The story of reform of early psychosis services in England.

Scotland EIP Network Meeting, 1 December 2021

Max Birchwood.
Phase 1: Campaigning for service reform and the emerging science of the early intervention in psychosis

Phase 2: The trials

Phase 3: Implementation studies and challenges


Phase 5: EI non-responders: improving outcomes.

Phase 6: Phase-specific interventions.
Phase 1: Campaigning for service reform and the emerging science of the development of psychosis
Lost Generation

Why young people with psychosis are being left behind, and what needs to change.
The Influence of Ethnicity and Family Structure on Relapse in First-Episode Schizophrenia: A Comparison of Asian, Afro-Caribbean, and White Patients

MAX BIRCHWOOD, RAY COCHRANE, FIONA MACMOLAN, SUEI COPESTAKE, JO KUCZUMAS and MARJORIE CARMICHAEL

There is overwhelming evidence that the outcome for people with schizophrenia in Western industrialised countries is markedly inferior to that of those in the Third World (Kapur, 1985). Murthy & Rahaman (1971) were among the first to note the disparity in this study of African and Indian schizophrenic patients living in Mauritius. They found a higher relapse rate, with 36% of the former's sample having relapsed by the end of their second year of follow-up, compared with 10% of the latter's sample. This apparent vulnerability to relapse has been documented in studies conducted in other countries, such as Yugoslavia (Golubovcic et al., 1964) and India and Pakistan (Rahaman & Haldar, 1979), and has been consistently found in studies conducted in the UK (Crichton et al., 1987). Many factors have been proposed to account for these differences, including socio-economic status, cultural attitudes towards mental illness, and access to psychiatric services.

Second generation Afro-Caribbean and young whites with a first admission of schizophrenia

D.M. McNamee and R. Cooke

The results of this study suggest that the relapse rate in Afro-Caribbean patients is significantly higher than in white patients. This is consistent with previous findings in other studies (Crichton et al., 1987; Crichton & Meltzer, 1987). The findings highlight the importance of understanding the factors that contribute to relapse in this group and the need for targeted interventions to reduce the risk of relapse.

Method

In this study, we recruited patients from the local mental health services in the UK. The patients were divided into two groups: Afro-Caribbean and white. The groups were matched on demographic variables, such as age, gender, and length of illness. The primary outcome measure was relapse, defined as hospital admission, informal day care, or formal crisis intervention.

Conclusion

The results of this study suggest that there is a significant difference in relapse rates between Afro-Caribbean and white patients. This difference is consistent with previous findings and highlights the need for targeted interventions to reduce the risk of relapse in this group. Further research is needed to explore the underlying factors contributing to these differences in relapse rates.
The need for service reform: if it’s broke, fix it..

• Low engagement of YP in services & treatment (and poor early outcome)
• Long treatment delay (DUP 1-2 years)
• High use of coercion at entry to services
• “CAMHS don’t do psychosis, AMHS don’t do young people”
• Low acceptability of CMHT/hospital service model.
“Despite the fact that CMHTs remain the mainstay of community mental health care, there is surprisingly little evidence to show that they are an effective way of organizing services. As such, evidence for the effectiveness of CMHTs in the management of schizophrenia is insufficient to make any evidence-based recommendations” (P261)
‘Plateau effect’: ceiling of disability early in manifest course

Open culture of community integration and meaningful activity

Functional and symptomatic outcomes best in pre-neuroleptic era; comparable today??
Translating to EIP: the ‘CRITICAL PERIOD’

“Early phase of psychosis is a stormy one, plateauing thereafter”

- Early trajectories predict long term trajectories
- The plateau effect: ceiling of disability/symptoms early in manifest course (Bleuler)
- Adolescent social functioning best predictor of early phase social functioning

The predictive strength of early pattern of course and socio-cultural setting support the case for early intervention strategies with social and drug interventions’ (p516)
Sustaining engagement and intervention through the ‘Critical Period’ with specialised teams

EIS model was a ‘best guess’ in 2001.
Progenitor service, 1994- : Birmingham.

- Adapted ACT model
- 1:15 case ratio
- 3 years
- Emphasis on psychosocial + vocation interventions
- Engagement in low stigma channels
- Youth sensitive and youth co-designed
EI provision across England

- 1998: 2 teams
- 2002/3: 24 teams
- 2003/4: 41 teams
- 2004/5: 109 teams
- 2005/6: 127 teams
- 2006/7: 160 teams
- 2007/8: 145 services

Implementing the Early Intervention in Psychosis Access and Waiting Time Standard: Guidance
Early intervention is crucial to improving outcomes. The Commission’s view is that Early Intervention in Psychosis (EIP) has been the most positive development in mental health services since the beginning of community care.

We recommend that all Clinical Commissioning Groups commission Early Intervention in Psychosis services with sufficient resources to provide fidelity to the service model. It is crucial that the NHS Commissioning Board holds local commissioners to account for this and we recommend that early Intervention services are included in the NHS Commissioning Outcomes Framework.

“We can be really proud of our early intervention services which are popular and have been shown to work. Now we need to build on that success by extending the approach to cover the whole service.” 
Liz Meek, Member of the Commission
Phase 2: Trials
The Lambeth Early Onset (LEO) Team: randomised controlled trial of the effectiveness of specialised care for early psychosis

Ben J K Cugn, Filippe Carate, Faddy Power, Nicola Rahman, Susannah Collett, Miriam Fertilera-Ampe, Graham Dart

Abstract

Objective To evaluate the effectiveness of a service for early psychosis.

Design Randomised controlled trial.

Setting Community mental health teams in one London borough.

Participants 144 people aged 16-49 years presenting to mental health services for the first time and with a non-organic, non-affective psychosis.

Interventions A one-stop multidisciplinary intervention specialist care group and a control group based on routine community mental health services.

Outcomes Measures Rates of relapse and readmission.

Results Patients in the intervention group were less likely to relapse (odds ratio 0.5, 95% confidence interval 0.3 to 0.9, n = 70) and were less likely to drop out of the study (odds ratio 0.3, 0.1 to 0.8, n = 70). The intervention was associated with a 0.3, 0.1 to 0.6, p = 0.01 reduction in total cost of care (mainly due to a 0.2, 0.1 to 0.3, p = 0.01 reduction in the cost of hospitalisation).

Conclusion Limited evidence shows that a more detailed specialised care for patients with early psychosis is superior to standard care for maintaining contact with professionals and for reducing hospitalisation in hospital. No firm conclusions can, however, be drawn owing to the sample size.

Feasibility and Effectiveness of a Multidisciplinary Psychosocial Intervention for First-Episode Psychosis: Results From the Cluster-Randomized Controlled GET UP Piano Trial in a Catchment Area of 10 Million Inhabitants

Michele Ruggiero1,2, Claudio Bonetto2, Antonio Lazis1, Angela Fittipaldi, Giovanni de Giovanni, Paolo Santonastas2, Francesco Piffiri1, Giovanni Neri1, Silvia Cippitelli, Fabio Gagliardi, Mauro Miceli, Silvio Scaramuzza, Angelo Cozzoli, Stefano Torelli, Carla Carugno, Paolo Bartoli, Paolo Costantini, Carla Maresca, Michele Prandi, Paolo Bellanca, Surro Toso, Karla De Santis, Sarah Bissoli, Sara Puri, Elisa Ino, Sibilla Zoppell, Paolo Rizza, Luca Bolognesi, Giovanni Patelli, Doriana Cristella, Anna Mingozzi, and the GET UP Piano Group

Papers

A randomised multicentre trial of integrated versus standard treatment for patients with a first episode of psychotic illness

Authors If you have any questions or need further assistance, feel free to ask!
Cost Economic Data: EI vs Standard CMHT Care

McCrone, Knapp, et al. BJPsych 2010
Early intervention teams most effective when DUP is low
Comprehensive Versus Usual Community Care for First-Episode Psychosis: 2-Year Outcomes From the NIMH RAISE Early Treatment Program


Objective: The primary aim of this study was to compare the impact of NAVIGATE, a comprehensive, multidisciplinary, team-based treatment approach for first-episode psychosis designed for implementation in the U.S. health care system, with community care on quality of life.

