



RECOMMENDED ACADEMIC READING

Early Psychosis

Early Psychosis is the focus of this edition of Recommended Academic Reading. Please find below a number of excellent recommendations from our contributing early psychosis experts.

Dr. Donald Addington recommends an article by Niendam et al., 2019. This article reports the results of a survey of California Early Psychosis Intervention programs which are focused on the age range served by Child and Adolescent Psychiatry. The focus of the paper is on implementation of services. The important methodological feature of the study is the use of evidence based measures that link the results to the research base on early psychosis intervention. The significant results are the wide range of service quality.

The implication for child and adolescent psychiatrists is that they can participate in evidence based care delivery, achieve better outcomes, and bridge their practices more seamlessly to the adult care system. The evidence base for the effectiveness and cost effectiveness of EPI services is now so strong that the next phase of research involves implementation research, the scientific study of barriers to and methods of promoting the systematic application of research findings in practice, including in public policy. An essential tool for evaluating service quality has been developed and tested in Canada and the United States (Durbin et al., 2019)

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References

Niendam, T.A., Sardo, A., Savill, M., Patel, Xing, G., Loewy, R. L., . . . Melnikow, J. (2019). The Rise of Early Psychosis Care in California: An Overview of Community and University-Based Services. *Psychiatric Services, 70*(6), 480-487. doi:10.1176/appi.ps.201800394 <https://ps.psychiatryonline.org/doi/full/10.1176/appi.ps.201800394>

Durbin, J., Selick, A., Langill, G., Cheng, C., Archie, S., Butt, S., & Addington, D. E. (2019). Using Fidelity Measurement to Assess Quality of Early Psychosis Intervention Services in Ontario. *Psychiatric Services, 70*(9), 840-844. doi:10.1176/appi.ps.201800581 <https://ps.psychiatryonline.org/doi/full/10.1176/appi.ps.201800581>

Dr. Christopher Bowie recommends an article by Shona M. Francey and colleagues (2020) that examines a non-inferiority trial of cognitive-behavioural case management with or without medication for patients in a specialized first-episode psychosis program. This paper, from early 2020, comes at a time when there is increasing scrutiny of whether antipsychotic medication should be administered as early as possible for those at the first episode of psychosis. The notion of Duration of Untreated Psychosis (DUP) is at the foundation of support for early intervention programs, but this and other recent reports remind us that “Untreated” need not be restricted to medication. Treatment of the person with psychosis’ symptoms is generally considered paramount, but this trial and others push us toward considering how we need to also offer psychosocial supports and psychotherapy as early as possible if we want treatment success to include recovery of functioning. It is important to consider, in this paper and others, that the “first-episode” state is fluid, with only a proportion of those going on to meet formal criteria for schizophrenia; data such as these support more work to identify whether non-medication treatments are warranted as first line for a subgroup of people within this population.

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Francey, S. M., O’Donoghue, B., Nelson, B., Graham, J., Baldwin, L., Yuen, H. P., ... & McGorry, P. D. (2020). Psychosocial intervention with or without antipsychotic medication for first-episode psychosis:

a randomized noninferiority clinical trial. *Schizophrenia Bulletin Open*, 1(1), sga015.
<https://academic.oup.com/schizbullopen/article/1/1/sgaa015/5810294?login=true>

Dr. Chiachen Cheng recommends reading about the British Avon Longitudinal Study of Parents and Children (ALSPAC) sub-analysis study by Benjamin Perry and colleagues (2021). When psychiatrists prescribe antipsychotic medications for first episode psychosis, we are cognizant of the metabolic side effects which may increase cardiovascular and diabetes risk; the risk increase can lead to lifespan reduction up to 20 years. Furthermore, the impact on physical health for people with mental illness was the focus of a recent 2019 Lancet Psychiatry Commission.

In this important study, Perry and co-authors suggest another association between fasting insulin (FI), body mass index (BMI) in early childhood and later risk of psychosis and depression in young adults. This prospective, cohort study recruited over 14,000 pregnant participants between 1991 to 1992 and followed this cohort over time. For this part of the study, repeated measures of FI and BMI between ages 1 and 24 were tested for association with risk of psychosis and depression at 24 years. The authors also analysed the data according to sex.

The authors stated that there was “consistent evidence” for an association between FI level trajectories and psychosis at 24 years. In fact, there appeared to be dose-response relationship. Whereas we have been focused on the impact of antipsychotics on the glucose-insulin relationship, the results indicated that those most at risk of psychosis had “persistently high FI level trajectory”, from childhood. The authors have suggested that there may be a common mechanism for developing psychosis and type 2 diabetes.

