs may have spillover effects, whether for narrowly-defined non-cases or expanded definitions of caseness that include CHR. These findings bring to question whether outreach strategies for psychosis should be specific to disorders and stages, or whether their targets should span across the psychosis spectrum.

Topic Area: Service System Development and Reform

C111
On the Cusp: Early Psychosis, Employment & Disability

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Income through employment is a social determinant of health, particularly in nations with market economies, yet individuals with severe mental illness (SMI) have historically been deprived of participation in employment, resulting in a high-level of poverty for this population. Poverty among adults with SMI in the U.S. is a function of a combination of historical, political, and economic factors, and adults living with severe mental illness have an unemployment rate of around 80%. Furthermore, low rates of social disability insurance payments, the primary source of income for a majority of individuals with SMI, fails to alleviate their poverty, as do menial employment options in the secondary labor market. Emerging research on early intervention for psychosis and employment indicates that these programs may be uniquely positioned to intervene with and possibly reverse the trend of long-term poverty for many individuals who develop psychosis. This oral presentation will review the literature on poverty and disability for mental illness and present the initial results of a case study exploring how first-episode young adults within the Oregon EASA program navigate returning to employment and school within the context of early intervention. Implications include changing the narrative within mental health policy and practice to formally target the poverty issue that currently encumbers individuals involved in public mental health systems particularly through more emphasis on promoting education pathways.

Topic Area: Service System Development and Reform

C112
Reducing Delays to Treatment: Models for Rapid Access to Mental Health Services

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Early intervention in mental health is grounded on the notion that intervention during the earliest stages of illness leads to optimal treatment outcomes, and reduces the potential burden and negative ramifications caused by long durations of untreated illness. Still, individuals seeking help for mental health problems often encounter complicated referral processes, long wait lists, and a disengaging first contact with services. We conducted a rapid review on service delivery models promoting easy, engaging access to mental health services. Overall, some examples include technology-based interventions (e.g., telepsychiatry); gatekeeper-models; and school-based mental health screening. We will also discuss examples of rapid access to care from the field of early intervention for psychosis, which has long had an emphasis on the reduction of delays to treatment. One such example is the entry protocol at The Prevention and Early Intervention for Psychosis Program (PEPP)-Montreal, which aims to reduce delays to care by placing a single, directly reachable clinician at the point of entry. Anyone can refer a youth without formalities to the intake clinician who responds promptly and sensitively to all help-seeking attempts. To promote accessibility, PEPP guarantees an initial assessment within 72 hours; maintains relationships with referral sources; and conducts outreach activities. This rapid entry protocol can be deployed in youth mental health services equally interested in reducing delays to treatment. Finally, a greater emphasis is required on strategies to promote the timely, engaging delivery of mental health services, in order to better serve the help-seeking population.

Topic Area: Service System Development and Reform

C113
Description of a Multi-component Education Programme for First Episode Psychosis Mental Health Services in the United States of America

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Orygen, in partnership with a county health care network in the USA is supporting a First Episode Psychosis Program via a collaborative workforce development initiative. The outcome is to upskill the clinical workforce in the development of youth focused early psychosis interventions. The workforce initiative has a strong focus on a self-directed, andragogical learning opportunity including intensive input with over 100 hours of a variety of reading and interactive online materials, and 5 days of face to face early psychosis workshops. The workforce has the unique opportunity to share their clinical experiences, undertake homework activities and discussions on a specifically designed online forum. This work is supported by regular service development meetings for the leadership group. Workforce data was collected via a self-assessment questionnaire which was sent out pre commencement and will also include post completion of the program. The participants were not able to access the LMS until they had initially completed the questionnaire as a way to promote their engagement and assist with valuable data collection that can be utilised for improving workforce and program performance. We anticipate that this qualitative evaluation will be positive showing an improved workforce in their early psychosis knowledge, clinical skills and confidence. The discussion will highlight that self- directed and reflective multi-component education programs can be an innovative way of not only engaging with busy clinicians, but gives an added benefit that building international links improves outcomes for young people. Recommendations for future education and training approaches based will also discussed.

