

# **How Well Does Psychosis Risk Criteria Predict the Transition to Psychosis?**

*A 10-year service audit of an early psychosis  
service.*

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## **Statement of Originality**

This dissertation contains no material which has been accepted for the award of any other degree or diploma in any university or other tertiary institution and, to the best of my knowledge and belief, contains no material previously published or written by another person, except where due reference has been made in the text. I give consent for this copy of my dissertation, when deposited in the University Library, being made available for loan and photocopying subject to the provisions of the Copyright Act 1968.

## **Acknowledgment of Collaboration**

I hereby certify that the work embodied in this thesis has been done in collaboration with other researchers. I have included as part of the thesis a statement clearly outlining the extend of collaboration, with whom and under what auspices.

## **Acknowledgment of Authorship**

I hereby certify that the work embodied contains a paper submitted for publication of which I am a joint author. I have included as part of the thesis a written statement, endorsed by my supervisor attesting to my contribution to the joint publication.

## **Authors' Contributions**

Agatha Conrad drafted the manuscript and contributed to project design, data collection, management, analysis and interpretation; Terry Lewin and Vaughan Car initiated the project and contributed to project design, statistical analysis and interpretation, and manuscript revision; Ketrina Sly contributed to project design, data collection, management and analysis, and manuscript revision; Ulrich Schall, Sean Halpin and Mick Hunter were additional project investigators who contributed primarily to project design, clinical interpretation of the data, and revision of the manuscript. All authors read and approved the final manuscript.

Dr Agatha Conrad

Signed:\_\_\_\_\_

## **Acknowledgement**

I would like to thank Associate Professor Terry Lewin for his involved in this project since the beginning and ongoing support with data management and analysis. We finally got there Terry. Secondly, I would like to thank Associate Professor Mick Hunter for his ongoing support, valuable input and advice throughout the project. Thirdly, I would like to thank my partner without whom I could not have done it, thank you for your, encouragement and ongoing support.

# **Presentations and Publications**

## **Presentations**

- 1.) Conrad, A, Lewin, TJ, Carr, VJ, Schall, U, Halpin SA, Sly KA, Does assessment of risk status matter in relation to subsequent transition to psychosis and treatment patterns? July 22-25, 7<sup>th</sup> WCBCT, 2013 Lima, Peru.
- 2.) Conrad, A, Lewin, TJ, Carr, VJ, Schall, U, Halpin SA, Sly KA, & Hunter, M. Is risk status a good predictor of transition to psychosis? December 3-5, ASPR, 2013, Melbourne, Australia.

## **Publications**

1. Conrad, AM., Lewin, TJ., Sly, K., Schall, U., Halpin, S., Hunter M & Carr, VJ. Characteristics of clients presenting to a community-based service for young people at increased risk for psychosis: results from 10 year Audit, BMC Psychiatry 2014, 14:318 doi:10.1186/s12888-014-0318-4
2. Conrad, AM., Lewin, TJ., Sly, K., Schall, U., Halpin, S., Hunter M & Carr, VJ. Is risk status a good predictor of transition to psychosis? Subsequent psychiatric morbidity and service use among young people presenting to a specialised community Mental Health Service. Early Intervention in Psychiatry, (in preparation).

# **Professional Doctorate of Clinical Psychology - Thesis Structure**

The formal structure of the thesis is written in accordance with guidelines for submission of Professional Doctorate of Clinical Psychology by the School of Psychology, University of Newcastle. More specifically, the guidelines include section 1: the extended critical literature review; section 2: manuscript of a journal article with the exception of the cover page and the last section is the extended discussion. The structure my thesis is outlined below following the guidelines.

## **Section 1: Critical Review of the Literature**

## **Section 2: Service Based Study comprised of**

- 1) Aims of the project and hypothesis
- 2) Paper 1
  1. Conrad, AM., Lewin, TJ., Sly, K., Schall, U., Halpin, S., Hunter M & Carr, VJ. Characteristics of clients presenting to a community-based service for young people at increased risk for psychosis: results from 10 year Audit, BMC Psychiatry 2014, 14:318  
doi:10.1186/s12888-014-0318-4
- 3) Extract from Psychosis Outcomes component of Paper 2  
Conrad, AM., Lewin, TJ., Sly, K., Schall, U., Halpin, S., Hunter M & Carr, VJ. Is risk status a good predictor of transition to psychosis? Subsequent psychiatric morbidity and service use among young people presenting to a specialised community Mental Health Service. Early Intervention in Psychiatry, (in preparation).

