A Stitch in Time

Interventions for Young People at Ultra High Risk of Psychosis

Orygen YOUTH Health
Research Centre

EPPIC
Early Psychosis Prevention and Intervention Centre

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Contents

Introduction

Most first episodes of psychotic disorders are preceded by a prolonged period of attenuated psychotic symptoms and impaired functioning – a period retrospectively referred to as the 'prodrome'. The benefits of early identification and intervention in the course of psychotic disorder are numerous, with the prospect of delaying or preventing the onset of first episode psychosis (FEP), reducing the duration of untreated psychosis (DUP), and minimising the iatrogenic trauma of FEP for young people and their families. In addition, a psychotic episode can disrupt a young person's developmental trajectory and is often associated with social and occupational dysfunction. Early identification and intervention has the potential to assist young people with maintaining their optimal developmental trajectory. This manual outlines a comprehensive model of treatment for those young people who are identified as being at ultra high risk (UHR) of psychosis through the application of set criteria that have been validated for identification of this group.

Context

This manual is aimed at mental health professionals working with young people who are at high risk of developing psychotic disorders, and individuals responsible for early psychosis service development. Young people who are at high risk of developing psychosis are referred to as having an 'at risk mental state' (ARMS) and those who meet a specific set of criteria are referred to as being at ultra high risk of psychosis (UHR). The content of this manual has been derived from international research evidence and extensive clinical experience of delivering services to young people and their families. This manual has been developed in collaboration with senior clinical and research staff at the Personal Assessment and Crisis Evaluation (PACE) clinic at Orygen Youth Health, the first clinic to provide a clinical research service for young people identified as being at UHR of psychosis.

How to use this manual

This manual has been developed as part of an overall training program delivered by the EPPIC National Support Program that includes face-to-face training and online learning modules. It is intended to be used in conjunction with the other manuals in this series The EPPIC National Support Program is assisting with the implementation of the Early Psychosis Prevention and Intervention Centre (EPPIC) Model in early psychosis services.

The EPPIC Model has been developed from many years' experience within the clinical program at Orygen Youth Health and has been further informed by the Early Psychosis Feasibility Study Report written and published by the National Advisory Council on Mental Health in 2011 which sought international consensus from early psychosis experts from around the world.[1] It is based on current evidence, the experience of other early psychosis programs internationally and shaped by real world considerations. The EPPIC Model aims to provide early detection and comprehensive, developmentally appropriate, specialised, evidence-based care for young people (aged 12–25 years) at risk of or experiencing a first episode of psychosis.

There are a number of core values and principles of practice that inform the EPPIC model of care. Ideally, an early psychosis service should incorporate:[2]

- easily accessible expert care
- a holistic, biopsychosocial approach to clinical interventions
- a comprehensive and integrated service approach
- evidence-based clinical practice
- the presence of youth-friendly culture throughout the service (reflected in staff behaviour and attitudes and decor)
- a spirit of hope and optimism that is pervasive throughout service
- a family-friendly ethos contained in all aspects of service
- a service culture and skills that facilitate culturally sensitive care to all patients and families
- a high level of partnerships with local service providers.

There are five sections of this manual. 'At risk mental state and ultra high risk for psychosis' defines and introduces the at risk mental state and ultra high risk concepts. While 'Assessment, engagement and formulation' provides a comprehensive description of assessing, engaging and case formulation of young people identified as UHR. 'Case management and Clinical interventions for UHR' describe the various components of intervention for young people identified as UHR. Finally, the 'Service level considerations for the UHR' population outline the options of service model delivery for the UHR population.

At risk mental state and ultra high risk of psychosis

At risk mental state and ultra high risk of psychosis

Rationale for interventions in the at risk mental state

The possibility of treating young people who are at high risk of developing psychotic disorders is an attractive prospect as the pre-onset or ‘prodromal’ phase of psychotic disorders is characteristically associated with an array of emerging mental health issues, distress and functional difficulties. The psychiatric symptoms young people present with include attenuated or brief psychotic symptoms that are often accompanied by symptoms of depression, anxiety, personality disorder or substance misuse.