Topic Area: Service System Development and Reform

C114
Development and Implementation of Early Intervention Services in Recent Years: A Scoping Review

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Over the last 20 years, the development and implementation of early intervention services (EIS) around the world has followed the natural rule of maturation of innovative ideas of leaders in the field. Several regions in the world will also see the birth of new EIS programs in the coming years, as it is currently the case in the United States and Quebec thanks to new public funding. The absence of structuring research projects, medical leadership, prior exposure of clinicians and the environment to the new EIS paradigm may complicate the process. The purpose of this scoping review is to determine the barriers and enablers to the development and implementation of EIS from the most recent literature. Medline/Pubmed and PsycINFO were searched from 1/1/2012 until December 31/12/2017 using the keywords "development" or "implementation" in addition to keywords related to first episode psychosis programs. The 24 included articles originated from the United States, Europe and Asian countries. Obstacles to development and implementation of EIS could be classified into 3 broad and interrelated categories: 1) Resources (financial, physical infrastructure, staff/caseload); 2) Knowledge / Training of clinicians and the milieu (social stigma, change of medical paradigm), 3) Organization (access to care, public / private health care systems, wait times, etc.). Some obstacles are more specific of certain regions, such as the higher level of mental illness stigma across Asian countries limiting access to care and requiring strategies such as awareness campaigns, redefinition of the word psychosis, etc. Other solutions are proposed.

Topic Area: Service System Development and Reform

C115
Precisely Measuring and Targeting What Matters to Young Adults with Mental Illness

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Aims: The routine use of patient-reported outcomes (PROs) in youth mental health provides an opportunity to help drive how health care is organized and delivered. Unfortunately, there is limited consensus on the needs and priorities of youth and ways to measure them. This study has three questions: (1) What are the health needs and experience of care of youth with mental illness, as identified by youth, (2) What can existing outcome assessments tell stakeholders about the health needs of youth?; and (3) Are these assessments psychometrically fir for purpose for youth?

Methods: We used study used a mixed methods measurement approach. For question 1, three focus groups, led by youth collaborators and a Peer Research Partner were conducted. For questions 2 and 3, we conducted a cross-sectional survey of youth with mental illness and used Classical and Rasch measurement psychometric methods to test the reliability and validity of twelve measures for this population.

Results: A total of 22 youth participated in the focus groups (mean age 21.9, SD 2.3) and 350 youth completed the questionnaires (mean age 21.5, SD 2.1). A model of health and an in-depth diagnostic report for ten commonly used scales resulted.

Conclusions: The study supports a preliminary conceptual and measurement model for understanding the mental health needs of youth with mental illness. The results will contribute much needed evidence towards how to used youth-centred robust measurement to improve the standard of care for young adults who experience mental illness in Canada and beyond.

Topic Area: Service System Development and Reform

C116
Mapping the Early Intervention Services in Psychosis in Spain: A Long Road Still to Travel

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The development and implementation of early intervention programs/services in mental health, and specifically in psychosis, is a social and healthcare need in Spain. In the last two decades have been local efforts to establish intervention services spread the country, however there is a long road still to be followed. Depicting the current situation of early services/programs across Spain is the first step to bridge to gap. The knowledge of the real situation in the 17 different regions in Spain (Autonomous Communities) will allow establishing and designing - in a sustained manner over the time - the necessary measures for promotion, prevention and improvement of health and social care in early intervention in psychosis. The results and conclusions of the study, both from a quantitative and qualitative point of view, include: covered population, the financing, the main barriers, the age of inclusion and duration of the interventions, available resources, referral routes, research and the analysis of the different indicators. The study has taken into account the perception of these programs by scientific societies related to mental health, the vision of patient and family associations as well as the main agents involved in its implementation. The work includes recommendations for the implementation of Early Intervention Programs in Psychosis in Spain.

