



## Research Paper

# Clinicians' views of treatment types for first episode psychosis delivered in a randomised controlled trial (MAPS)

Byrne RE<sup>a,b,\*</sup>, Reeve S<sup>c</sup>, Bird JC<sup>d,e</sup>, Jones W<sup>a</sup>, Shiers D<sup>a</sup>, Morrison AP<sup>a,b</sup>, Pyle M<sup>a,b</sup>, Peters S<sup>b</sup>

<sup>a</sup> Psychosis Research Unit, Greater Manchester Mental Health NHS Foundation Trust, Prestwich, Manchester, M25 3BL, UK

<sup>b</sup> Division of Psychology and Mental Health, University of Manchester, Manchester, M13 9PL, UK

<sup>c</sup> Department of Clinical, Educational, and Health Psychology, University College London, WC1E 6BT

<sup>d</sup> Department of Psychiatry, Medical Sciences Division, University of Oxford, Warneford Hospital, Oxford, OX3 7JX, UK

<sup>e</sup> Oxford Health NHS Foundation Trust, Warneford Hospital, Oxford, OX3 7JX, UK

## ARTICLE INFO

## Article History:

Received 7 February 2020

Revised 27 May 2020

Accepted 28 May 2020

Available online 7 July 2020

## Keywords:

Qualitative

Child

Adolescent

Family

Psychosis

Antipsychotic medication

Psychological Intervention

Trial

## ABSTRACT

**Background:** Clinicians' treatment beliefs could affect the feasibility of delivering different treatments in a randomised controlled trial (RCT). In MAPS (Managing Adolescent first Episode Psychosis: a feasibility Study), adolescents with first episode psychosis (FEP) were randomly allocated to receive either antipsychotic medication (AP), psychological intervention (cognitive behavioural therapy [CBT] and family intervention [FI]), or both. We conducted a nested qualitative study to investigate clinicians' views of these treatments.

**Methods:** Purposive sampling identified seventeen clinicians from CAMHS and Early Intervention services with prescribing responsibilities for 14–18 year olds at three participating MAPS sites. Individual participants were interviewed to examine their views of treatments in the MAPS trial. Interview transcripts were analysed using inductive Thematic Analysis.

**Findings:** Clinicians viewed the decision to refer adolescents to the MAPS trial as requiring careful clinical judgement. Assessment complexity and diagnostic uncertainty had to be balanced against the urgency for treatment to reduce risk and distress. Underlying influences including duty of care and treatment beliefs underpinned decisions. Clinicians consistently valued AP as the primary treatment for FEP, with CBT and/or FI seen as helpful secondary treatment options. Nevertheless, the potential harms of prescribing AP, or not, to such a young population were highlighted as being of concern in treatment decision-making, and fostered reluctance to refer into a RCT.

**Interpretation:** The design and delivery of RCTs involving young people experiencing FEP should consider the views of responsible clinicians, recognising that perceived treatment urgency, limitations in diagnostic precision, and existing treatment beliefs may influence trial processes.

**Funding:** NIHR HTA programme (project number 15/31/04).

© 2020 The Author(s). Published by Elsevier Ltd. This is an open access article under the CC BY-NC-ND license. (<http://creativecommons.org/licenses/by-nc-nd/4.0/>)

## 1. Introduction

Psychosis most often emerges during adolescence or young adulthood [1,2]. The UK's NICE guidance for treatment of psychosis and schizophrenia in children and young people (CYP) recommends that both pharmaceutical (antipsychotic medication [AP]) and psychological (cognitive behavioural therapy [CBT] and family intervention [FI]) treatments are offered to CYP experiencing a first episode of psychosis [3]. However, the evidence to support this guidance is largely extrapolated from studies conducted with adults, which limits its value as treatment effects observed in adults, positive or negative,

may occur differently in younger people. The MAPS feasibility trial (Managing Adolescent first Episode Psychosis: a feasibility Study) was developed to address the need to improve this evidence base [4,5]. MAPS randomised adolescents aged 14–18 years to one of three treatment allocations: AP only, CBT and FI only, or a combination of AP and CBT/FI.

Along with establishing empirical trial evidence, researchers should also evaluate relevant personal and professional perspectives to inform interpretations of trial feasibility or outcome data [6]. With regard to the MAPS trial, it is therefore important to understand the views of clinicians working with adolescents with psychosis as their views may influence young people's (YP) access to treatments. However, most studies exploring clinicians' views of treatment for psychosis have consulted practitioners working with adult populations, focusing predominantly on AP prescribing [7–9]. For example, a

\* Corresponding author: Psychosis Research Unit, Greater Manchester Mental Health NHS Foundation Trust, Prestwich, Manchester, M25 3BL, UK.

E-mail address: [roby.byrne@gmmh.nhs.uk](mailto:roby.byrne@gmmh.nhs.uk) (B. RE).