Difficulties associated with the development of psychotic features may be present for some time before the formal diagnostic criteria for a psychotic disorder are met. For this reason, people presenting at this stage of disorder with clinically significant distress and functional decline warrant assessment and intervention. Treatment during this phase has the potential to reduce existing symptoms and disability, improve social and vocational dysfunction, and prevent or delay the onset of a psychotic disorder.[3-5] Additionally, alterations in brain structure (and possibly function) occur during the transition from an ‘at risk’ state to full-threshold psychotic disorder.[6,7] Thus, intervention in young people with an 'at risk mental state' has two possible targets:

- reducing current symptoms and disability
- preventing further decline to a psychotic disorder.

Other potential benefits of treatment during this period include:

- Existing protective factors such as social functioning and support networks are more likely to be intact in this earlier phase than for individuals with psychosis.
- A young person already engaged with a clinical service may be more likely to remain involved with this service and accept treatment for full-threshold psychosis if this does eventuate.[8]
- Effective treatment can be provided rapidly if the person does develop a psychotic disorder with the aim of minimising both iatrogenic trauma related to treatment interventions such as hospitalisation and deleterious effect of extended untreated psychosis.

- Early intervention that maintains educational, vocational and social function during adolescence and early adulthood assists young people to maintain their developmental trajectory and reach their potential across these domains.
- Identification and treatment of young people during the pre-onset phase of disorder can assist with research into risk factors and mechanisms of onset of psychosis and in developing new intervention strategies for improving the prospects for 'at risk' young people.

Background and definition

Given the potential benefits of pre-psychotic identification and intervention, strategies that effectively identify young people who are in the pre-psychotic or 'prodromal' phase of psychotic disorder are required. The concept 'prodrome' is retrospective, that is, it can only be used to refer to a young person's pre-psychotic symptoms if they develop a psychotic disorder.[9] The onset of a psychotic disorder cannot be predicted with certainty from any particular symptom or cluster of symptoms. Therefore, the risk concept is most appropriate for identifying people prospectively. The term 'at risk mental state' (ARMS) was introduced in the mid 1990s to refer to young people who may be at heightened risk of developing a psychotic disorder.[9] Given the lack of specificity of many prodromal symptoms of schizophrenia and other psychotic disorders, strategies were needed to increase the accuracy of predicting psychosis. A 'close-in' strategy to identify young people experiencing an ARMS was adopted. This strategy is based on:

- Identifying the presence of trait factors (such as genetic loading based on a family history of psychosis or the young person having schizotypal personality disorder) and state factors (such as mental distress and deteriorating functioning) known to be associated with increased risk of psychotic disorder.
- Identifying symptoms commonly present prior to the onset of a full-threshold psychotic disorder.

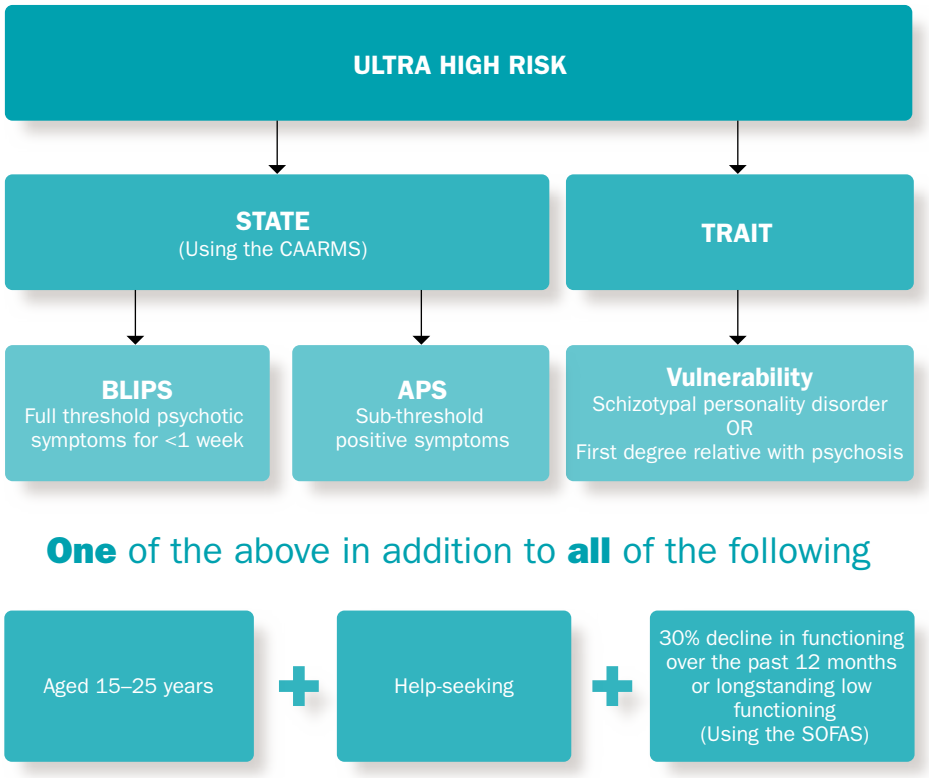
Young people who are experiencing an ARMS can be further identified using a set of criteria listed below known as the ultra high risk (UHR) for psychosis criteria. The term 'ultra' was introduced to distinguish these criteria from the 'high risk' criteria based exclusively on identifying relatives of patients with a psychotic disorder.[5] The UHR criteria consist of three groups and are represented in Figure 1. Young people can meet the criteria for more than one of these groups.