Topic Area: Service System Development and Reform

C117
Foundry – Transforming Access Through Integrated Youth Services in British Columbia, Canada

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Foundry increases access to early intervention through a province-wide network of branded wellness centres for young people ages 12–24. Centres provide integrated, one-stop-shops for young people to access a broad range of mental health and substance use services, primary care, social services, and youth and family peer support. From January 2017-March 2018, a total of 4783 youth were served at six Foundry Centres. This equated to 35,791 visits and youth accessing services 3-9 times. 44% reported that if they had not accessed Foundry, they would have gone "nowhere". The Youth Experience Survey summarized that: youth felt welcomed and comfortable (99%), they would refer their friends or family members (91%), and multiple services in one place made it easier to get the help they needed (97%). Our poster will also report on the Clinical Microsystem Assessment Survey (CMAT), Partnership Self-Assessment Tool, and a 2-year developmental evaluation. Centres staff endorsed optimal ratings on three of ten dimensions of the CMAT, reflecting the early development of integrated service delivery. Partners indicated that more work is needed to achieve a successful collaborative process between partners. The developmental evaluation of the Foundry model demonstrated that the anticipated Foundry "brand experience" was evident in the core components of care and that realizing this vision requires a unique approach to leadership and partnership that is challenging in existing siloed service systems. Taken together, findings suggest that relationship building is key to system transformation in youth mental health, which is evident in Foundry's collaborative, team-based approach to care.

Topic Area: Service System Development and Reform

C118
Mindfulness-based Online Interventions for Mental Health Treatment: A Systematic Review and Meta-analysis

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Background: Mindfulness-based online interventions (MOI) are increasingly being delivered through the Internet to treat mental health conditions.

Objectives: To determine the effectiveness of MOI in clinical mental health populations. Secondary aims are to explore the impact of study variables on the effectiveness of MOI.

Methods: Systematic review and meta-analysis of studies investigating the effects of MOI in clinical populations.

Results: The search strategy yielded 9 eligible studies. MOI were effective in reducing depression in the total clinical sample (n = 545 g = -0.748, p = 0.004) and in the anxiety disorder subgroup (n = 237, g = -0.730, p = 0.000) but not in the depression disorder subgroup (n = 308, p = 0.111). Similarly, MOI significantly reduced anxiety in the total clinical sample (n = 645, g = -0.398, p = 0.003) and the anxiety disorder subgroup (n = 337, g = -0.551, p = 0.003) but not in the depression disorder group (n = 308, p = 0.275). Finally, MOI improved quality of life in the anxiety disorder subgroup (n = 234, g = 0.711, p = 0.004) and mindfulness skills in the total clinical sample (n = 281, g = 0.615, p = 0.005).

Conclusions: Results support the effectiveness of MOI for reducing depression and anxiety, and enhancing quality of life and mindfulness skills, particularly in those with clinical anxiety. Results should be interpreted with caution given the high heterogeneity of MOI and the low number of studies included.

Topic Area: Translational Research

C119
Closing the Mortality Gap: Meeting the Physical Health Needs of People with Serious Mental Illness (SMI) in Primary Care

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People with serious mental illness (SMI) – predominantly schizophrenia or bipolar disorder – die on average 15-20 years earlier than the general population, largely from the same potentially preventable physical conditions such as heart and lung disease. This mortality gap, which may be widening, is an unacceptable injustice and deserves attention. As stated, by the late Professor Helen Lester, primary care is the cornerstone of healthcare for people with SMI, where most of their physical health needs are met. Consequently this study focuses on exploring what is happening in primary care. Semi-structured interviews have been conducted to explore patient and provider perspectives regarding barriers and enablers to improving care quality. Interviews were audio recorded, transcribed verbatim, and analysed using thematic analysis methodology. Early findings: providers openly acknowledged not enough is being done for SMI patients. Main challenges identified included SMI patient engagement, missed appointments, difficulties following-up when problems are identified, insufficient time for adequate consultation, lack of continuity of care due to growing pressure on routine appointment systems, lack of training about mental health for primary care doctors/nurses, and widening disconnect between primary and secondary care in relation to sharing information and communication. Nearly all respondents viewed the Quality and Outcomes Framework (QOF) positively though, reporting it had raised awareness and encouraged GPs to conduct physical health checks with SMI patients, an example of introducing good practice, which sustained, even after removal of QOF indicators in 2014.