## Research in Context

### *Evidence before this study*

We searched PubMed and PsycNET for articles published from database inception to April 28, 2020, with the terms ("clinician" OR "prescriber") AND ("adolescent" OR "young") AND ("psychosis" OR "schizophrenia"). We supplemented this search with additional reviews of reference lists, focusing on published reviews of the literature area to maximise scope and relevance. Searches identified a small body of survey-based research reporting clinician/prescriber views of adolescent psychosis treatment, and a small number of qualitative studies which have explored clinician/prescriber views of antipsychotic prescribing with adults. There were no qualitative studies identified that addressed the specific topic of clinician/prescriber views of treatment for children or young people with first episode psychosis.

### *Added value of this study*

This study is the first in-depth interview study to our knowledge to investigate prescribing clinicians' views of treatment for psychosis for children and young people. We found that clinicians manage complex decision-making processes around both assessment and treatment of psychosis through individual clinical judgements, which are in turn influenced by their duty of care, urgency of treatment needs, and specific beliefs about different treatment types.

### *Implications of all the available evidence*

Clinical trials randomly allocating young people with first episode psychosis to treatment should consider the views and concerns of relevant clinicians. Given the prominent influence of clinicians' treatment beliefs and attitudes in determining decision-making, including referral of a young person to a randomised trial, there is also a need to enhance the integration of high quality treatment evidence with individualised clinical judgement.

## 2. Method

### 2.1. Participants

Purposive sampling identified a representative range of eligible qualified mental health professionals with prescribing responsibility for adolescents with first episode psychosis (FEP) in UK Child and Adolescent Mental Health Services (CAMHS) or Early Intervention for Psychosis (EIP) services across NHS Trusts hosting the MAPS trial [4,5]. Potential participants were identified from MAPS trial liaison information (complete lists of local CAMHS and EIP prescribers), and invited to take part by email between October 2017 and July 2018. Clinician interviewees were not offered a financial reimbursement or reward. This study was approved by the North West - Greater Manchester East NHS Research Ethics Committee (16/NW/0893). All participants provided written informed consent to participate.

### 2.2. Procedure

A semi-structured interview topic guide was developed to explore clinicians' views of the relative benefits and challenges of delivering trial treatments. Researchers outlined confidentiality, anonymity, and data security prior to interviews commencing. All individual interviews were conducted in-person, except for two interviews conducted by telephone. Interviews were conducted by RB and SR and audio recorded. Interview recordings were transcribed verbatim, with all potentially identifying information redacted to ensure anonymization.

### 2.3. Data Analysis

Data were analysed using Braun and Clarke's approach to Thematic Analysis [15]. Analysis was conducted inductively at the manifest level to accurately represent participants' immediate meaning, and to elicit accessible thematic representations of interviewees' views.

All authors were involved in the analysis and read all or a sample of the transcripts. RB initially coded all transcripts within NVivo qualitative data analysis software (Version 11 [16]). RB and WJ reviewed and developed this initial coding, which sought to identify all sections of data that informed the research question. The emerging coding framework was regularly discussed and refined under supervision with SP. These analysis discussions also identified new questions to 'ask' of the data, prompting further refined coding and interpretation until thematic sufficiency was achieved [17,18]. The core analysis team (RB, WJ, SP) periodically met with the wider central team (DS, MP, TM) to further develop the analysis and establish consensus of the emerging thematic 'maps' representing both commonalities and variations within the dataset. Over time, this mapping process elevated or reduced the prominence of key candidate themes in order to produce a final model of participants' perspectives. SR and JB provided remote review of structured findings.

Study design, data generation, and analysis were conducted with the involvement of individuals with personal or parental experience of psychosis-spectrum difficulties. The analysis team was multidisciplinary and included service user and parent caregiver, general practitioner (GP), clinical psychology, and health psychology perspectives. These are both recognised steps to increase trustworthiness in the final analysis [19].

### 2.4. Role of funding

This study was funded by the National Institute for Health Research (NIHR) Health Technology Assessment (HTA) programme following a commissioned call (15/31/04). The call specified the interventions, population, setting, comparator, study design, and

recent UK qualitative study identified factors underpinning prescribing behaviour that include prescribers' level of experience, varying levels of perceived personal responsibility for prescribing and associated risks, collaboration and compromise, patient involvement, and research evidence [10]. Notably, a Norwegian interview study examining psychiatrists' views of medication-free treatment for psychosis reported substantial concern among prescribers that justifying treatment without antipsychotics lacked evidence [11].

Only a small number of survey studies have explored clinicians' views of treatment options for adolescents with a first episode of psychosis. These have also focused on antipsychotic treatment, particularly side effects and factors affecting adherence [12,13].