Attenuated Psychotic Symptoms (APS): the experience of sub-threshold attenuated positive psychotic symptoms during the past year.

Brief Limited Intermittent Psychotic Symptoms (BLIPS): the experience of full-threshold positive psychotic symptoms that have not lasted longer than a week and have spontaneously resolved without treatment.

Vulnerability: a first-degree relative with a psychotic disorder, or the presence of a schizotypal personality disorder.

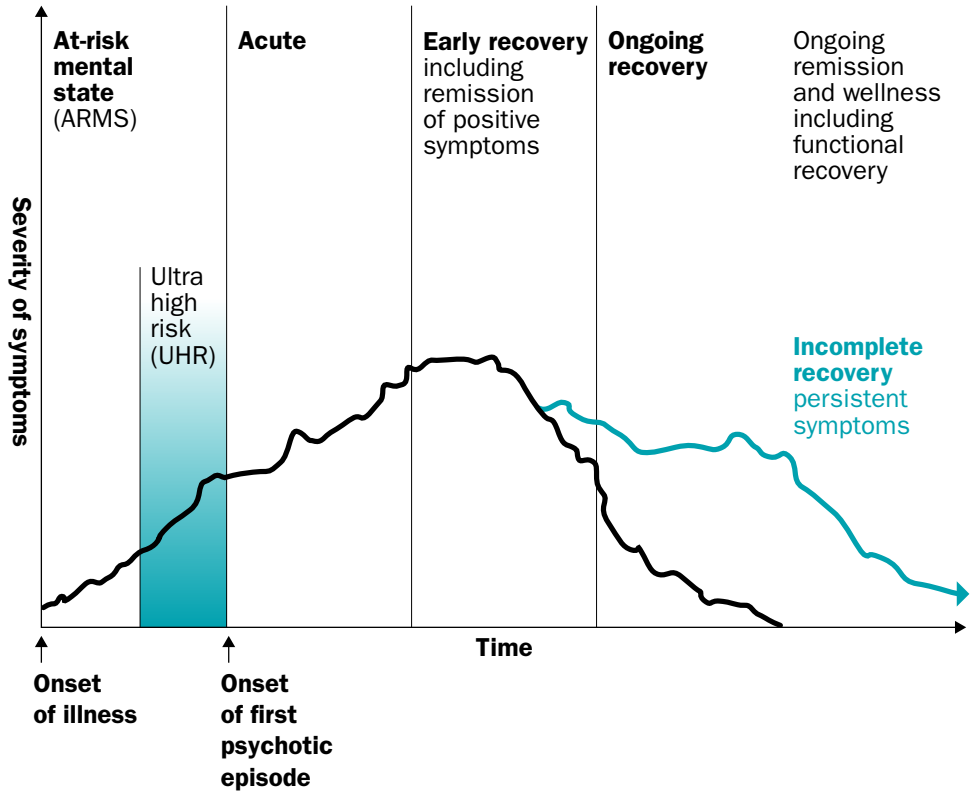
FIGURE 1. **UHR CRITERIA**



A significant decline in functioning or chronic low functioning, measured using the Social and Occupational Functioning Scale (SOFAS)[10], is also required for the young person to be identified as UHR. Please see Goldman et al. (1992) for more information on the SOFAS. The Comprehensive Assessment of At Risk Mental States (CAARMS) instrument can be used to assess the UHR criteria of brief limited psychotic symptoms and attenuated psychotic symptoms in young people. The CAARMS should only be used by clinicians who have completed training in the appropriate use and scoring of the measure.[11] The *CAARMS: assessing young people at ultra high risk of psychosis* is a ENSP manual that clinicians may use to guide assessment and clinical application of the measure.