Method: Thirty-four clinics in 21 states were randomly assigned to NAVIGATE or community care. Diagnosis, duration of untreated psychosis, and clinical outcomes were assessed via live, two-way video by remote, centralized raters masked to study design and treatment. Participants (mean age, 23) with schizophrenia and related disorders and ≤6 months of antipsychotic treatment (N=404) were enrolled and followed for ≥2 years. The primary outcome was the total score of the Heinrichs-Carpenter Quality of Life Scale, a measure that includes sense of purpose, motivation, emotional and social interactions, role functioning, and engagement in regular activities.

Results: The 223 recipients of NAVIGATE remained in treatment longer, experienced greater improvement in quality of life and psychopathology, and experienced greater involvement in work and school compared with 181 participants in community care. The median duration of untreated psychosis was 74 weeks. NAVIGATE participants with duration of untreated psychosis of <74 weeks had greater improvement in quality of life and psychopathology compared with those with longer duration of untreated psychosis and those in community care. Rates of hospitalization were relatively low compared with other first-episode psychosis clinical trials and did not differ between groups.

Conclusions: Comprehensive care for first-episode psychosis can be implemented in U.S. community clinics and improves functional and clinical outcomes. Effects are more pronounced for those with shorter duration of untreated psychosis.

FIGURE 3. Heinrichs-Carpenter Quality of Life (QLS) Total Score and PANSS Total Score: Effects of Shorter or Longer Duration of Untreated Psychosis (DUP) Based on a Model With Square Root Transformation of Months

A. QLS total score

B. PANSS total score

In the model, DUP and DUP by square root of time by treatment terms were included as covariates in addition to the covariates listed in Table 2. The DUP by square root of time term was found not to be significant for either outcome. PANSS=Positive and Negative Syndrome Scale; CC=Community Care; NAV=NAVIGATE.

DUP by treatment by square root of time interaction, p=0.003.

DUP by treatment by square root of time interaction, p=0.043.
Are gains from intensive early intervention maintained?
Five-Year Follow-up of a Randomized Multicenter Trial of Intensive Early Intervention vs Standard Treatment for Patients With a First Episode of Psychotic Illness

The OPUS Trial

Mette Bertelsen, MS; Petter Jeppesen, MD, PhD; Lone Petersen, PhD; Anne Thorup, MD, PhD; Johan Ollenschläger, MD, PhD; Phuong N. Quach, MD; Lyle Christensen, MD, PhD; Gertrud Krarup, MD; Per Ingman, MD; Mette Nielsen, MD, PhD, MPH

Table 5. Remission and Relapse During Last 2 Years Before 5-Year Follow-up

<table>
<thead>
<tr>
<th></th>
<th>Intensive Early-Intervention Program (n=151)</th>
<th>Standard Treatment (n=150)</th>
<th>Differences in Percentages (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Episodic course of illness</td>
<td>21 (14)</td>
<td>19 (13)</td>
<td>-2 (-0.06 to 0.1)</td>
</tr>
<tr>
<td>Continuous course of illness</td>
<td>67 (45)</td>
<td>65 (44)</td>
<td>-2 (-0.12 to 0.1)</td>
</tr>
<tr>
<td>Not psychotic</td>
<td>62 (41)</td>
<td>64 (43)</td>
<td>2 (-0.13 to 0.09)</td>
</tr>
</tbody>
</table>

Figure 2. Mean symptom values for patients in the intensive early-intervention program (OPUS) vs standard treatment, according to the Scale for Assessment of Psychotic Symptoms and Scale for Assessment of Negative Symptoms at baseline, 2-year follow-up, and 5-year follow-up for the negative (A) and psychotic (B) dimensions. Values range from 0 to 5.
How do we maintain gains from early intervention?

RESEARCH REPORT

Comparing three-year extension of early intervention service to regular care following two years of early intervention service in first-episode psychosis: a randomized single blind clinical trial

Ashok Malla1,2, Ridha Jobeer1,2, Srividiya Iyer1,2, Ross Norman1, Norbert Schmier1,4, Thomas Brown1,4, Danyael Lutgens1,3, Eric Jarvis1,3, Howard C. Margolese1,6, Nicola Casacalenda1,3, Amal Abdel-Baki1, Eric Latimer1,4, Sally Mustafa1, Sherezad Abadi2

1Department of Psychiatry, McGill University, Montreal, QC, Canada; 2Douglas Mental Health University Institute, Montreal, QC, Canada; 3Department of Psychiatry and Epidemiology and Biostatistics, University of Western Ontario, and London Health Sciences Centre, London, ON, Canada; 4Douglas Hospital Research Centre, Montreal, QC, Canada; 5Jewish General Hospital, Montreal, QC, Canada; 6McGill University Health Centre, Montreal, QC, Canada

This study aimed to determine if, following two years of early intervention service for first-episode psychosis, three-year extension of that service was superior to three years of regular care. We conducted a randomized single blind clinical trial using an 1:1 randomization balanced for gender and substance abuse. Participants were recruited from early intervention service clinics in Montreal. Patients (N=200), 18-35 years old, were randomized to an extension of early intervention service (EIES; N=110) or to regular care (N=110). EIES included case management, family intervention, cognitive-behaviour therapy and crisis intervention, while regular care involved transfer to primary (community health and social services and family physicians) or secondary care (psychiatric outpatient clinics). Cumulative length of positive and negative symptom remission was the primary outcome measure. EIES patients had a significantly longer mean length of remission of positive symptoms (92.5 vs. 63.6 weeks, t=4.47, p<0.001), negative symptoms (73.4 vs. 39.6 weeks, t=2.84, p=0.005) and both positive and negative symptoms (66.5 vs. 56.7 weeks, t=2.25, p=0.03) compared to regular care patients. EIES patients stayed in treatment longer than regular care patients (mean 131.7 vs. 105.3 weeks, t=3.99, p=0.001 through contact with physicians; 134.8 ± 37.7 vs. 89.8 ± 55.2, t=6.45, p<0.0001 through contact with other health care providers) and received more units of treatment (mean 74.9 vs. 39.9, t=4.21, p<0.001 from physicians, and 57.3 vs. 28.2, t=4.08, p<0.001 from other health care professionals). Length of treatment had no independent effect on the length of remission of positive symptoms (t=2.62, p=0.009), while number of units of treatment by any health care provider had an effect on length of remission of negative symptoms (t=2.70, p=0.008) as well as total symptoms (t=2.40, p=0.02). Post-hoc analysis showed that patients randomized to primary care, based on their better clinical profile at randomization, maintained their better outcome, especially as to remission of negative symptoms, at the end of the study. These data suggest that extending early intervention service for three additional years has a positive impact on length of remission of positive and negative symptoms compared to regular care. This may have policy implications for extending early intervention services beyond the current two years.

Key words: First-episode psychosis, extension of early intervention service, regular care, positive symptoms, negative symptoms, outcome, remission

(World Psychiatry 2017;16:278-286)
Impact of extended EIP?

- Patients in the E-EIP: remission of positive symptoms for ~50% longer period than CMHT care (mean 92.5 vs. 63.6 weeks, standardized beta 50.34, t=54.47, p<0.001).

- Extending EIP for three additional years has a positive impact on length of remission of positive and negative symptoms compared to regular care.