Very few studies have explored clinicians' views of psychological treatment for psychosis. One recent example explored staff views of psychology provision in a multidisciplinary adult psychiatric inpatient setting and found that although psychological treatment was valued, it was considered an 'add on' to medication and not a first-line treatment [14]. There are no studies evaluating views of psychological interventions for psychosis among child and adolescent psychiatrists. Addressing the need to develop this literature, a nested qualitative interview study was conducted as part of the MAPS trial to investigate prescribing clinicians' views of antipsychotic medication and psychological intervention for adolescents with first-episode psychosis.

important outcomes. The funder of the study had no role in data collection, data analysis, data interpretation, or writing of the report. The corresponding author had full access to all the data in the study and had final responsibility for the decision to submit for publication.

**3. Results**

**3.1. Participants**

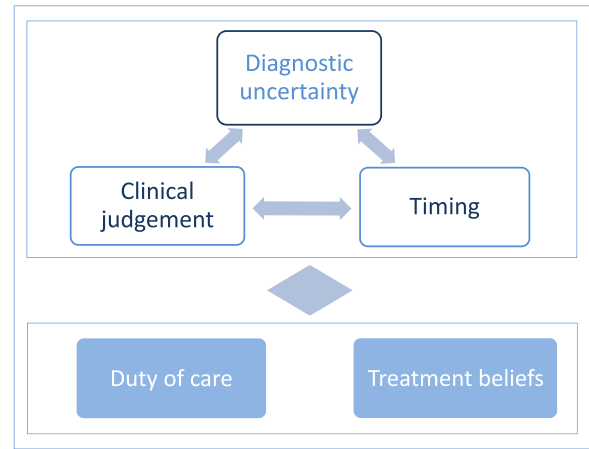
Forty nine eligible prescriber clinicians were invited to participate in interviews: twenty-eight did not respond, and four declined. The final sample comprised seventeen clinicians with prescribing responsibility for adolescents aged 14 to 18 across three sites (North West, Oxfordshire, Sussex). Fifteen interviews were conducted at participants' place of work, typically CAMHS or EIP services within NHS premises; two interviews were conducted by telephone. Most participants were psychiatrists, and eight (47%) had prescribing responsibility for MAPS participants. Participant characteristics are shown in Table 1.

**3.2. Findings**

The overarching superordinate theme of 'The complexity of clinical decision-making' appeared to mediate all diagnostic and treatment decisions for adolescents with first episode psychosis (FEP). Sub-themes include 'Diagnostic uncertainty', 'Clinical judgement', and 'Timing'. The subordinate thematic category 'Underlying influences' details further important factors in clinicians' decision-making ('Duty of care', 'Treatment beliefs'). Each of these is described below and illustrated with sample quotes. A larger body of direct quotes is shown in the Appendix. Additional organisational and trial-specific factors are reported elsewhere [20]. See Figure 1 below for a summary of the thematic structure.

**4. The complexity of clinical decision-making**

Clinicians were firstly concerned with the diagnostic assessment of FEP, and stressed the necessity for individualised clinical judgement in this process to ensure assessment accuracy, and to determine the urgency of treatment delivery. Figure 2 illustrates a proposed matrix model of clinicians' decision-making, derived directly from



**Figure 1.** The complexity of clinical decision-making in treatment for adolescent psychosis

these data. Clinicians expressed the strongest concern about addressing clinical risk (to self, others), and diagnostic uncertainty. Age and treatment risk/safety are important concerns, but secondary. All decisions are informed by duty of care. For example, higher clinical risk and greater diagnostic certainty favour immediate AP prescription; younger age and lower acceptability of treatment risks appear associated with willingness to delay AP and commencing CBT. For clinical equipoise, clinicians must be satisfied that no one priority outweighs others, and that treatment decisions are most appropriately based on informed choice.

**4.1. Diagnostic uncertainty**

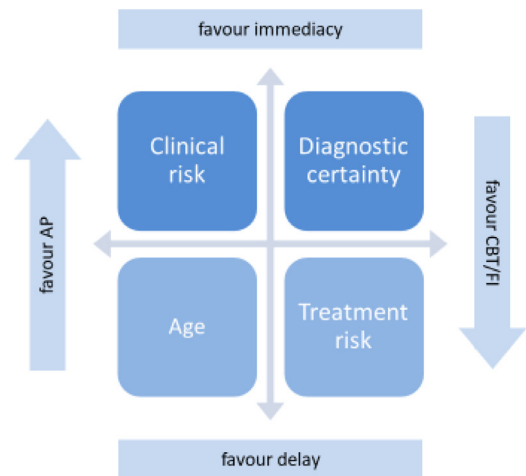
A central concern among all participants was the importance of reliable assessment and diagnosis of FEP when considering treatment for adolescents ("the diagnostic question of what's going on, for me that's the big question", C15, CAMHS). There was consistent recognition that reliably identifying FEP in adolescents was often very difficult:

*Sometimes it can be more complicated in a child or an adolescent to make a very confident diagnosis, because you might have to watch and wait, you might have to see how symptoms develop over time, often things are not as clear-cut as they might be in somebody who is an adult (C07, CAMHS)*

