

Institution: University of Birmingham		
Unit of Assessment: 4 – Psychology, Psychiatry and Neuroscience		
Title of case study: Enhancing clinical guidelines and professional training to transform the management of early psychosis and schizophrenia		
Period when the underpinning research was undertaken: 2010 - 2020		
Details of staff conducting the underpinning research from the submitting unit:		
Name(s):	Role(s) (e.g. job title):	Period(s) employed by submitting HEI:
Rachel Upthegrove	Professor of Psychiatry and Youth Mental Health	August 2012 – to date
Max Birchwood	Honorary Professor of Youth Mental Health	July 1985 – November 2015
Period when the claimed impact occurred: March 2014 – July 2020		
Is this case study continued from a case study submitted in 2014? No		
1. Summary of the impact		
<p>Patient outcomes have been transformed by reducing delays in the treatment of psychotic disorders. Based on our research, new NHS standards on 'Access and Waiting Times' for early intervention in psychosis services have greatly reduced the mean duration of untreated psychosis by over 150 days. This change has both improved the chances of recovery and reduced the risk of suicide for patients and is a model which is now being adopted internationally. Our evidence has also led to the enhancement of clinical guidelines from NICE and the British Association for Psychopharmacology which now emphasise the importance of treating depression in early psychosis and schizophrenia. This has translated into improved CPD and training standards across the world with professionals using resources informed by research conducted at the University of Birmingham.</p>		
2. Underpinning research		
<p>Professor Birchwood's research included the first national observational cohort studies, trials and evaluations of service development for patients with early psychosis. His research demonstrated that, in 2008–2009, one third of patients experienced durations of untreated psychosis exceeding 6 months [R1]. He argued that this duration was not inevitable, as the greatest contribution to treatment delays occurred within the mental health services and could be halved by advancing the access to Early Intervention in Psychosis (EIP) services to 2 weeks [R1].</p> <p>Birchwood and Singh (University of Warwick) then completed the UK's first public health trial of treatment delay in psychosis in 2014, showing that by changing care pathways for young people within UK mental health services, outlining the clear benefits of reducing the mean duration of untreated psychosis [R2, R3]. Birchwood had earlier shown that early treatment would lead to long-term improvement in the illness course and reduction in disability. Birchwood and Singh's research guided the Department of Health's mental health policy framework as part of the 5-year NHS 'National Plan' for 2016–2021.</p> <p>Subsequent research by Upthegrove and Birchwood showed that the prevalence of depression in young people during first episode psychosis is much higher than previous cross-sectional studies had demonstrated, and that up to 80% of young people with psychosis experience depression [R4]. They showed that this predicts suicidal behaviour more significantly than any</p>		

other symptom [R4]. These findings informed what treatments should be given early in psychosis.

Upthegrove's research has since emphasised the importance of the correct management of depression in psychosis to both prevent suicide and to improve treatment outcomes including the social, economic, and personal status for young people. For example, a systematic review and meta-analysis demonstrated a clear beneficial effect of antidepressant medication for the treatment of depression in schizophrenia [R5] — a paper that is highly cited, has attracted widespread media attention and has informed international treatment guidelines and consensus statements [R6].

The research has further identified the urgent need for clinical trials examining the prevention of depression in early psychosis and schizophrenia, in order to improve outcomes and prevent suicide. An approved and funded NIHR HTA-funded multisite trial ('ADEPP'), launched in 2019 and led by Upthegrove, will be the first to address these questions (see Grants).

Key Findings (KF)

1. Early intervention in psychosis led by specialised multidisciplinary teams can improve outcomes [R1, R2, R3];
2. Reducing untreated psychosis is possible by changing care pathways [R2, R3];
3. Depression is very common in and after first episode psychosis [R4];
4. Identifying and treating co-morbid depression in early psychosis is possible [RR4];
5. Treatments for depression in first episode psychosis are likely to be effective [R5, R6].

3. References to the research

R1. Birchwood, M., Connor, C., Lester, H., Patterson, P., Freemantle, N., Marshall, M., Fowler, D., Lewis, S., Jones, P., Amos, T., Everard, L., and Singh, S.P. (2013) 'Reducing Duration of Untreated Psychosis: Care Pathways to Early Intervention in Psychosis Services', *British Journal of Psychiatry*, 203(1): 58–64. DOI: 10.1192/bjp.bp.112.125500

This output has 89 citations and an FWCI of 3.87 (Scopus, 25th February 2021), the journal is in the top 4% for Psychiatry and Mental Health (CiteScore rank 2019)

R2. Connor C, **Birchwood M**, Palmer C, et al. Don't turn your back on the symptoms of psychosis: a proof-of-principle, quasi-experimental public health trial to reduce the duration of untreated psychosis in Birmingham, UK. *BMC Psychiatry*. 2013;13:67. DOI: 10.1186/1471-244X-13-67

R3. Birchwood M, Connor C, Lester H, et. al. Reducing duration of untreated psychosis: care pathways to early intervention in psychosis services. *The British Journal of Psychiatry* 2013, 1–7. DOI:10.1192/bjp.bp.112.125500.