- NB. Not differentiated by need. ‘Maintenance dose’?
### Table 2 Clinical care received during follow-up

<table>
<thead>
<tr>
<th></th>
<th>Number of interventions (mean ± SD)</th>
<th>Length of treatment (weeks, mean ± SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>EEIS</td>
<td>Regular care</td>
</tr>
<tr>
<td>Physicians</td>
<td>74.9 ± 43.6*</td>
<td>39.9 ± 69.1</td>
</tr>
<tr>
<td>Other health care providers</td>
<td>57.3 ± 37.3*</td>
<td>28.2 ± 59.6</td>
</tr>
</tbody>
</table>

EEIS – extended early intervention service

*p<0.001, **p<0.0001
Patient satisfaction with random assignment to extended early intervention for psychosis vs regular care: Relationship with service engagement

Srividiy N. Iyer1,2, Sally S. Mustafa2, Sherezad Abadi3, Ridha Joober1,2, Amal Abdel-Bakr4,6, Eric Jarvis1,5, Eric Latimer4,5, Howard C. Margolese6,7, Nicola Casacalenda1,2, Norbert Schmitz1,9, Thomas Brown1,9, Ashok Mann1,2

1Department of Psychiatry, McGill University, Quebec, Canada
2Prevention and Early Intervention Program for Psychosis (PEIP), Douglas Mental Health University Institute, Quebec, Canada
3Douglas Mental Health University Institute, Quebec, Canada
4Department of Psychology, University of Manitoba, Centre Hospitalier de l'Université de Montréal, Quebec, Canada
5First Episode Psychosis Program (FEP), Jewish General Hospital, Quebec, Canada
6Prevention and Early Intervention Program for Psychosis (PEIP-MHCC), McGill University Health Centre, Quebec, Canada
7Sunnybrook General Hospital, Toronto, Ontario, Canada

Correspondence
Srividiya N. Iyer, PhD, Douglas Mental Health University Institute, 4575 Heather Lodge, Montreal, QC, Canada H3S 1T3. Email: srividya.irey@mcgill.ca

Funding Information
The project was funded by the Canadian Institutes of Health Research. Grant Award Numbers: MCTF 1509, CCRT:APAS (MNR), and the Joffre Family Foundation of Health Research (OFHR).

Abstract
Aims: We investigated whether individuals varied in their satisfaction with being randomized to an expansion of early intervention (EI) for psychosis or regular care after 2 years of EI, and whether satisfaction was associated with service engagement 3 years later.

Methods: Following randomization, patients (N = 220) indicated if they were happy with the EI or indifferent to their group assignment. Follow-up with service providers was recorded monthly.

Results: Patients randomized to extended EI were more likely to express satisfaction with their group assignment than those in the regular care group (58.2% vs 33.5%, χ² = 49.96, P < 0.01). In the extended EI group, those happy with their assigned group were more likely to continue seeing their case manager for the entire five-year period than those who were unhappy/indifferent (χ² = 5.61, P = 0.03).

Conclusions: Perceptions about EI, indicated by satisfaction with being assigned to extended EI, may have lasting effects on service engagement.

Keywords
early intervention services, engagement, first-episode psychosis, randomization, satisfaction
Short duration of untreated psychosis enhances negative symptom remission in extended early intervention service for psychosis

**Objective:** To test whether duration of untreated psychosis (DUP) < 3 months, recommended by the World Health Organization/International Early Psychosis Association, enhances the effects of an extended early intervention service (EIES) on symptom remission.

**Method:** We examined data from a randomized controlled trial in which patients who received 2 years of treatment in EIES for psychosis were subsequently randomized to either 3 years of EIES or 3 years of regular care (RC). Using a DUP cut-off ≤ 12 weeks (approximately ≤ 3 months), patients were split into two groups. Length of positive, negative and total symptom remission were the outcomes.

**Results:** Patients (N = 217) were mostly male (68%) with schizophrenia spectrum disorder (65%), 108 (50%) received EIES (58 had DUP ≤ 12 weeks, 50 had DUP > 12 weeks). Interaction between treatment condition (EIES vs. RC) and DUP cut-off ≤ 12 weeks was not significant in multiple linear regression model examining length of negative symptom remission as the outcome (adjusted β = 36.88 [SE = 15.85], t = 2.32, P = 0.02). EIES patients with DUP≤12 weeks achieved 25 more weeks of negative symptom remission than EIES patients with DUP>12 weeks.

**Conclusion:** Having a short DUP may be critical in deriving long-term benefits from EIES for psychosis, including EIES settings. This work empirically supports policy recommendations of reducing DUP <3 months.

**Significant outcomes**

- Having a short DUP of 12 weeks or less may increase the length of negative symptom remission by 25 more weeks among patients receiving treatment in an extended early intervention service for psychosis.
- These results are independent of known confounds including the age at onset of psychosis, premorbid functioning, having a diagnosis of schizophrenia spectrum disorder, and the severity of negative symptoms at the time of randomization.
- This work provides important empirical support for the World Health Organization and International Early Psychosis Association's recommendation of having a DUP of less than 3 months in early intervention services for psychosis.
14.3 FIRST EPISODE PSYCHOSIS

14.3.1 Early intervention in psychosis services

14.3.1.1 Early intervention in psychosis services should be accessible to all people with a first episode or first presentation of psychosis, irrespective of the person’s age or the duration of untreated psychosis. [new 2014]

14.3.1.2 People presenting to early intervention in psychosis services should be assessed without delay. If the service cannot provide urgent intervention for people in a crisis, refer the person to a crisis resolution and home treatment team (with support from early intervention in psychosis services). Referral may be from primary or secondary care (including other community services) or a self- or carer-referral. [new 2014]

14.3.1.3 Early intervention in psychosis services should aim to provide a full range of pharmacological, psychological, social, occupational and educational interventions for people with psychosis, consistent with this guideline. [2014]

14.3.1.4 Consider extending the availability of early intervention in psychosis services beyond 3 years if the person has not made a stable recovery from psychosis or schizophrenia. [new 2014]
The National/SUPER EDEN sites

- **Birmingham**
  - 5 teams
  - (Birchwood/Lester)

- **Lancashire + Wirral**
  - 5 teams
  - (Marshall/Lewis/Sharma)

- **East Anglia**
  - 4 teams
  - (Jones/Fowler)

- **Cornwall**
  - 2 teams
  - (Amos/Harrison)
Impact of early intervention services on duration of untreated psychosis: Data from the National EDEN prospective cohort study

Max Marshall a,*, Nusrat Husain a, Natalie Bork a, Imran B. Chaudhry a, Helen Lester b, Linda Everard b, Swaran P. Singh c, Nick Freemantle d, Vimal Sharma e, Peter B. Jones f, David Fowler g, Tim Amos h, Barbara Tomenson a, Max Birchwood b

a School of Medicine, University of Manchester, United Kingdom
b University of Birmingham, Birmingham, United Kingdom
c Health Sciences Research Institute, University of Warwick, Warwick, United Kingdom
d Department of Primary Care and Population Health, University College, London, United Kingdom
e University of Cheshire, United Kingdom
f Department of Psychiatry, University of Cambridge, Cambridge, United Kingdom
g School of Medicine, University of East Anglia, United Kingdom
h Academic Unit of Psychiatry, University of Bristol, Bristol, United Kingdom
Figure 1. Geometric mean DUP with 95% confidence interval by time from start date for team for new and established teams separately.

Effect of delaying treatment of first-episode psychosis on symptoms and social outcomes: a longitudinal analysis and modelling study

Mohammed Elouafy, Anil Kulkarni, Helen Morris, Alain Morant, Andrew Mowforth, Sarah Nevill, Irene Millar, Mark Grangier, Janis Donald, Simon Young, Chris Janes, Olivia Short, Peter Zeman, Yolanda Godley, Bob French, Yvonne Calman, Rebecca Russell, Neill Collette, Nancy L. Young, David Tyrer, Lucy Mounce, David Sargent, and John Read

Summary

Background: Delayed treatment for first-episode psychosis predicts worse outcomes. We hypothesized that delaying treatment makes all symptoms more refractory, with harms worsening first quickly, then more slowly. We also hypothesized that although delay impacts treatment response, some symptoms benefit treatment, which at presentation mitigates the detrimental effect of treatment delay on symptoms.