**Table 1**  
Participant Characteristics

Prescribing clinicians N=17	
Age (years), mean (SD)	41•3 (8•35)
Gender, n (%)	
Female	8 (47%)
Male	9 (53%)
Ethnicity, n (%)	
White British	13 76%
a	1 (6%)
b	1 (6%)
c	1 (6%)
d	1 (6%)
Service Type	
CAMHS	6 (35%)
EIP	9 (53%)
CAMHS+EIP	2 (12%)
Professional role	
Psychiatrist	14 (88%)
Advanced practitioner	1 (6%)
Specialty doctor	1 (6%)
Prescribing responsibility for MAPS participants	
Yes	8 (47%)
No	9 (53%)

a–d. details including ethnicity and study site removed to ensure participant anonymity



**Figure 2.** Theoretical model of decision-making for treatments for FEP. Discrete categories (boxes) show priority concerns, and allow for an order of priorities. Directionality (arrows) indicate degree of concern. Interactions between degree of concern and priority order may result in trade-offs.

Along with the difficulty of establishing the severity of psychotic symptomatology, clinicians also highlighted the complexity of assessing adolescents for neurodevelopmental, personality, or autism-spectrum features, and differences in presentation between the youngest and oldest adolescents, experiencing greater difficulty assessing for FEP in younger people:

*I think the younger people get the harder it is to tell whether what they're describing is psychosis or not... we try not to be certain about anyone really, but it's especially rare to be sure about someone who's fifteen and is hearing voices (C13, EIP)*

## 4.2. Clinical judgement

### 4.2.1. Assessment

Participants frequently highlighted the importance of drawing on their own clinical judgement to navigate diagnostic uncertainty. There was therefore considerable uncertainty about determining FEP status solely with the Positive and Negative Syndrome Scale (PANSS [21]) used to assess for trial eligibility:

*the more we can kind of standardise and the more predictable we are in our decision-making processes the better, but at the same time we have to hold alongside that the slightly dyssynchronous idea that actually these are simply measures and that we need to be able to intuit and think around them, and I think that's really important and particularly with young people (C01, CAMHS/EIP)*

### 4.2.2. Treatment

While treatment decisions in MAPS were ostensibly determined by random allocation, interviewees often referred to using their own clinical judgement when making individual treatment decisions with YP under their care, regardless of trial treatment allocation. Key factors informing clinical judgement and treatment decision-making included the young person's levels of distress and risk:

*I'm usually looking at whether the person's severity of symptoms and maybe lack of functioning and risk associated with both of those is such that they warrant a prescription at that time (C12, EIP)*

## 4.3. Timing

Clinicians also highlighted the importance of timing in assessment and treatment decisions. For example, there was a perceived need to initiate treatment as quickly as possible to alleviate severe distress or risk:

*we've had a few under eighteens who were very floridly psychotic and were actually admitted to paediatric wards because they were so unwell, and there was no doubt there that the appropriate thing to do was to start antipsychotic medication first (C11, EIP)*

In the absence of immediate risk or severe distress, it was often seen as preferable to prolong assessment periods to ensure the reliability of a psychosis-spectrum diagnosis prior to commencing treatment:

*there's a degree of uncertainty when we start off about quite what might be happening for the young person so it's not always clear-cut for me whether medication's necessarily something we're going to be prescribing right at the start, so there's often a period of assessment before we'd be considering whether that'd be an option for someone (C04, EIP)*

## 5. Underlying influences

Prominent underlying influences that underpinned clinical decision-making were also identified, most notably the duty of care that participants perceived in their work with YP, and existing beliefs about treatments for psychosis.

### 5.1. Duty of care and safety

The personal and professional responsibility clinicians perceived in their roles was present across interviews, especially the need for enhanced caution around both diagnosis and treatment of psychosis with children or adolescents:

*arguably we need to be more careful about these younger people in A giving a diagnosis that is as significant as psychosis and B using antipsychotics (C16, EIP)*

All clinician interviewees voiced concern about the potential harms of AP, and their own responsibility for AP prescribing:

*with children your duty of care is quite different, I think you have to be much more rigorous about when you recommend medical treatments that may have serious side effects (C07, CAMHS)*

Clinicians also discussed the potential for harm in not prescribing AP:

*so age of the young person is important but if they're very severely disturbed and at risk or others might be at risk due to their behaviour then you would be having discussions with family around antipsychotics and the possible benefits versus risks, for that young person (C17, CAMHS)*

### 5.2. Treatment beliefs

Treatment decisions were also influenced by clinicians' existing beliefs about different treatment types. Interviewees held a complex range of views of MAPS' comparator treatments, weighing likely benefits against potential costs or harms of treatment.