A considerable body of research has identified good reliability and validity for the UHR criteria as measured by the CAARMS. The main purpose of the criteria is to identify young people who are at high risk of transitioning to psychotic disorder. Therefore, validation consists of examining rates of transition to psychosis over time. A meta-analysis reported that transition rates in young people identified as experiencing UHR were 18% at 6 months, 22% at 12 months, 29% at 2 years and 36% at 3 years.[12] A long-term follow up study conducted at the PACE Clinic at Orygen Youth Health Research Centre found that risk of transition to psychosis can extend up to 10 years post-entry to the service, with the highest risk being in the first 2–3 years.[13] These rates are far higher than rates observed in other clinical groups or in the general population, providing further evidence for the validity of the criteria.[13] The concepts of ARMS and UHR in relation to the later phases of psychosis and recovery are depicted in Figure 2.

FIGURE 2. **PHASES OF PSYCHOSIS**



Young people who have been identified as UHR of psychosis using specific criteria and do transition to psychotic disorder are referred to as 'true positive' cases. This means that the UHR criteria have correctly identified this young person as being in the prodromal phase of psychotic disorder. Young people who have been identified as at UHR for psychosis but do not transition to psychotic disorder are referred to as 'false positive' cases. These young people have been falsely identified as being at risk of psychotic disorder that is, although they meet UHR criteria they are not on the trajectory towards psychotic disorder. It is challenging, with the current level of knowledge, to distinguish false positive cases from cases of UHR where intervention has in fact prevented transition to psychotic disorder, these cases are sometimes referred to false false positive cases. This difficulty of predicting the future course of symptoms in young people identified as UHR of psychosis is one reason why language, labelling and treatment must be sensitively handled in this clinical population.

Staging model and phase-specific intervention

The approach to UHR identification and intervention is supported by the principles outlined in the clinical staging model that are based on theories from general medicine. The model outlines the stages of development of a disorder and proposes that early intervention may be both safer than those interventions used during the later stages of disorder, due to less invasive treatment and more effective, due to briefer duration of active illness.[14] The clinical staging model of psychosis differs from conventional practice by defining psychosis as a continuum: where treatment interventions are used at specific stages to prevent progression to the next stage of the disorder in addition to promoting recovery.

The differentiation of early and milder clinical phenomena from those that accompany illness progression lies at the heart of the concept makes it especially useful in adolescence and early adulthood, when most adult-type psychiatric disorders emerge for the first time. The different stages of disorder are determined by symptom severity, level of distress and disability. The identification of young people with sub-threshold psychotic symptoms (stage 1b) using the UHR approach means identifying people at an earlier stage of disorder and tailoring treatment to this stage (see Table 1). If the young person progresses to first episode psychosis (FEP), their treatment needs will differ (Table 1). According to the staging model, the UHR stage should attract interventions aimed at reducing distress and functional impairment with minimal potential side effects. This may include integrated case management, cognitive behavioural therapy, social and occupational interventions and neuroprotective agents such as omega-3 fatty acids. It may also include the use of pharmacological treatments for co-occuring anxiety or depression. Once FEP has occurred, the type and intensity of interventions should be adapted to reflect a change in the stage of illness. For a discussion of interventions indicated for young people who have experienced a FEP or later phase of psychotic illness please see the *Australian Clinical Guidelines for Early Psychosis*[14] and other manuals in this series.