R4. Upthegrove, R., Birchwood, M., Ross, K., Brunett, R., McCollum, R., and Jones, L. (2010) 'The evolution of depression and suicidality in first episode psychosis', *Acta Psych Scandinavica*, 122(3): 211–218. DOI: 10.1111/j.1600-0447.2009.01506.x

This output has 114 citations (Scopus, 25th February 2021) and the journal is in the top 5% for Psychiatry and Mental Health (CiteScore rank 2019)

R5. Gregory, A., Mallikarjun, P., and **Upthegrove, R.** (2017) 'Treatment of Depression in Schizophrenia: A Systematic Review and Meta-Analysis', *British Journal of Psychiatry*, 211(4): 198–204. DOI: 10.1192/bjp.bp.116.190520

R6. Barnes, T.R., Drake, R. ... **Upthegrove, R.,** Wieck, A., and Yung, A.R. (2019) 'Evidence-based guidelines for the pharmacological treatment of schizophrenia: Updated recommendations from the British Association for Psychopharmacology', *Journal of Psychopharmacology*, 34(1): 3–78. DOI: 10.1177/0269881119889296

These British Association for Psychopharmacology guidelines are an update of the 2011 version, from a consensus meeting held in 2017.

Grants

1. NIHR (West Midlands) SUsstaining Positive Engagement and Recovery (SuperEDEN) the next step after Early Intervention for Psychosis. Birchwood, PI. 2010–2015, £2,047,092
2. NIHR CLAHRC (West Midlands): Youth Mental Health theme. Birchwood, CI. 2013–2019, £1.2M
3. EU-FP7 Personalised Prognostic Tools for Early Psychosis Management (PRONIA) 2014–2019. Upthegrove, UK PI, Birmingham award £702,035
4. NIHR HTA Antidepressants for the prevention of depression in First Episode Psychosis (ADEPP) Upthegrove, CI. 2019–2024, £2.3M

4. Details of the impactImproved patient outcomes by reducing treatment delay at the onset of psychosis

We have **improved patient outcomes** by reducing treatment delay nationally for the management and care of patients with psychosis. All people presenting within NHS England/Wales with first episode psychosis are now managed by EIP service teams, the use of which has been demonstrated to reduce the duration of untreated psychosis [KF1]. With approximately 10,000 new cases of psychosis each year in England alone, the care of thousands of people has been improved by these changes.

Influenced by our research, NHS England developed a *Five Year Forward View on Mental Health* [S1]. This document included the need to **set standards** for a maximum length of time between the first episode psychosis and treatment, recommending 2 weeks. These standards were published in 2016 as guidance on 'Implementing the Early Intervention in Psychosis Access and Waiting Time Standard' [S2]. Birchwood was given special acknowledgement by the authors [S2] and his work [R1] cited.

The impact of this change has been a significant **improvement in provision and access to services** with EIP coverage across England and Wales and is evidenced by NHS services monitoring access times in line with the guidance [S2]. By June 2018, three quarters of EIP teams delivered care within 2 weeks of the patient's referral compared to one third in June 2015, beating the long-term target set for 2020. By Sept. 2019, this had improved further with treatment commencing within 2 weeks for 79% of patients [S3]. The harmful effects of a long period of untreated psychosis are well documented and are associated with risk of occupational and social decline, treatment resistant symptoms, family break up and suicide. The changes have therefore demonstrably **reduced the negative impact of psychosis on patients' lives**. As an example, the University of Manchester reported that NHS trusts which were implementing service changes such as EIP had 13–20% lower annual incidence of completed suicide [S4].

This model of treatment [KF2] now extends beyond the UK. Birchwood was a founding member of the International Association for Youth Mental Health (IAYMH) which is promoting these reforms across the globe. **Decisions to reform health services informed by the research** have now been reached in Australia (HEADSPACE/ORYGAN), Ireland (JIGSAW) [S5] and Canada (ACCESS-OM). The President Elect of the World Psychiatric Association states

research led by the University of Birmingham [...] has shaped the way the international community approaches decisions such as when and how to intervene with developing psychotic disorders and the service structures in Birmingham for Early Intervention in Psychosis have served as template for excellence many countries have, and aim to, emulate. [...] I cannot highlight enough the enormous contribution this has made to the treatment of severe mental illnesses, which effect [sic] over 20 million people worldwide. [S6]

New guidelines and patient care practices at the onset of early psychosis

Patient treatment has improved due to changes in clinical guidelines informed by our research. The care administered to patients follows the National Institute of Health and Care Excellence (NICE) guidelines for the prevention and management of psychosis and schizophrenia. These were updated in 2014 and now stipulate that patients should be routinely monitored for depression with appropriate treatments offered [S7]. The guidelines cite 5 papers by Upthegrove and Birchwood, published 2003–2010 [KF3, 4, 5].