#### 5.2.1. Antipsychotic medication

AP were most commonly viewed as an important and generally beneficial first-line treatment for FEP, perceived to deliver therapeutic effects quickly, especially for the most unwell YP:

*we get referred lots of kids with potentially psychotic symptoms like voices... if they're really thought disordered or paranoid or aggressive, they're not really well enough for CBT or we decide not to get MAPS involved and just say ok they really need antipsychotics which we know work, wouldn't be fair to withhold them (C13, EIP)*

AP medication was also seen by some to be important in the longer-term to reduce the risk of relapse. The clinical value of antipsychotics was nonetheless weighed against potential serious medication adverse effects, particularly when prescribed to children and YP:

*things like metabolic syndrome, long terms complications... what parent wants to hear about some of these side effects, you'd be just freaking out really, and I think explaining that kind of risk benefit to them can be really complex and challenging (C10, CAMHS)*

#### 5.2.2. Psychological intervention

Of the psychological interventions offered in the MAPS trial (CBT and FI), CBT was most frequently discussed, and was seen to offer valued benefits alongside AP treatment, or as a more appropriate treatment approach for some YP:

*it's thinking about what actually are the specific difficulties the young person may be having for example, if they are experiencing hearing voices but actually the primary problem is they're struggling more with their mood or engaging with education if we were to do a psychological piece of work that's going to have much more of an impact than medication possibly with that (C09, CAMHS/EIP)*

However, the potentially limited capacity of some YP to engage with psychological treatments was highlighted:

*particularly quite young people often they find it difficult to describe their experiences or to talk about what's going on so I'm thinking that sometimes that decision between CBT and medication is about that ability to be able to talk and think and tolerate their distress (C11, EIP)*

It was also recognised in several interviews that there was potential for psychological interventions to be harmful, and a small number of clinicians were explicit in specifying that they were not in favour of offering CBT for psychosis in the absence of AP.

### 5.2.3. Combined treatment

Clinicians also considered the combination of AP and psychological treatments, and commonly endorsed a preference for the combination as it was perceived to maximise benefits by addressing a wider range of treatment targets:

*I think that it's quite clear to me that having a combination is superior to either alone, and I think that's related to them doing essentially quite different things (C12, EIP)*

Combined treatment was particularly valued for the perceived interaction whereby AP can enable YP to undertake psychological therapy:

*when people are at their most unwell, that's really difficult to even engage with and usually they're the people who are saying 'I don't want CBT because I don't want to think differently, I know what I think' and actually medication can sometimes move them forward to the point where they can then engage with the CBT (C08, EIP)*

## 6. Discussion

Findings from this interview study illuminate the challenges faced by prescribing clinicians who work with children and young people (YP) with psychosis, along with a range of important considerations for potential inclusion of this group in a randomised clinical trial. The most common challenge for clinician interviewees was the difficulty of accurately assessing first episode psychosis (FEP) in adolescents. Confidence in the reliability of a FEP diagnosis was viewed as particularly important to guide subsequent treatment decisions, especially the prescription of antipsychotic medication. Analysis also identified important underlying influences that informed clinicians' decision-making, particularly professional duty of care and existing treatment beliefs. These in turn shaped decisions around referral to a treatment trial.

The importance and complexity of accurate diagnosis of psychosis in YP has been recognised to be particularly challenging as YP often present with nonspecific difficulties that overlap with aspects of psychosis, and it can be more difficult to assess their internal thoughts and experiences. Clinicians are also hesitant to apply particular diagnoses to YP due to their prognostic implications [2]. A recent focus group study conducted with clinicians found that diagnostic uncertainty was an important cause of treatment delay in early psychosis, requiring an extended assessment period, along with a conflicting sense of urgency for starting beneficial treatment as quickly as possible [22]. Each of these factors was evident in the present study.

The use of individual clinical judgement in assessment and treatment decision-making also emerged clearly as an integral aspect of prescribers' practice. This accords with previous findings that while clinicians may endorse collaborative decision-making and adhering to published treatment guidance, they also consider it necessary to retain flexibility in their clinical judgement, with some clinicians emphasising the perceived superiority of their clinical judgement over guidelines, and the views of patients [8,10]. One possible influence in this is level of experience, whereby practitioners with the least experience may be more likely to collaborate with patients and to adhere to treatment guidelines than those with the most [23]. It is also likely that the importance of clinical judgement is related to the paucity of high quality evidence to guide standardised treatment for adolescent FEP. It was clear that clinicians perceived a particular duty of care in their clinical decision-making with YP, and this sense of professional responsibility has previously been highlighted [23].

Clinicians' treatment beliefs were an important influence in their decision-making, and this accords well with comparable existing

research. Notably, while clinicians generally favoured the efficacy of AP for timely reduction of acute symptoms and risk, they also voiced the most concern about AP treatment decision-making, and this reflects the prominence of AP-related studies in this area of research. Very few studies have consulted clinicians responsible for prescribing AP to children and adolescents (side effects, [15] adherence [14]), and these have used survey methodology. Findings from qualitative adult studies are therefore needed for interpretation. In line with the present study, qualitative research has previously reported that prescribers commonly view AP as the primary or key treatment for psychosis [9,10]; as Shephard et al. argue [10], such views are likely to influence how information and treatment offers are presented to patients.