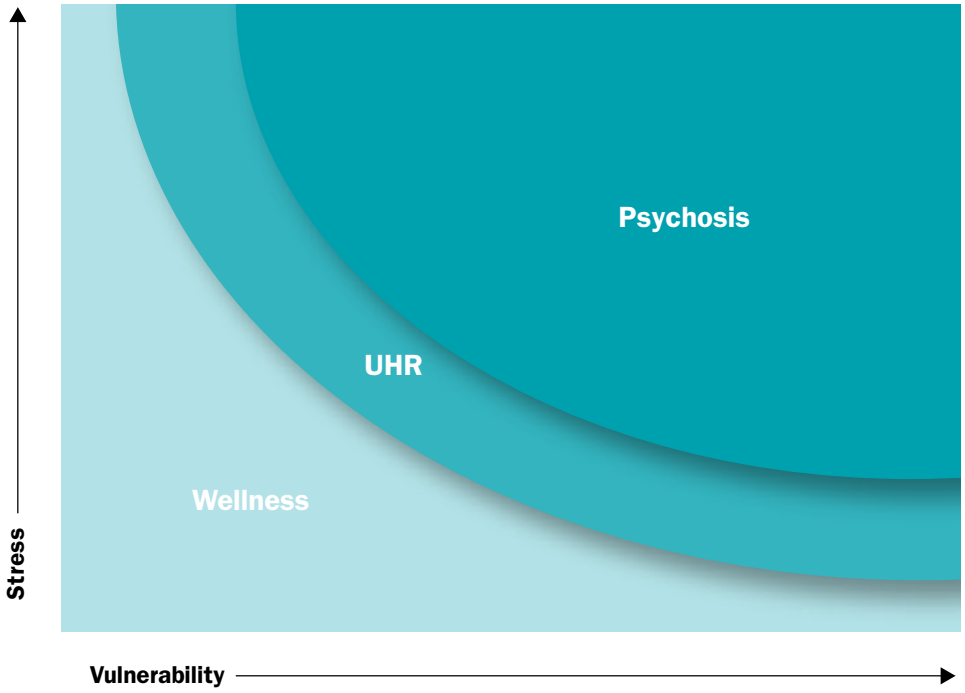
TABLE 1. **THE STAGING MODEL OF PSYCHOSIS**

STAGE	PSYCHOSIS	TREATMENT
0	Increased risk/no symptoms	Indicated prevention of FEP such as: improved mental health literacy, family education, drug education
1a	Mild or non-specific symptoms and functional decline	Indicated secondary prevention such as: formal mental health literacy, family psychoeducation, cognitive-behavioural therapy, active reduction in substance use
1b	UHR – sub-threshold	Indicated secondary prevention such as: psychoeducation, cognitive-behavioural therapy, substance use work, omega-3 fatty acids, antidepressants
2	FEP – full-threshold	Early intervention for FEP such as: psychoeducation, cognitive-behavioural therapy, substance use work, atypical antipsychotic meds, vocational rehabilitation
3a	Incomplete remission from first episode of care	Early intervention for FEP such as: for stage 2 plus additional emphasis on medical and psychosocial strategies to achieve remission
3b	Recurrence or relapse stabilised with treatment but still residual symptoms	Early intervention for FEP such as: for stage 3a plus additional emphasis on relapse prevention
3c	Multiple relapses with clinical deterioration	Early intervention in FEP such as: for stage 3b but with emphasis on long-term stabilisation
4	Severe, persistent or unremitting illness	As for stage 3c but with emphasis on clozapine, other tertiary treatments and social participation despite ongoing disability

Stress–vulnerability model

The stress–vulnerability model of psychosis forms the basis of the treatment approach for young people identified as UHR. It incorporates biological, psychological and social factors in understanding the development of psychotic disorders. A central assumption is that environmental stressors such as relationship issues, substance use or lifestyle factors can precipitate illness in vulnerable individuals. The more vulnerable an individual, the less stress is required to trigger the onset of symptoms. Consideration of biological, social and psychological stressors, protective factors and underlying biological vulnerability can guide the development of individualised treatment plans. This model implies that the implementation of appropriate coping strategies may reduce the person's vulnerability. Figure 2 shows the interactions between stress and vulnerability, and how reducing stress or vulnerability can both reduce the risk of becoming unwell.

FIGURE 3. **STRESS–VULNERABILITY MODEL OF PSYCHOSIS**



In the context of the stress–vulnerability model non-psychotic presenting complaints are a perfectly valid treatment target in young people identified as UHR. The majority of young people identified as UHR present with co-occuring conditions such as depression, anxiety or personality disturbance. These conditions can often be more distressing to the young person than the APS. According to the stress-vulnerability model addressing these co-occuring conditions will reduce the levels of stress experienced by the individual and thereby reduce the risk of transition to psychosis. It is not uncommon for treatment of young people identified as UHR to focus on depressive symptoms as the most pressing source of distress and to see the APS recede as depressive symptoms improve.