## **Section 3: Integrated discussion**

# **Abstract**

## **Background:**

Over the past 15 years research has focused on the development and validation of specific assessment tools to identify individuals at risk of developing psychosis, and to apply these methods to naturalistically followed high risk cohorts. Further, during this phase, ascertainment and assessment methods have proven sufficiently valid, initial clinical risk markers and predictors of conversion to psychosis have been identified and interventions that can abort or delay the development of full psychosis have been examined. Despite the existence of this body of literature, few studies have sought to document the development, implementation and evaluation of specialised psychosis related services. Assessment of individuals at Ultra High Risk (UHR) has been a consistent focus of attention, but it is equally as important to identify appropriate comparison groups, and to account for other baseline differences.

## **Purpose:**

This research comprised a 'layered' service audit which examined all presentations to Psychological Assessment Service (PAS) during the ten-year period ending December 2007. The term 'layered' also reflected the fact that there were variations in the patterns of assessments completed and the availability of different service level outcomes. While the service audit had broad aims, the data used for this study has been selected to examine the following aims;

- a) Describe the sample of clients who have presented to PAS service over the 10 year period
- b) Examine the risk factors for developing a psychosis
- c) Examine the relative contribution of UHR to transition to psychosis

## **Methods:**

The first paper reported data from a 10-year layered service audit of all presentations to a specialised 'Psychological Assistance Service' (PAS) for young people in Newcastle (Australia). Baseline socio-demographic and clinical characteristics of the clients (N = 1,997) are described (including their psychosis and UHR status, previous service contacts, hospitalisation rates, and diagnostic and comorbidity profiles, key groups are identified, and comparisons are made between clients who received ongoing treatment and those who were

primarily assessed and referred elsewhere. The second paper reported on five primary outcomes: rates to subsequent psychosis (or transition where appropriate); subsequent comorbidity of depression, anxiety and/ or substance use among the five groups, service use (community contacts, and hospital admissions). The second paper focused on examining the predictors of transition. It is beyond the scope of the thesis to present all the results, while all of the results from paper 1 are included only key findings on psychosis transition rates and associated comorbidity are reported from paper 2.

## **Results:**

Paper 1 reported on the demographic and clinical characteristics of the sample. The average age of clients was 19.2 (SD = 4.5) years, 59% of whom were male. One-tenth (9.6%) of clients were categorised as UHR, among whom there were relatively high rates of attenuated psychotic symptoms (69.1%), comorbid depression (62.3%), anxiety (42.9%), attentional and related problems (67.5%). Overall, one-fifth (19.8%) of clients experienced a recent psychotic episode, while a further 14.5% were categorised as having an existing psychosis (67.8% with schizophrenia), amongst whom there were high rates of comorbid substance use (52.9%), psychosocial issues (70.2%), and physical health problems (37.7%). The largest group of clients presenting to PAS were those with non-psychotic disorders (43.7%), who should provide a valuable comparison group against which to contrast the health trajectories of those with UHR and recent psychosis. Ongoing treatment by the PAS service was preferentially given to those experiencing or at risk for psychosis, and those reporting greater current distress or dysfunction. As a result two broad clinical groups were identified ‘the psychosis group’ comprised of clients with existing and recent psychosis. The second group the ‘non-psychosis at potential risk groups’ comprised of clients at UHR, non-psychosis mental health disorders group and uncertain group. The second paper reported that gender and age were not predictive of subsequent psychosis episodes, those who were treated by PAS were still twice as likely to have a subsequent episode of psychosis. Those with existing psychosis (62.3%) and recent psychosis (50.1%) had higher rates of subsequent psychosis, while the UHR group (17.3%) and the uncertain group (15.2%) had a comparable rate of transition to psychosis to the reference group (16.7%). While knowing the risk status (UHR) of clients did not improve prediction, the three non-psychosis groups had much higher transition rate (16.5%) to psychosis than would be expected in the community at large.

## **Conclusion**

Whether or not UHR clients transition to psychosis, they displayed high rates of comorbid depression and anxiety at service presentation, with half receiving ongoing treatment from PAS. While UHR risk was not related to transition, the three non-psychosis groups had much higher levels of transition than general community. More research is required to examine pattern of treatment in relation to the timing of transition which will be undertaken in the future papers.



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