Psychological interventions were generally viewed positively, in terms of helping YP understand and cope with distressing experiences. It was also suggested that CBT could be a more appropriate treatment than AP for some YP if, for example, there is greater uncertainty around their FEP status. However clinicians felt that CBT/FI were not an appropriate first-line treatment for YP with the most severe presentations, and that more generally some YP would find it difficult to engage with CBT. Clinicians' beliefs about causes of psychosis may also have influenced these views. A recent survey study found that among professional disciplines, only psychiatrists endorsed biogenetic above psychosocial causal beliefs, with a corresponding association between biogenetic beliefs and perceived helpfulness of AP. In contrast, the perceived helpfulness of CBT was associated with stronger endorsement of psychosocial causal beliefs (eg., effects of trauma) [24]. It was also recognised that CBT had the potential to cause negative impacts, though less concern was expressed about this than in relation to AP. Most clinicians viewed a combination of AP and psychological treatment as optimal, with AP seen to help YP benefit from CBT/FI. There is no directly comparable research with which to contextualise these findings.

It also informative to compare treatment views in this study with those of YP and family members involved in the MAPS trial [25]. There is reasonable agreement that AP is helpful for reducing symptoms of psychosis, alongside common concerns about side effects and some concern about long-term use. AP were considered essential by many clinicians and several family members as an immediate first-line treatment to reduce serious risk and severe distress; no YP identified this specific concern. Interview groups agreed that CBT and FI can be beneficial, though there was a shared concern among some clinicians and family members that CBT in the absence of AP would not sufficiently alleviate serious distress or risk. Clinicians' preference for combined treatment closely accorded with family members' views, and to a moderate degree with those of YP. Previous qualitative studies have compared views of psychosis treatment between participant groups, but focus predominantly on aspects of antipsychotic prescribing, and none discuss adolescent treatment [9,26].

Although this study included a range of prescriber perspectives, it did not explore views of the broader range of professional disciplines. While medical expertise is an essential aspect of assessment and treatment for psychosis, the delivery of psychological interventions to YP with psychosis is increasing, therefore it will also be valuable to evaluate the views of psychological specialists. It is possible that social and cultural factors may impact on assessment and treatment for adolescent FEP; the role of socioeconomic, ethnic, and cultural differences will be important to explore in future, among both YP accessing services and their clinicians. The study was conducted at sites where MAPS was taking place, and these locations may not be representative of psychiatry practice across the UK. Analysis did not include formal respondent validation, however these findings were presented to the wider trial team, which includes multiple child and adolescent prescribers, and no concerns were suggested.

These findings show that clinicians view clinical judgement as essential in making assessment and treatment decisions, weighing the complexities of reaching an accurate diagnosis against the need

to avoid treatment delay in FEP. Greater certainty of FEP diagnosis, particularly when accompanied by perceived treatment urgency resonated with treatment beliefs favouring AP as a first-line approach, and could have deterred referral to the MAPS trial. However, the counterbalancing view that psychological interventions are valuable may have encouraged referral to MAPS because of the limited availability of clinical psychology in many services and the reassurance that poor treatment response to either single treatment arm would lead to combined treatment, which was well regarded.

The findings suggest several implications for a future definitive trial. There is a clear need to align and develop approaches to establishing FEP status for trial entrants, most likely by greater involvement of CAMHS and/or EIP psychiatrists at trial sites, with protected time to conduct assessments, and to ensure timely access to treatment. Greater guidance based on the best available treatment evidence is needed to support clinicians' decision-making, and reduce the influence of treatment perceptions that may not be grounded in empirical evidence and which may prevent patient's access to treatments. This would promote the integration of high quality evidence and guidance into individualised decision-making with YP and family members [27,28], ensuring duty of care is met whilst promoting standardisation and quality of prescribing practice.

### Contributors

RB contributed to the application for funding, design of the study, data collection, interview transcription and analysis, produced the first draft of the manuscript, and critically read the manuscript. JB contributed to data collection and analysis, and critically read the manuscript. SR contributed to data collection and analysis, and critically read the manuscript. WJ contributed to interview transcription and analysis, and critically read the manuscript. DS contributed to the application for funding, design of the study, and analysis, and critically read the manuscript. APM contributed to the application for funding, design of the study, and analysis, and critically read the manuscript. MP contributed to the application for funding, design of the study, and analysis, and critically read the manuscript. SP contributed to the application for funding and design of the study, supervised data analysis, and critically read the manuscript. All authors read the final manuscript.