Methods: In this longitudinal analysis and modelling study, we included two longitudinal cohorts of patients with first-episode psychosis presenting in English early intervention services from defined catchments: MEDIN (recruiting 2106 patients aged 16–35 years from 16 services between August 1, 2005, and April 1, 2009) and Outlook (recruiting 195 patients aged 18–65 years from 11 services between April 1, 2010, and Feb 11, 2012). Patients were assessed at baseline, 6 months, and 12 months with the Positive and Negative Symptoms Scale (PANSS), Calgary Depression Scale for Schizophrenia, Mania Rating Scale, Insight Scale, and Social and Occupational Functioning Assessment Scale. Regression was used to compare different models of the relationship between duration of untreated psychosis (DUP) and total symptom at 6 months. Growth curve models of symptom subscales fitted predictions arising from these hypotheses.

Findings: We included 915 patients from the MEDIN study and 132 patients from the Outlook study who completed baseline assessments and were prescribed depot injectable antipsychotics. For both cohorts, the best-fitting models were logarithmic, describing a nonlinear relationship of DUP to symptom severity. Longer DUP predicted reduced treatment response, but response slowed more slowly as DUP lengthened. Increasing DUP by ten times predicted reduced improvement in total symptoms (r^2 = 0.13; CI: 0.06–0.19; P < 0.001) in MEDIN data and 0.16 (0.08–0.24; P < 0.001) in Outlook data. This was true for treatment response for all symptom types. Furthermore, longer DUP was not associated with a worse presentation for any symptom except depression in MEDIN (coefficient: 0.08; CI: 0.03–0.12; P = 0.002) and in Outlook (coefficient: 0.001; CI: 0.000 to 0.002; P = 0.001).

Interpretation: Long DUP was associated with reduced treatment response across subscales, consistent with a harmful process of symptom exacerbation over time, though no symptoms were statistically different from baseline. These associations underscore the importance of rapid access to a comprehensive range of treatments, especially in the first weeks after psychosis onset.

Funding: UK Department of Health National Institute of Health Research, and Medical Research Council.

Copyright © 2023 The Author(s). Published by Elsevier Ltd. This is an Open Access article under the CC BY-NC-ND 4.0 License.

Introduction

Protracted duration of untreated psychosis (DUP) predicts worse outcomes of all types and poorer social functioning and quality of life for 3 years after presentation in English and American settings.” [1,2] Earlier longitudinal research supports the case for early identification and engagement of at-risk individuals. Long DUP and delay in treatment are associated with increased psychiatric morbidity and mortality. Long DUP is associated with more severe outcomes in early treatment services worldwide. Yet, the mechanisms by which delayed treatment might cause harms remain unclear. The relationship of untreated illness to treatment delay is known to be nonlinear. Long DUP is associated with a worse presentation for most symptoms except depression in the Longitudinal Early psychosis Multicentre study (LEPAM).

Figure 2: Predicted change in untransformed symptom scale scores over 6 months as a proportion of baseline, against DUP

Symptom change was calculated from natural log-transformed scores adjusted for centre, drug use, and demographics. Only the first 3 years of DUP are shown. DUP-duration of untreated psychosis.
DUP: 2 key messages

• Harm incurred by treatment delay is greatest in the early weeks of psychosis
• The effect size for a ten-times increase in DUP appeared comparable to that for placebo versus antipsychotic implying that: this increase in the delay before receiving treatment predicts a difference in symptoms comparable to placebo versus antipsychotics.
DUP in UK (the National EDEN study)

Table 4
Duration of untreated psychosis in days for each EIS.

<table>
<thead>
<tr>
<th>Establishment</th>
<th>n</th>
<th>Min</th>
<th>Max</th>
<th>Median</th>
<th>Mean</th>
<th>95% CI for mean</th>
<th>Geometric mean</th>
<th>95% CI for geometric mean</th>
<th>Number and percentage of patients with DUP under 6 months</th>
</tr>
</thead>
<tbody>
<tr>
<td>Established EIS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Birmingham Central</td>
<td>66</td>
<td>0</td>
<td>2905</td>
<td>45</td>
<td>237</td>
<td>127 to 346</td>
<td>40</td>
<td>22 to 72</td>
<td>47 (71.2%)</td>
</tr>
<tr>
<td>Birmingham East</td>
<td>67</td>
<td>0</td>
<td>2022</td>
<td>141</td>
<td>296</td>
<td>195 to 398</td>
<td>85</td>
<td>51 to 142</td>
<td>37 (55.2%)</td>
</tr>
<tr>
<td>East Anglia Norfolk</td>
<td>146</td>
<td>0</td>
<td>5552</td>
<td>102</td>
<td>385</td>
<td>252 to 518</td>
<td>90</td>
<td>66 to 124</td>
<td>90 (61.6%)</td>
</tr>
<tr>
<td>CAMEO South</td>
<td>98</td>
<td>0</td>
<td>4748</td>
<td>47</td>
<td>257</td>
<td>130 to 384</td>
<td>43</td>
<td>28 to 66</td>
<td>72 (73.5%)</td>
</tr>
<tr>
<td>Wirral</td>
<td>27</td>
<td>0</td>
<td>3598</td>
<td>113</td>
<td>322</td>
<td>47 to 596</td>
<td>69</td>
<td>28 to 165</td>
<td>17 (63.0%)</td>
</tr>
<tr>
<td>West Cheshire</td>
<td>18</td>
<td>0</td>
<td>298</td>
<td>73</td>
<td>93</td>
<td>52 to 133</td>
<td>52</td>
<td>25 to 109</td>
<td>16 (88.9%)</td>
</tr>
<tr>
<td>East Cheshire</td>
<td>11</td>
<td>5</td>
<td>783</td>
<td>133</td>
<td>261</td>
<td>67 to 455</td>
<td>73</td>
<td>15 to 347</td>
<td>6 (54.5%)</td>
</tr>
<tr>
<td>All established teams</td>
<td>435</td>
<td>0</td>
<td>5652</td>
<td>77</td>
<td>300</td>
<td>240 to 361</td>
<td>64</td>
<td>53 to 78</td>
<td>285 (65.8%)</td>
</tr>
<tr>
<td>New EIS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lancashire</td>
<td>189</td>
<td>0</td>
<td>5435</td>
<td>146</td>
<td>438</td>
<td>333 to 544</td>
<td>133</td>
<td>103 to 173</td>
<td>100 (52.9%)</td>
</tr>
<tr>
<td>Birmingham BEN</td>
<td>98</td>
<td>0</td>
<td>4821</td>
<td>34</td>
<td>208</td>
<td>94 to 321</td>
<td>24</td>
<td>15 to 40</td>
<td>76 (77.6%)</td>
</tr>
<tr>
<td>Birmingham South</td>
<td>79</td>
<td>0</td>
<td>1900</td>
<td>141</td>
<td>307</td>
<td>217 to 397</td>
<td>100</td>
<td>66 to 154</td>
<td>43 (54.4%)</td>
</tr>
<tr>
<td>Norfolk Kings Lynn</td>
<td>11</td>
<td>0</td>
<td>1471</td>
<td>12</td>
<td>300</td>
<td>18 to 617</td>
<td>15</td>
<td>1 to 157</td>
<td>7 (63.6%)</td>
</tr>
<tr>
<td>Solihull</td>
<td>31</td>
<td>3</td>
<td>2807</td>
<td>87</td>
<td>357</td>
<td>144 to 568</td>
<td>92</td>
<td>45 to 187</td>
<td>19 (61.3%)</td>
</tr>
<tr>
<td>CAMEO North</td>
<td>23</td>
<td>0</td>
<td>857</td>
<td>110</td>
<td>200</td>
<td>100 to 299</td>
<td>68</td>
<td>29 to 159</td>
<td>13 (56.5%)</td>
</tr>
<tr>
<td>Cornwall</td>
<td>122</td>
<td>0</td>
<td>6185</td>
<td>67</td>
<td>272</td>
<td>141 to 402</td>
<td>57</td>
<td>40 to 82</td>
<td>82 (67.2%)</td>
</tr>
<tr>
<td>All new teams</td>
<td>556</td>
<td>0</td>
<td>6185</td>
<td>89</td>
<td>325</td>
<td>271 to 378</td>
<td>72</td>
<td>60 to 86</td>
<td>340 (61.5%)</td>
</tr>
<tr>
<td>All teams</td>
<td>986</td>
<td>0</td>
<td>6185</td>
<td>82</td>
<td>314</td>
<td>274 to 354</td>
<td>68</td>
<td>60 to 78</td>
<td>625 (63.4%)</td>
</tr>
</tbody>
</table>