Topic Area: Translational Research

C120
LAMP: Learn, Assess, Manage, Prevent–A Smartphone App Designed for Schizophrenia Care

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Smartphones offer the potential of accessible, affordable, and accurate screening for diseases like depression and schizophrenia. Designed with those with lived experience, we sought to create an app for multimodal data collection. In conjunction with the Beiwe app from Dr. JP Onnela at the Harvard School of Public Health–we collect patient self reported outcomes via phone surveys, cognitive status via interactive games, physiological biomarkers including galvanic skin conductance and heart rate variability, social markers including aynonymized call and text message phone logs, and geo-location data and physical activity derived from the phone. This real time smartphone based platform is called LAMP (Learn, Assess, Manage, Prevent) and offers the ability to remotely monitor patients and gain novel clinical insights. We are currently assessing LAMP in a pilot clinical study and hope to present those results in the IEPA poster session. We will also offer a live demonstration of the LAMP app at the poster session.

Topic Area: Translational Research

C121
Development of Multiple Proteomic Marker Panel and Predictive Model for the Onset and Progress of Major Psychiatric Disorders

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Objective: The authors tried to develop a predictive model using multiple proteomic marker panel and ultra-high speed multiple proteomic marker analysis platform to predict the onset and progression of schizophrenia, bipolar disorder, and major depressive disorder among high-risk group of major psychiatric disorders.

Methods: The study subjects were recruited from 8 psychiatric centers in South Korea from June 2017. Protein marker candidates were selected by data mining and extracted from blood samples of the subjects and control group by quantitative proteomics applying In-depth proteome profiling using Q-exactive Orbitrap mass spectrometer and Multiple Reaction Monitoring (MRM) technique using Triple Quadrupole Mass spectrometer. Proteins with different expression level between groups were selected using pair-wise analysis, and protein marker candidates that could distinguish each group were selected by ANOVA and pearson correlation-based hierarchical clustering.

Results: 342 protein marker candidates were selected by data mining. 120 proteins with different expression level differentiating groups were extracted from blood samples of the subjects and control group. Overall, 428 protein marker candidates were constructed. Among these, 156 proteins were identified as proteins detectable by mass spectrometry through the blood proteome library. Simultaneous multiplex MRM platform for verification of proteomic markers and 150 proteomic marker panels for prospective cohort samples were constructed.

Conclusions: Analysis of the proteomic marker candidates showed that each group was clustered with a considerably high correlation. Based on this results, clinical evaluation and proteomics of high-risk group will be integrated to develop a prediction model of the onset and progression of major psychiatric disorders.

Topic Area: Translational Research

C122
Improving Mental Health in Young People through Harmonised Collection of Data

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The current international trend is to create large datasets with data already collected and/or deposit newly collected data into repositories accessible to the scientific community. These practices lead to better transparency of the data and enable more efficient data sharing. In Australia, to facilitate data sharing and collaborative opportunities, a group was created, namely the Neurobiology in Youth Mental Health Partnership. This group brings together specialised researchers from around Australia to work toward a better understanding of the cross-diagnostic neurobiology of youth mental health, and the translation of this knowledge into clinical practice. One of the mandates of the group was to develop ways to harmonise the prospective collection of data across research Centres in the field of youth mental health. Four key domains were identified: clinical assessments, brain imaging, cognitive tests and collection of blood samples. A core set of assessments/data collection has been selected for each domains and developed into Standard Operating Procedures, which will be presented and open for discussion at the conference. The use of this protocol will facilitate the pooling of psychopathological and neurobiological data into large datasets allowing researchers to tackle questions requiring very large numbers. This transdiagnostic approach will hopefully help the research community towards a better understanding of the mechanisms underlying mental illnesses.