### Declaration of Competing Interest

RB reports personal fees from CBT for psychosis (CBTp) Training at Oxford Cognitive Therapy Centre (OCTC), Oxford Health NHS Foundation Trust. JB reports personal fees and fees paid for clinical supervision of CBTp training at OCTC, Oxford Health NHS Foundation Trust. DS reports personal fees from the National Clinical Audit of Psychosis, personal fees from Wiley Blackwell publication "Promoting Recovery in Early Psychosis" 2010, ISBN 978-1-4051-4894-8, outside the submitted work; and is an expert advisor to the NICE centre for guidelines, member of the current NICE guideline development group for Rehabilitation in adults with complex psychosis and related severe mental health conditions, and board member of the National Collaborating Centre for Mental Health (NCCMH), outside the submitted work; the submitted work represents personal views and not those of NICE, NCCMH or NCAP. APM reports personal fees from CBT for Psychosis training, and personal fees from Book publishing, outside the submitted work. MP reports personal fees and fees paid to the Psychosis Research Unit from CBT Training at Greater Manchester Mental Health NHS Foundation Trust. All other authors report no conflict of interests.

### Acknowledgements

The authors would like to thank the clinicians who made time to share their professional perspectives and expertise for this study. This project was funded by the National Institute for Health Research Health Technology Assessment (NIHR HTA) programme (project number 15/31/04) and will be published in full in Health Technology Assessment. Visit the HTA programme website for further project information. The views expressed are those of the author(s) and not necessarily those of the NIHR or the Department of Health and Social Care.

### Supplementary materials

Supplementary material associated with this article can be found in the online version at doi:[10.1016/j.eclinm.2020.100421](https://doi.org/10.1016/j.eclinm.2020.100421).

### References

- [1] Kessler RC, Amminger GP, Aguilar-Gaxiola S, Alonso J, Lee S, Ustun TB. Age of onset of mental disorders: a review of recent literature. *Current Opinion in Psychiatry* 2007 Jul;20(4):359–64.
- [2] McClellan J. Psychosis in Children and Adolescents. *Journal of the American Academy of Child and Adolescent Psychiatry* 2018 May;57(5):308–12. doi: [10.1016/j.jaac.2018.01.021](https://doi.org/10.1016/j.jaac.2018.01.021).
- [3] National Institute for Health and Care Excellence. Psychosis and Schizophrenia in Children and Young People: Recognition and Management (Clinical Guideline CG155). NICE 2013 <https://www.nice.org.uk/guidance/cg155> (accessed on 1 February 2020).
- [4] Pyle M, Broome MR, Joyce E, et al. Study protocol for a randomised controlled trial of CBT vs antipsychotics vs both in 14–18-year-olds: Managing Adolescent first episode Psychosis: a feasibility study (MAPS). *Trials* 2019 Jul 4;20(1):395. doi: [10.1186/s13063-019-3506-1](https://doi.org/10.1186/s13063-019-3506-1).
- [5] Morrison AP, Pyle M, Maughan D, et al. A feasibility randomised controlled trial comparing antipsychotic medication to psychological intervention to a combined treatment in adolescents with first episode psychosis: The MAPS trial. *Lancet Psychiatry* 2020. doi: [10.1016/S2215-0366\(20\)30248-0](https://doi.org/10.1016/S2215-0366(20)30248-0).
- [6] Holmes EA, Ghaderi A, Harmer CJ, et al. The Lancet Psychiatry Commission on psychological treatments research in tomorrow's science. *Lancet Psychiatry* 2018 Mar;5(3):237–86. doi: [10.1016/S2215-0366\(17\)30513-8](https://doi.org/10.1016/S2215-0366(17)30513-8).
- [7] Seale C, Chaplin R, Lelliott P, Quirk A. Sharing decisions in consultations involving anti-psychotic medication: a qualitative study of psychiatrists' experiences. *Social Science and Medicine* 2006 Jun;62(11):2861–73.
- [8] Shepherd A, Shorthouse O, Gask L. Consultant psychiatrists' experiences of and attitudes towards shared decision making in antipsychotic prescribing, a qualitative study. *BMC Psychiatry* 2014 May 1;14:127. doi: [10.1186/1471-244X-14-127](https://doi.org/10.1186/1471-244X-14-127).
- [9] Pedley R, McWilliams C, Lovell K, et al. Qualitative systematic review of barriers and facilitators to patient-involved antipsychotic prescribing. *BJPsych Open* 2018 Jan;4(1):5–14. doi: [10.1192/bjo.2017.5](https://doi.org/10.1192/bjo.2017.5).
- [10] Roberts R, Neasham A, Lambrinudi C, Khan A. A thematic analysis assessing clinical decision-making in antipsychotic prescribing for schizophrenia. *BMC Psychiatry* 2018 Sep 10;18(1):290. doi: [10.1186/s12888-018-1872-y](https://doi.org/10.1186/s12888-018-1872-y).
- [11] Yeisen RA, Bjørnstad J, Joa I, Johannessen JO, Opjordsmoen S. Psychiatrists' reflections on a medication-free program for patients with psychosis. *Journal of Psychopharmacology* 2019 Apr;33(4):459–65. doi: [10.1177/0269881118822048](https://doi.org/10.1177/0269881118822048).
- [12] Walter G, DeLaroche A, Soh N, et al. Side effects of second-generation antipsychotics: the experiences, views and monitoring practices of Australian child psychiatrists. *Australasian Psychiatry: bulletin of Royal Australian and New Zealand College of Psychiatrists* 2008 Aug;16(4):253–62. doi: [10.1080/10398560801958549](https://doi.org/10.1080/10398560801958549).
- [13] Ramdour S, Duxbury JA, Becket G, Wilson S. A cross-sectional observational study of healthcare professional views of factors affecting teenage adherence with antipsychotic medication. *Journal of Psychiatric and Mental Health Nursing* 2015 Sep;22(7):491–501. doi: [10.1111/jpm.12210](https://doi.org/10.1111/jpm.12210).
- [14] Wood L, Williams C, Billings J, Johnson S. The role of psychology in a multidisciplinary psychiatric inpatient setting: Perspective from the multidisciplinary team. *Psychology and Psychotherapy* 2019 Dec;92(4):554–64. doi: [10.1111/papt.12199](https://doi.org/10.1111/papt.12199).
- [15] Braun V, Clarke V. Using thematic analysis in psychology. *Qualitative Research in Psychology* 2006;3(2):77–101.
- [16] NVivo qualitative data analysis software, 11. QSR International Pty Ltd; 2015.
- [17] Braun V, Clarke V. To saturate or not to saturate? Questioning data saturation as a useful concept for thematic analysis and sample-size rationales. *Qualitative Research in Sport, Exercise and Health*. Published online:2019 Dec 26. doi: [10.1080/2159676X.2019.1704846](https://doi.org/10.1080/2159676X.2019.1704846).
- [18] Malterud K, Siersma VD, Guassora AD. Sample Size in Qualitative Interview Studies: Guided by Information Power. *Qualitative Health Research* 2016 Nov;26(13):1753–60. doi: [10.1177/1049732315617444](https://doi.org/10.1177/1049732315617444).
- [19] Peters S. Qualitative research methods in mental health. *Evidence-Based Mental Health* 2010 May;13(2):35–40. doi: [10.1136/ebmh.13.2.35](https://doi.org/10.1136/ebmh.13.2.35).