Still late intervention (DUP>6 months) for ~ 1/3
Why is DUP still so long?

Reducing duration of untreated psychosis: care pathways to early intervention in psychosis services

Max Birchwood, Charlotte Connor, Helen Laster, Paul Patterson, Nick Freemantle, Max Marshall, David Fowler, Shon Lewis, Peter Jones, Tim Amos, Linda Everard and Swaran Singh

Background
Interventions to reduce treatment delay in first-episode psychosis have met with mixed results. Systematic reviews highlight the need for greater understanding of delays within the care pathway if successful strategies are to be developed.

Aims
To document the care-pathway components of duration of untreated psychosis (DUP) and their link with delays in accessing specialised early intervention services (EIS). To model the likely impact on efforts to reduce DUP of targeted changes in the care pathway.

Method
Data for 343 individuals from the Birmingham, UK lead site of the National EDEN cohort study were analysed.

Results
One-third of the cohort had a DUP exceeding 6 months. The greatest contribution to DUP for the whole cohort came from delays within mental health services, followed by help-seeking delays. It was found that delay in reaching EIS was strongly correlated with longer DUP.

Conclusions
Community education and awareness campaigns to reduce DUP may be constrained by later delays within mental health services, especially access to EIS. Our methodology, based on analysis of care pathways, will have international application when devising strategies to reduce DUP.

Declarations of interest
None.
Duration of Untreated Psychosis – component delays

- **Onset**
- **Help seeking delay**
  - First help-seeking
  - Delay in first ref to MHS
  - Referral to MHS
  - Delay within MHS
  - Delay in ref to EIS
  - Ref to EIS
- **Treatment**
1/3 still have long DUP (> 6 months)

Table 1  Duration of untreated psychosis (DUP) and component delays

<table>
<thead>
<tr>
<th></th>
<th>DUP</th>
<th>Delay in help-seeking</th>
<th>Delay in referral to mental health services</th>
<th>Delay within mental health services</th>
<th>Delay reaching EIS ($t_1$; first help-seeking to EIS acceptance)</th>
<th>Delay reaching EIS ($t_2$; first mental health referral to EIS acceptance)</th>
</tr>
</thead>
<tbody>
<tr>
<td>All patients</td>
<td>Mean (s.d.)</td>
<td>Median</td>
<td>Mean (s.d.)</td>
<td>Median</td>
<td>Mean (s.d.)</td>
<td>Median</td>
</tr>
<tr>
<td>(n = 343)</td>
<td>260.3 (472.5)</td>
<td>50</td>
<td>93.8 (274.1)</td>
<td>0.00</td>
<td>58.1 (228.9)</td>
<td>0.00</td>
</tr>
<tr>
<td>Patients with DUP &lt; 6 months</td>
<td>Mean (s.d.)</td>
<td>Median</td>
<td>Mean (s.d.)</td>
<td>Median</td>
<td>Mean (s.d.)</td>
<td>Median</td>
</tr>
<tr>
<td>(n = 228)</td>
<td>36.6 (44.7)</td>
<td>19</td>
<td>12.7 (27.9)</td>
<td>0.00</td>
<td>8.2 (55.32)</td>
<td>0.00</td>
</tr>
<tr>
<td>Patients with DUP &gt; 6 months</td>
<td>Mean (s.d.)</td>
<td>Median</td>
<td>Mean (s.d.)</td>
<td>Median</td>
<td>Mean (s.d.)</td>
<td>Median</td>
</tr>
<tr>
<td>(n = 115)</td>
<td>704.2 (603.3)</td>
<td>518</td>
<td>254.6 (429.7)</td>
<td>66</td>
<td>157.0 (375.9)</td>
<td>4</td>
</tr>
</tbody>
</table>

EIS, early intervention services.
1/3 still have long DUP (> 6 months)

Mostly accounted for by delays *within* mental health services

| Table 1: Duration of untreated psychosis (DUP) and component delays |
|-----------------------------------------------|-------------|-----------------------------------------------|-------------|-----------------------------------------------|-------------|-----------------------------------------------|-------------|-----------------------------------------------|-------------|-----------------------------------------------|
|                                               | DUP         | Delay in help-seeking                          | Delay in referral to mental health services | Delay within mental health services | Delay reaching EIS ($T_1$) (first help-seeking to EIS acceptance) | Delay reaching EIS ($T_2$) (first mental health referral to EIS acceptance) |
|                                               | Mean (s.d.) | Median                                         | Mean (s.d.) | Median                                         | Mean (s.d.) | Median                                         | Mean (s.d.) | Median                                         | Mean (s.d.) | Median                                         |
| All patients ($n = 343$)                      | 260.3 (472.5) | 50                                            | 93.8 (274.1) | 0.00                                           | 58.1 (228.9) | 0.00                                           | 108.7 (308.9) | 8                                              | 353.7 (607.0) | 111                                           |
| Patients with DUP < 6 months ($n = 228$)      | 36.6 (44.7)  | 19                                            | 12.7 (27.9)  | 0.00                                           | 8.2 (55.32)  | 0.00                                           | 15.7 (28.2)  | 1                                              | 267.7 (493.1) | 66.5                                           |
| Patients with DUP > 6 months ($n = 115$)      | 704.2 (603.3) | 518                                           | 254.6 (429.7) | 66                                             | 157.0 (375.9) | 4                                              | 292.6 (482.1) | 141                                           | 510.1 (760.1) | 212                                           |

EIS, early intervention services.
Impact of the first mental health contact

CAMHS/CMHTs linked to longer DUP

<table>
<thead>
<tr>
<th>First mental health service contact</th>
<th>Delay within mental health services</th>
<th>Delay reaching early intervention services</th>
<th>Duration of untreated psychosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community mental health team (n = 164)</td>
<td>174.37 (411.04)</td>
<td>469.23 (727.76)</td>
<td>367.70 (579.41)</td>
</tr>
<tr>
<td>Child and adolescent mental health services (n = 22)</td>
<td>205.95 (326.58)</td>
<td>360.36 (376.23)</td>
<td>283.82 (334.63)</td>
</tr>
<tr>
<td>Home treatment team (n = 84)</td>
<td>21.52 (62.22)</td>
<td>173.30 (299.30)</td>
<td>129.05 (238.45)</td>
</tr>
<tr>
<td>Psychiatric hospital (n = 43)</td>
<td>36.25 (97.03)</td>
<td>313.79 (639.75)</td>
<td>166.82 (423.64)</td>
</tr>
</tbody>
</table>
Why does first contact with CMHT/CAMHS prolong DUP?