Topic Area: Translational Research

C123
Implementing Project RED to Reduce 30-day Readmissions in Patients with Serious Mental Illness (SMI)

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Hospital readmission is a measure of poor quality of care that results in poor patient health outcomes and increased healthcare costs. Hospital readmission has been particularly problematic amongst mentally ill population. In October of 2012, the Centers for Medicare and Medicaid Services (CMS) established the Hospital Readmission Reduction Program under provision of the Affordable Care Act of 2009, whereby payments are reduced to hospitals with readmission rates higher than the national average. Improvement in care transition was identified as a potential solution. Medical care transition models, such as Project RED (Re-Engineered Discharge), can be used in transitioning care of patients with mental illness to improve health outcomes. The purpose of this project was to implement Project RED in a voluntary psychiatric unit at a community hospital to reduce 30-day readmission of patients with serious mental illness, using The Ottawa Model of Research Use as a guide. A pre and post-test quasi-experimental design was used. A total of 16 patients received the RED's interventions. The results yielded statistically significantly fewer patients were readmitted post-intervention than before intervention (mean = 1.33 versus 4.67, $p < .05$). The project RED' interventions had a significant impact on 30-day readmission. Patients felt more ready to take care of themselves in the community.

Topic Area: Translational Research

C124
A brave New World: New Approaches to Knowledge Translation in Youth Mental Health

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A significant gap exists between the latest research evidence and what is occurring in clinical practice in the field of youth mental health. Knowledge translation is about applying scientific knowledge to service settings to provide the best possible care. This presentation will have three sections. Firstly, it will present a review of the latest evidence regarding which interventions and approaches have demonstrated efficacy in knowledge translation in youth mental health. This includes evidence pertaining to interventions including educational workshops, fidelity monitoring, financial incentives and organisational level interventions aimed at cultural change. Secondly, it will present Orygen's newly developed knowledge translation framework for youth mental health. The approach involves for four phases including defining the issue, assessing the evidence, adapting to the context and planning next steps. This framework can be applied by services that are seeking to better integrate research evidence into their clinical practice. The third part of the presentation will focus on opportunities for knowledge translation that apply in the modern context, including using digital technologies, podcasting and social media platforms. Data will be presented that demonstrate important opportunities that arise from recent changes in patterns of information consumption, and examples will be provided of responses to these changes in the field of knowledge translation.

Topic Area: Translational Research

C125
From Research to Reality: Implementing First Episode Treatment in a Community Mental Health Center

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The purpose of this poster is to discuss the feasibility of implementing a research program into Standard of Care in a community behavioral health clinic. PeaceHealth in Eugene, Oregon was one of 17 sites that provided the Navigate program as part of the Recovery After Initial Schizophrenia Episode (RAISE) research study. Following the conclusion of the recruitment for the study, PeaceHealth committed to extend such early intervention services for the community. To do this, PeaceHealth adopted a hybrid of the Early Assessment and Support Alliance (EASA) and the Navigate program. The goal was to carry forward the positive outcomes experienced during RAISE in a non-research setting. Reasons to do this included increasing the reach of the program to a broader population, and to eliminate the delay until research findings are usually made available. We will discuss the successes we experienced in this effort to integrate research with clinical practice, such as increasing the number of patients who had access to specialized first episode treatment including individual therapy, medication management, vocational/educational support, family education and therapy, nursing, occupational therapy and peer support. We will also discuss the challenges we faced, such as dealing with limited resources for training staff and working in a less structured environment than what is found within research trials. Lastly, we will also provide recommendations for disseminating future programs.

Topic Area: Translational Research

C126
Comparison of Online Learning and Engagement through a Learning Management System

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Orygen, in partnership with a county health care network in the USA is supporting a First Episode Psychosis Program via a collaborative workforce development initiative. The outcome is to upskill the clinical workforce in the development of youth focused early psychosis interventions. The workforce initiative has a strong focus on a self-directed, andragogical learning opportunity including intensive input with approximately 100 hours of reading and interactive online materials, and 5 days of face to face workshops. The clinicians were able to browse the learning management system (LMS) in their own time, they could also connect to colleagues and educators in the forums where reflection of clinical practice occurred. The themes on the LMS covered 10 topics as well as pre and post workshop activities. All themes also were split into foundation and advanced levels so that the learner could self-identify which level was more appropriate for them. There were also opportunities to connect via a general forum to discuss anonymised cases or organisational issues. The forum was moderated and supported by clinical educators at Orygen. Data was collected in regard to the amount of activity in each theme. This included, accessing articles, watching interactive materials or engagement with activities or conversations on forums. This data is presented with recommendations for future planning of educational programs as well as an evaluation of learning modes clinicians found most useful.

Topic Area: Translational Research