This study is an excellent read; highly recommended because there are other interesting findings about the relationships between FI, BMI, sex and depression and psychosis.

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Reference

Perry, B. I., Stochl, J., Upthegrove, R., Zammit, S., Wareham, N., Langenberg, C., ... & Khandaker, G. M. Longitudinal Trends in Childhood Insulin Levels and Body Mass Index and Associations With Risks of Psychosis and Depression in Young Adults. *JAMA Psychiatry*. doi:10.1001/jamapsychiatry.2020.4180
 Published online January 13, 2021.
<https://jamanetwork.com/journals/jamapsychiatry/article-abstract/2774874>

Dr. Ashok Malla recommends an article by Anderson et al (2018). The development and expansion of early intervention services (EIS) over more than two decades have been one of the most significant improvements in mental health care. These services are based on the scientific logic of delay in treatment (duration of untreated psychosis) being associated with poorer outcome as well as the effectiveness of a package of effective interventions (low-dose second generation antipsychotic medications, family intervention, cognitive behavioural intervention, modified assertive case management and a recovery orientation). These EIS for psychosis have been implemented nationally in several countries (e.g., the U.K., Denmark) and several regions in Canada (e.g., Ontario, B.C., Québec, Nova Scotia, Yukon). EIS, while effective, are likely to benefit only those who are able to access them. The recommended publication is a ground-breaking examination of a population level impact of an EIS established to cover a defined geographic area over a period of nearly two decades. Further work from Anderson et al. has examined factors associated with the likelihood of receiving or not receiving treatment in the EIS. Such epidemiologically driven studies are extremely important to understand how to improve access to effective services in order to have a real impact at the population level.

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- Anderson, K. K., Norman, R., MacDougall, A., Edwards, J., Palaniyappan, L., Lau, C., & Kurdyak, P. (2018). Effectiveness of early psychosis intervention: comparison of service users and nonusers in population-based health administrative data. *American Journal of Psychiatry*, 175(5), 443-452.
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<https://journals.sagepub.com/doi/full/10.1177/0706743718762101>

Dr. Aristotle Voineskos recommends a paper by Gregory E. Simon and colleagues (2018) in the American Journal of Psychiatry entitled: Care Pathways Before First Diagnosis of a Psychotic Disorder in Adolescents and Young Adults. This paper shows the percentage of young people who developed a first episode of psychosis, who previously had received mental health care. The authors used the Kaiser

Permanente health system data in the U.S. to conduct their study. After identifying index cases of a first diagnosis of a psychotic disorder, the authors examined services used, diagnoses recorded, and prescriptions filled in the prior 3 months, 12 months, 24 months, and 36 months. Mental health care was evaluated as hospitalization with mental health diagnosis, emergency department visit with mental health diagnosis, specialty mental health outpatient visit, and primary care visit with mental health diagnosis. Most striking was the staggeringly high percentage of young people who had received mental health care before their first psychotic episode: approximately 75%. Current paradigms of risk identification for psychosis relate to setting up clinical high risk or prodromal clinics. However, the large majority of people who develop psychosis clearly are receiving care for other mental health diagnoses prior to their first psychotic episode. This suggests the need for a critical paradigm shift for early identification of psychosis within the child psychiatry practice domain. Given that the majority of people who develop psychosis have an antecedent disorders such as depression, anxiety, ADHD, ASD or other conditions, it would then appear that the presence of such disorders in childhood or adolescence are themselves risk factors for psychosis (e.g. see Selten et al, *JAMA Psych*, 2015). Future prospective cohort studies are needed to determine such risk. In addition, it raises new opportunities for psychosis prevention. Is it possible that effective treatment of other psychiatric disorders in children or adolescents diminishes risk for psychosis, or mitigates its severity? Again well-designed studies are needed to answer these questions of crucial public health importance.

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Thanks to all our expert contributors. If you would like to update your knowledge further on psychosis research, consider some of the following articles written by our contributors.

Addington, D., Noel, V., Landers, M., & Bond, G. R. (2020). Reliability and Feasibility of the First-Episode Psychosis Services Fidelity Scale-Revised for Remote Assessment. *Psychiatric Services*, 71(12), 1245-1251.

<https://ps.psychiatryonline.org/doi/full/10.1176/appi.ps.202000072>

Addington, D., Cheng, C. C., French, P., Killackey, E., Melau, M., Meneghelli, A., ... & Smith, J. (2020). International application of standards for health care quality, access and evaluation of services for early intervention in psychotic disorders. *Early Intervention in Psychiatry*. First published: 25 May 2020 <https://doi.org/10.1111/eip.12990>

<https://onlinelibrary.wiley.com/doi/abs/10.1111/eip.12990>

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