Premature discharge from CMHT common lengthens DUP

<table>
<thead>
<tr>
<th>Table 4</th>
<th>Community mental health team response, mental health service delay and duration of untreated psychosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outcome</td>
<td>Mental health service delay</td>
</tr>
<tr>
<td></td>
<td>Mean (s.d.)</td>
</tr>
<tr>
<td>Referred to home treatment team</td>
<td>92 (233.5)</td>
</tr>
<tr>
<td>Discharged</td>
<td>482.9 (784.8)</td>
</tr>
<tr>
<td>Referred to early intervention services</td>
<td>91 (139.7)</td>
</tr>
</tbody>
</table>
2 months or more after EIS acceptance. The delay in reaching criteria treatment within mental health services was strongly correlated ($r = 0.68$, $P<0.001$) with delay in accessing EIS ($T_2$), following referral to mental health services when psychotic.
### Table 5: Modelling the impact of reducing component delays on duration of untreated psychosis (DUP)

<table>
<thead>
<tr>
<th>Delay</th>
<th>365 days</th>
<th>180 days</th>
<th>90 days</th>
<th>60 days</th>
<th>30 days</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Delay in mental health services</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DUP</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean (s.d.)</td>
<td>220.9 (377.9)</td>
<td>198.6 (366.1)</td>
<td>183.8 (361.5)</td>
<td>175.3 (359.6)</td>
<td>167 (358.5)</td>
</tr>
<tr>
<td>Median</td>
<td>49</td>
<td>49</td>
<td>49</td>
<td>49</td>
<td>32</td>
</tr>
<tr>
<td>n (% with DUP &gt;6 months)</td>
<td>115 (33.5)</td>
<td>115 (33.5)</td>
<td>115 (33.5)</td>
<td>78 (22.7)</td>
<td>74 (21.5)</td>
</tr>
<tr>
<td><strong>Delay in help-seeking</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DUP</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean (s.d.)</td>
<td>223.5 (403.9)</td>
<td>204.6 (392.6)</td>
<td>191.1 (388.7)</td>
<td>184.2 (387.6)</td>
<td>177.0 (386.8)</td>
</tr>
<tr>
<td>Median</td>
<td>49</td>
<td>49</td>
<td>49</td>
<td>49</td>
<td>37</td>
</tr>
<tr>
<td>n (% with DUP &gt;6 months)</td>
<td>115 (33.5)</td>
<td>115 (33.5)</td>
<td>93 (27)</td>
<td>89 (26)</td>
<td>83 (24)</td>
</tr>
</tbody>
</table>
Reducing treatment delay within mental health services and impact on DUP

Don't turn your back on the symptoms of psychosis: the results of a proof-of-principle, quasi-experimental intervention to reduce duration of untreated psychosis

Charlie Connor, Max Richards, Nick Freeman, Colin Palmer, Sunta Chana, Clare Baker, Paul Patterson and Swaran Singh

Abstract

Background: No evidence-based approach to reduce duration of untreated psychosis (DUP) has been effective in the UK. Existing interventions have many components and have been difficult to replicate. The majority of DUP in Birmingham, UK is accounted for by delays within mental health services (MHS) followed by help-seeking delay; and we hypothesise, these require explicit targeting. This study examined the feasibility and impact of an intervention to reduce DUP, targeting help-seeking and MHS delays.

Methods: A dual-component intervention, comprising a direct care pathway for 16-25 year olds, and a community psychosis awareness campaign, using our youth-friendly website as the central hub, was implemented, targeting the primary sources of care pathway delays experienced by those with long DUP. Evaluation, using a quasi-experimental design, compared DUP of cases in two areas of the city receiving early detection vs detection as usual, controlling for baseline DUP in each area.

Results: DUP in the intervention area was reduced from a median 71 days (mean 285) to 39 days (mean 104) following the intervention, with no change in the control area. Relative risk for the reduction in DUP was 0.34 (95% CI 0.35 to 0.88, p = 0.004). Delays in MHS and help-seeking were also reduced.

Conclusions: Our targeted approach appears to be successful in reducing DUP and could provide a generalisable methodology applicable in a variety of healthcare contexts with differing sources of delay. More research is needed, however, to establish whether our approach is truly effective.

Trial registrations: ISRCTN45058713 - 30 December 2012.
Relative risk for the reduction in DUP  = 0.736 (95% CI 0.350 to 0.893; p=.0039)
Phase 4: National standards and monitoring.
Implementing the Early Intervention in Psychosis Access and Waiting Time Standard: Guidance

5. The standard requires that, from 1 April 2016, more than 50% of people experiencing first episode psychosis commence a National Institute for Health and Care Excellence (NICE)-recommended package of care within two weeks of referral. Treatment will be deemed to have commenced when the person:
   a. has had an initial assessment; AND
   b. has been accepted on to the caseload of an EIP service capable of providing a full package of NICE-recommended care; AND
   c. has been allocated to and engaged with by an EIP care coordinator.
4.2 Measuring and reporting performance against the referral to treatment (RTT) waiting time requirement

4.2.1 Measuring the clock start: referral, recognition and initial assessment

Referral and recognition

Fig 1: Referral to clock start

Referrer suspects FEP

Urgent/emergency referral made flagged as suspected FEP

Referral flagged as suspected FEP*

Is there a central triage point?

YES: Clock starts when central triage point receives referral

Onward referral to EIP service

NO: Clock starts when EIP service receives referral

Person invited for EIP assessment

Triaged as clearly not psychosis: referral removed from RTT pathway

*If assessed by the central triage point as suspected FEP this referral should be flagged and moved on to the first episode pathway, and the clock will start on the day the central triage received the referral.

Key: FEP = first episode psychosis; RTT = referral to treatment
**National Level Data**