- [20] Morrison AP, Pyle M, Byrne R, et al. Psychological intervention, antipsychotic medication and a combined treatment for adolescents with a first episode of psychosis: the MAPS feasibility RCT. *Health Technology Assessment*. [in press]
- [21] Kay SR, Fiszbein A, Opler LA. The Positive and Negative Syndrome Scale (PANSS) for schizophrenia. *Schizophrenia Bulletin* 1987;13(2):261–76.
- [22] Kvig EI, Moe C, Brinchmann B, Larsen TK, Sørgaard K. Negotiating the boundaries of psychosis: A qualitative study of the service provider perspective on treatment delay in community mental health. *Early Intervention in Psychiatry* 2019 Apr;13(2):272–80. doi: [10.1111/eip.12477](https://doi.org/10.1111/eip.12477).
- [23] Banning M. A review of clinical decision making: models and current research. *Journal of Clinical Nursing* 2008 Jan;17(2):187–95.
- [24] Carter L, Read J, Pyle M, Law H, Morrison AP. Mental health clinicians' beliefs about the causes of psychosis: Differences between professions and relationship to treatment preferences. *International Journal of Social Psychiatry* 2017 Aug;63(5):426–32. doi: [10.1177/0020764017709849](https://doi.org/10.1177/0020764017709849).
- [25] Byrne RE, Bird JC, Reeve S, et al. Understanding young peoples' and family members' views of treatment for first episode psychosis in a randomised controlled trial (MAPS). *EclinicalMedicine* 2020. doi: [10.1016/j.eclinm.2020.100417](https://doi.org/10.1016/j.eclinm.2020.100417).
- [26] Dress EM, Frasso R, Calkins ME, et al. Comparing Patient, Clinician, and Caregiver Perceptions of Care for Early Psychosis: A Free Listing Study. *Narrative Inquiry in Bioethics* 2018;8(2):157–78. doi: [10.1353/nib.2018.0054](https://doi.org/10.1353/nib.2018.0054).
- [27] Moritz S, Berna F, Jaeger S, Westermann S, Nagel M. The customer is always right? Subjective target symptoms and treatment preferences in patients with psychosis. *European Archives of Psychiatry and Clinical Neuroscience* 2017 Jun;267(4):335–9. doi: [10.1007/s00406-016-0694-5](https://doi.org/10.1007/s00406-016-0694-5).
- [28] Freeman D, Taylor KM, Molodynski A, Waite F. Treatable clinical intervention targets for patients with schizophrenia. *Schizophrenia Research* 2019 Sep;211:44–50. doi: [10.1016/j.schres.2019.07.016](https://doi.org/10.1016/j.schres.2019.07.016).