Upthegrove's research also significantly informed the British Association for Psychopharmacology (BAP) Guidelines on the treatment of depression in early psychosis and schizophrenia, which were revised in 2019. BAP is the largest psychopharmacology professional body in Europe and the second largest in the world. Their guidelines are freely available and accessed over 6,000 times every year. The guidelines cite 8 Upthegrove research papers including R3, R4 and R5. The President Elect of the World Psychiatric Association states:

Work led by Professor Rachel Upthegrove [...] has led to specific guidance on the assessment and management of depression in early psychosis in National Institute of Health and Care Excellence (NICE) Guidelines and British Association for Psychopharmacology Guidelines; both of which are consulted by psychiatrists around the world. [S6]

Enhancing CPD training of health professionals internationally

The majority of practising psychiatrists (over 5,000 in the UK, together with members of the Royal College of Psychiatrists in Canada, Australia and Asia) use BAP and NICE resources to inform their clinical practice.

BAP also organises heavily over-subscribed, bi-annual training events in psychopharmacology for **continuing professional development**. Upthegrove has helped to shape the teaching content for the BAP Clinical Certificate and Masterclass CPD training, reaching over 250 psychiatrists in the UK every year [S8], with her teaching underpinned by KF4 and KF5 on the treatment of schizophrenia.

Her research [KF5] has also been used as expert input on the treatment of psychosis for the *Pocket Prescriber for Psychiatrists*, also written in association with the BAP [S9]. This new title adds to the *Pocket Prescriber* series in physical health disorders, ubiquitously used by the UK's 53,000 junior doctors. Upthegrove is listed as a contributor, and research papers R5 and R6 are cited.

Based on these guidelines and resources, **CPD and training standards have been transformed** by our research. An online survey [S10] of international registered psychiatrists on the practical impact of the NICE, BAP and *Pocket Prescriber* guidelines demonstrated that 63.4% of psychiatrists (UK total of 4,921, Royal College Psychiatrists) who treat people with psychosis follow these international guidelines and use University of Birmingham research findings in conducting their work. An estimated 115,000 individuals in the UK have had their care improved by these guidelines, informed by research conducted at the University of Birmingham.

5. Sources to corroborate the impact

S1: [5 Year Forward View of Mental Health: A report from the independent Mental Health Taskforce to the NHS in England](#). February 2016.

This report details the strategy and targets for national implementation of Early Intervention in Psychosis services over 2016–2021.

S2: National guidelines for NHS England on access and waiting times. [‘Implementing the Early Intervention in Psychosis Access and Waiting Time Standard: Guidance’](#), 2016. NHS England Publications Gateway Reference 04294.

These guidelines give special acknowledgement to Birchwood (page 40).

S3: NHS England [Press release summary of EIS access times](#), documenting a significant reduction in treatment delays since 2015. [Dated September 2019]

The press release also links to the full report.

S4: [National Confidential Inquiry into Suicide and Homicide by People with Mental Illness: Making Mental Health Care Safer: Annual Report and 20-year Review](#). October 2016. University of Manchester.

This commissioned report details the impact of service changes including EIP on suicide in England. See Key Findings (#23): “Safer services”.

S5: McGorry, Bates and Birchwood (2013). Designing youth mental health services for the 21st century: examples from Australia, Ireland and the UK. BJP 202, s30–s35.

DOI: [10.1192/bjp.bp.112.119214](https://doi.org/10.1192/bjp.bp.112.119214)

S6: Testimonial from President Elect of the World Psychiatric Association (WPA). Contact: Dr Afsal Javed. [Dated 3 February 2020]

S7: NICE guidelines on [Psychosis and Schizophrenia; prevention and management](#) (2014). S1.3.3.3: directive to routinely monitor for and treat depression in early psychosis

“1.3.3.3 Routinely monitor for other coexisting conditions, including depression, anxiety and substance misuse particularly in the early phases of treatment. [2009; amended 2014]”

The guidelines cite 5 papers by Upthegrove and Birchwood, published 2003–2010. This guideline was reviewed in 2019 and remains active.

S8: British Association for Psychopharmacology (BAP) Continuing professional development courses for schizophrenia

Training: [Master Class](#) and [Clinical Certificate](#) course content (Actual content is pay-to-access online). [Accessed 22 June 2020]

S9: British Association for Psychopharmacology - [Pocket Prescriber Psychiatry](#) - Upthegrove is listed as a contributor, and research papers R5 and R6 are cited. [Available on request]

S10: Bashir, Griffiths and Upthegrove. Recognition and Management of Depression in Early Psychosis – technical report on usage of guidelines.