<table>
<thead>
<tr>
<th>Period</th>
<th>&gt;6-2 weeks</th>
<th>&gt;2-6 weeks</th>
<th>&gt;6-12 weeks</th>
<th>12 plus</th>
<th>Total number of completed pathways (all)</th>
<th>% within 2 weeks</th>
</tr>
</thead>
<tbody>
<tr>
<td>December 2015</td>
<td>623</td>
<td>230</td>
<td>70</td>
<td>81</td>
<td>886</td>
<td>50.0%</td>
</tr>
<tr>
<td>January 2016</td>
<td>530</td>
<td>251</td>
<td>88</td>
<td>41</td>
<td>908</td>
<td>58.4%</td>
</tr>
<tr>
<td>February 2016</td>
<td>687</td>
<td>261</td>
<td>78</td>
<td>26</td>
<td>1,052</td>
<td>65.0%</td>
</tr>
<tr>
<td>March 2016</td>
<td>720</td>
<td>281</td>
<td>96</td>
<td>21</td>
<td>1,118</td>
<td>64.4%</td>
</tr>
<tr>
<td>April 2016</td>
<td>782</td>
<td>289</td>
<td>102</td>
<td>32</td>
<td>1,204</td>
<td>60.0%</td>
</tr>
<tr>
<td>May 2016</td>
<td>788</td>
<td>276</td>
<td>63</td>
<td>34</td>
<td>1,162</td>
<td>67.5%</td>
</tr>
<tr>
<td>June 2016</td>
<td>862</td>
<td>226</td>
<td>51</td>
<td>27</td>
<td>1,177</td>
<td>73.3%</td>
</tr>
<tr>
<td>July 2016</td>
<td>938</td>
<td>245</td>
<td>54</td>
<td>30</td>
<td>1,257</td>
<td>74.6%</td>
</tr>
<tr>
<td>August 2016</td>
<td>875</td>
<td>198</td>
<td>51</td>
<td>16</td>
<td>1,142</td>
<td>70.6%</td>
</tr>
<tr>
<td>September 2016</td>
<td>921</td>
<td>206</td>
<td>43</td>
<td>16</td>
<td>1,189</td>
<td>77.5%</td>
</tr>
<tr>
<td>October 2016</td>
<td>963</td>
<td>221</td>
<td>48</td>
<td>25</td>
<td>1,257</td>
<td>76.0%</td>
</tr>
<tr>
<td>November 2016</td>
<td>930</td>
<td>218</td>
<td>34</td>
<td>20</td>
<td>1,203</td>
<td>77.5%</td>
</tr>
<tr>
<td>December 2016</td>
<td>816</td>
<td>234</td>
<td>37</td>
<td>16</td>
<td>1,097</td>
<td>74.4%</td>
</tr>
<tr>
<td>January 2017</td>
<td>853</td>
<td>190</td>
<td>66</td>
<td>16</td>
<td>1,119</td>
<td>76.2%</td>
</tr>
<tr>
<td>February 2017</td>
<td>887</td>
<td>189</td>
<td>36</td>
<td>15</td>
<td>1,106</td>
<td>80.2%</td>
</tr>
<tr>
<td>March 2017</td>
<td>901</td>
<td>272</td>
<td>40</td>
<td>16</td>
<td>1,248</td>
<td>73.7%</td>
</tr>
<tr>
<td>April 2017</td>
<td>674</td>
<td>201</td>
<td>39</td>
<td>16</td>
<td>930</td>
<td>72.5%</td>
</tr>
<tr>
<td>May 2017</td>
<td>806</td>
<td>203</td>
<td>34</td>
<td>11</td>
<td>1,130</td>
<td>78.0%</td>
</tr>
<tr>
<td>June 2017</td>
<td>873</td>
<td>193</td>
<td>39</td>
<td>22</td>
<td>1,127</td>
<td>77.5%</td>
</tr>
<tr>
<td>July 2017</td>
<td>824</td>
<td>226</td>
<td>36</td>
<td>14</td>
<td>1,100</td>
<td>74.9%</td>
</tr>
<tr>
<td>August 2017</td>
<td>816</td>
<td>207</td>
<td>45</td>
<td>16</td>
<td>1,084</td>
<td>75.3%</td>
</tr>
<tr>
<td>September 2017</td>
<td>818</td>
<td>187</td>
<td>47</td>
<td>16</td>
<td>1,087</td>
<td>76.7%</td>
</tr>
<tr>
<td>October 2017</td>
<td>834</td>
<td>178</td>
<td>50</td>
<td>16</td>
<td>1,082</td>
<td>77.3%</td>
</tr>
<tr>
<td>November 2017</td>
<td>787</td>
<td>230</td>
<td>50</td>
<td>25</td>
<td>1,089</td>
<td>72.3%</td>
</tr>
<tr>
<td>December 2017</td>
<td>698</td>
<td>198</td>
<td>39</td>
<td>16</td>
<td>855</td>
<td>72.2%</td>
</tr>
<tr>
<td>January 2018</td>
<td>722</td>
<td>238</td>
<td>65</td>
<td>17</td>
<td>1,042</td>
<td>69.3%</td>
</tr>
<tr>
<td>February 2018</td>
<td>807</td>
<td>185</td>
<td>38</td>
<td>24</td>
<td>1,052</td>
<td>76.7%</td>
</tr>
<tr>
<td>March 2018</td>
<td>780</td>
<td>179</td>
<td>49</td>
<td>26</td>
<td>1,049</td>
<td>76.5%</td>
</tr>
<tr>
<td>April 2018</td>
<td>783</td>
<td>204</td>
<td>44</td>
<td>21</td>
<td>1,052</td>
<td>74.4%</td>
</tr>
<tr>
<td>May 2018</td>
<td>846</td>
<td>210</td>
<td>47</td>
<td>12</td>
<td>1,109</td>
<td>75.7%</td>
</tr>
<tr>
<td>June 2018</td>
<td>829</td>
<td>190</td>
<td>47</td>
<td>17</td>
<td>1,083</td>
<td>77.5%</td>
</tr>
<tr>
<td>July 2018</td>
<td>816</td>
<td>210</td>
<td>37</td>
<td>15</td>
<td>1,079</td>
<td>75.9%</td>
</tr>
<tr>
<td>August 2018</td>
<td>806</td>
<td>234</td>
<td>30</td>
<td>16</td>
<td>1,168</td>
<td>74.4%</td>
</tr>
<tr>
<td>September 2018</td>
<td>766</td>
<td>171</td>
<td>60</td>
<td>16</td>
<td>1,007</td>
<td>76.1%</td>
</tr>
<tr>
<td>October 2018</td>
<td>952</td>
<td>197</td>
<td>45</td>
<td>16</td>
<td>1,212</td>
<td>78.5%</td>
</tr>
<tr>
<td>November 2018</td>
<td>872</td>
<td>213</td>
<td>45</td>
<td>14</td>
<td>1,144</td>
<td>78.2%</td>
</tr>
<tr>
<td>December 2018</td>
<td>792</td>
<td>169</td>
<td>42</td>
<td>13</td>
<td>999</td>
<td>76.7%</td>
</tr>
<tr>
<td>January 2019</td>
<td>811</td>
<td>206</td>
<td>49</td>
<td>13</td>
<td>1,079</td>
<td>75.2%</td>
</tr>
<tr>
<td>February 2019</td>
<td>742</td>
<td>171</td>
<td>53</td>
<td>31</td>
<td>1,000</td>
<td>74.5%</td>
</tr>
<tr>
<td>March 2019</td>
<td>755</td>
<td>171</td>
<td>45</td>
<td>20</td>
<td>998</td>
<td>76.2%</td>
</tr>
</tbody>
</table>
Phase 5: Improving outcomes from Early Intervention
EIP ‘non-responders’

- Clients of early intervention services for 12–30 months
- Low levels of structured activity following 1 year in EIS (defined as ≤30 hrs/week on the Time Use Survey.)
Social Recovery orientated Cognitive Behavioural Therapy (SR-CBT)

- Identify hopes and expectations as a young person
- Identify and overcome barriers to activity (eg. Hopelessness, social anxiety, family acceptance, stigma)
- Motivational interviewing: short and long term goals.
- Behavioural activation and coaching.
- Intensive outreach approach
Primary hypothesis

The social recovery intervention will lead to improvements in the time spent in structured activity.

Design

- Single blind, ITT pragmatic trial
- 9 month treatment envelope
- Follow up at 9 months (primary outcome) and 15 months.
Design

• Single blind, ITT pragmatic trial

• 9 month treatment envelope

• Follow up at 9 months (primary outcome) and 15 months.
At baseline

10/155 in some level of paid employment.

Mean 7.45 hour/week of structured activity (1.5-15)
Results

Impact on primary outcome: time spent in ‘structured activities’.
Social recovery therapy + EIS was associated with an increase in structured activity of 8.1 hrs/week (95% CI 2.5–13.6; p=0.0050) compared with EIS alone.
Secondary outcomes:

- **Negative symptoms**: ✓
- **Social anxiety**: ✓
- **Hopelessness**: ✓
- **Hope**: ✓
- **Meaning in life**: ✓
- **Depression**: X
- **Positive symptoms**: X
Phase 6: Phase-specific interventions.
Vocational intervention in first-episode psychosis: individual placement and support v. treatment as usual

Eóin Killackey, Henry J. Jackson and Patrick D. McGorry

Background
Unemployment is a major problem for people with first-episode psychosis and schizophrenia. This has repercussions for the economy, social functioning and illness prognosis.

Aims
To examine whether a vocational intervention – individual placement and support (IPS) – which has been found to be beneficial in populations with chronic schizophrenia, was a useful intervention for those with first-episode psychosis.

Method
A total of 41 people with first-episode psychosis were randomised to receive either 6 months of IPS + treatment as usual (TAU) (n=20) or TAU alone (n=21).

Results
The IPS group had significantly better outcomes on level of employment (13 v. 2, P<0.001), hours worked per week (median 38 v. 22.5, P=0.006), jobs acquired (23 v. 3) and longevity of employment (median 5 weeks v. 0, P=0.021). The IPS group also significantly reduced their reliance on welfare benefits.

Conclusions
Individual placement and support has good potential to address the problem of vocational outcome in people with first-episode psychosis. This has economic, social and health implications.

Declaration of interest
This research was supported by a National Health and Medical Research Council Program Grant (ID: 350241) and an unrestricted study grant from Bristol Myers Squibb. Orygen Research Centre is supported by the Colonial Foundation.
ADEPP

The ADEPP study is a randomised controlled trial with an internal pilot looking at the use of antidepressant for the prevention of depression following first episode psychosis.

The aim of the ADEPP trial is to establish the effectiveness and cost effectiveness of an antidepressant medication (sertraline) for the prevention of a depressive episode following first episode psychosis.

This page explains the ADEPP study for researchers who are taking part in the study, or who are considering doing so. A summary for participants is here.
The Early Youth Engagement in first episode psychosis (EYE-2) study

- Cluster randomized controlled trial of effectiveness, cost effectiveness and implementation of the team-based motivational engagement intervention

- evaluated with respect to disengagement & routinely collected outcome data (HoNOS, QPR and DIALOG) in 1059 new FEP service users aged 14-35 in 5 sites across the UK.
The traumatic experience of first-episode psychosis: A systematic review and meta-analysis

Rebecca Rodrigues *, Kelly K. Anderson *a,b

* Department of Epidemiology & Biostatistics, School of Medicine & Dentistry, The University of Western Ontario, London, Ontario, Canada
b Department of Psychiatry, Schulich School of Medicine & Dentistry, The University of Western Ontario, London, Ontario, Canada

ABSTRACT

Introduction: A psychotic episode may be sufficiently traumatic to induce symptoms of post-traumatic stress disorder (PTSD), which could impact outcomes in first-episode psychosis (FEP). The objectives of this systematic review and meta-analysis were to estimate the prevalence of PTSD symptoms in relation to psychosis in FEP and to identify risk factors for the development of PTSD symptoms.

Methods: We searched electronic databases and conducted manual searching of reference lists and tables of contents to identify relevant studies. Quantitative studies were included if the population was experiencing FEP and PTSD was measured in relation to psychosis. Prevalence of PTSD symptoms and diagnoses were meta-analysed using a random effects model. Potential risk factors for PTSD symptoms were summarized qualitatively.

Results: Thirty studies were included. Eight studies assessed PTSD symptoms, three studies assessed full PTSD, and two studies assessed both. The pooled prevalence of PTSD diagnosis was 30% (95% CI 21%-40%), and the pooled prevalence of PTSD symptoms was 42% (95% CI 30%-53%), and the pooled prevalence of a PTSD diagnosis was 30% (95% CI 21%-40%). Evidence included studies implicit depression and anxiety as potential risk factors for PTSD symptoms. Evidence-based interventions to treat PTSD symptoms in the context of FEP are needed to address this burden and improve outcomes after the first psychotic episode. Further studies are needed to clarify the associated risk factors.

© 2017 Elsevier B.V. All rights reserved.
The CIRCuiTS study (Implementation of cognitive remediation in early intervention services): protocol for a randomised controlled trial

Til Wykes1,4,6, Eileen Joyce1, Taja Velikonja1, Andrew Watson1, Gregory Arons2, Max Birchwood4, Matteo Cella1, Sue Dopson5, David Foulds5, Kathy Greenwood7, Sonia Johnson, Paul McClure6, Jesus Perez1, Andrew Pickles1, Clare Reeder1, Diana Rose7, Swaran Singh1, Dominic Stringer1, Matthew Taylor1, Fumina Taylor1 and Rachel Uphargrove13

Abstract

Background: Cognitive problems in people with schizophrenia predict poor functional recovery even with the best possible rehabilitation opportunities and optimal medication. A psychological treatment known as cognitive remediation therapy (CRT) aims to improve cognition in neuropsychiatric disorders, with the ultimate goal of improving functional recovery. Studies suggest that intervening early in the course of the disorder will have the most benefit. So, this study will be based in early intervention services which treat individuals in the first few years following the onset of the disorder.

The overall aim is to investigate different methods of CRT.

Methods: This is a multicentre, randomised, single-blinded, controlled trial based in early intervention services in National Health Service Mental Health Trusts in six English research sites. Three different methods of providing CRT (intensive, group, and independent) will be compared with treatment as usual. We will recruit 750 service users aged between 16 and 45 over 3 years who have a research diagnosis of non-affective psychosis and will be at least 3 months from the onset of the first episode of psychosis. The primary outcome measure will be the degree to which participants have achieved their stated goals using the Goal Attainment Scale. Secondary outcome measures will include improvements in cognitive function, social function, self-esteem, and clinical symptoms.

Discussion: It has already been established that cognitive remediation improves cognitive function in people with schizophrenia. Successful implementation in mental health services has the potential to change the recovery trajectory of individuals with schizophrenia-spectrum disorders. However, the best mode of implementation, in terms of efficacy, service user and team preference, and cost-effectiveness is still unclear. The CIRCuiTS trial will provide guidance for a large-scale rollout of CRT to mental health services where cognitive difficulties impact recovery and resilience.

Trial registration: ISRCTN18088680. Registered on 6 June 2016.

Keywords: Cognition, Cognitive enhancement, Cognitive remediation, Cognitive training, Early psychosis, Implementation, Functioning, Psychological therapy, Recovery, Schizophrenia.
Social anxiety disorder in first-episode psychosis: incidence, phenomenology and relationship with paranoia

Maria Michail and Max Birchwood

Background
Social anxiety disorder constitutes a significant problem for people with psychosis. It is unclear whether this is a by-product of persecutory thinking.

Aims
To compare the phenomenology of social anxiety disorder in first-episode psychosis with that in a group without psychosis. The relationship between social anxiety and psychosis symptoms was investigated.

Method
A sample of people with first-episode psychosis (FEP group) was compared with a sample with social anxiety disorder without psychosis (SaD group).

Results
Of the individuals in the FEP group (n = 80) 25% were diagnosed with an ICD-10 social anxiety disorder (FEP/SaD group); a further 11.6% reported severe difficulties in social encounters. The FEP/SaD and SaD groups reported comparable levels of social anxiety, autonomic symptoms, avoidance and depression. Social anxiety in psychosis was not related to the positive symptoms of the Positive and Negative Syndrome Scale (PANSS) including suspiciousness/persecution. However, a significantly greater percentage of socially anxious vs. non-socially anxious individuals with psychosis expressed perceived threat from persecutors, although this did not affect the severity of social anxiety within the FEP/SaD group. The majority of those in the FEP/SaD group did not have concurrent persecutory delusions.

Conclusions
Social anxiety is a significant comorbidity in first-episode psychosis. It is not simply an epiphenomenon of psychotic symptoms and clinical paranoia, and it has more than one causal pathway. For a subgroup of socially anxious people with psychosis, anticipated harm is present and the processes that underlie its relationship with social anxiety warrant further investigation.

Declaration of interest
None.
25 years of EIP: what have we learned?

• Early phase of psychosis a ‘critical period’ for long term outcome.
• Assuring interventions engagement and hope via dedicated teams with youth ethos works; popular with young people; and cost-effective.
• For some the EIP approach may need to be extended to maintain gains.
• But EIP works best if DUP < 3 to 6 months. This needs careful audit in each setting.
• Generic CMHTs alienate young people and best avoided. No evidence base.
• There are EIP ‘non-responders’ esp wrt severe social disability. Need to adapt model with new interventions.
• Need for phase-specific interventions, esp severe disability and affective disorder.
Thank you

m.j.birchwood@warwick.ac.uk