The illness trajectory of young people identified as UHR cannot be predicted with certainty from time of service entry as symptoms can wax and wane over time. The following case scenarios present two different examples of young people identified as UHR. The case scenario of Anna (presented in the box below) illustrates a young person whose symptoms fluctuated in intensity and frequency prior to and after referral to a youth mental health service but never reached threshold for FEP.

CASE SCENARIO **ANNA**

Anna, aged 17, was in her final year at high school when she was referred to a youth mental health service by a school psychologist. Her teachers were concerned about her behaviour; they noticed that she had become distant from her friends and had become verbally abusive towards one of them, accusing the teacher of taking about her behind her back. Anna's parents said that she had recently started spending more time alone in her bedroom. Anna said she had developed ideas that her family and friends were conspiring to harm her over the past three months. She said that she was avoiding contact with others because this reduced the frequency of the thoughts. She also indicated that she had heard mumbling voices outside her head on four occasions in the past month. These experiences occurred as she was trying to fall asleep and on one occasion the voices were clearer and were speaking negatively about her. Anna had experienced similar symptoms, on and off, for the past 18 months, usually coinciding with increased stressors in her life. She said she was feeling anxious about her forthcoming exams and was concerned that she would not achieve high enough marks to enter the university degree she was interested in. While being seen at the youth mental service, Anna's symptoms worsened as life stressors increased and abated when the stressor passed. Treatment focused on stress-management strategies and over 12 months Anna's symptoms, although still present occasionally, reduced in intensity and frequency.

The case of David (presented in the box below) illustrates a young person identified as UHR whose symptoms passed threshold for FEP while being seen by a youth mental health service but had resolved over time. He was also functioning well several years after his transition to psychosis.

CASE SCENARIO **DAVID**

David was referred to a youth mental health service by his local doctor. He presented with a 2-year history of depressed mood and social withdrawal, and 3 years of moderate-to-heavy cannabis use. He reported about 1 year of attenuated psychotic symptoms, including the intermittent feeling that the television and radio were broadcasting messages for him, a feeling of being watched, and feeling that his parents were talking in riddles. While being seen at the service, David began working on reducing his cannabis use and at the end of 4 months had ceased use completely. Within 1 week of ceasing cannabis his attenuated psychotic symptoms worsened and became held with delusional conviction. He had therefore crossed the psychosis threshold and was now being treated for FEP. David was started on antipsychotic medication and continued with psychological interventions. His adherence with medication was intermittent and David eventually ceased medication completely after symptoms resolved within a month. The risks and benefits of using antipsychotic medication were discussed with David and he indicated that he would consider using medication only if he again experienced psychotic symptoms. David had two further periods during which similar delusions and auditory hallucinations reached the psychosis threshold in the context of heavy alcohol and cannabis use. Following this second period of symptoms, David recommenced medication and remained adherent to this for a period of one year. Two years after David transitioned to psychosis he was functioning well. Since the last episode of psychotic symptoms his life had improved: he was recently married and had a 2 year-old daughter.

Efficacy

A number of intervention studies involving young people identified as UHR have been conducted nationally and internationally, and are summarised in Table 2.

TABLE 2. **UHR INTERVENTION STUDIES**

STUDY	STUDY DETAILS	MAIN FINDINGS
McGorry et al. (2002)[15]	CBT+RISP CM 12 months follow-up	Significantly lower rate of transition in treatment versus control group (9.7% vs. 35%) at 6 months. No difference between two groups at 12 months. Study demonstrated onset of psychosis could be delayed by specific intervention; however, it is unknown whether the benefit is due to medication, CBT or both.
McGorry et al. (2013)[16]	CBT+RISP CBT+PLA ST+PLA 12 months follow-up	No significant difference in transition rate between 3 groups (log-rank test p=0.60) at 12 months. Negative symptoms and overall functioning improved in all groups. Data failed to provide support for the use of antipsychotic medication in UHR patients. Data also suggested that initial supportive therapy is effective and is associated with fewer risks.
McGlashan et al. (2006)[17]	OLAN PLA 12 months follow-up	No significant difference in transition rate for the treatment group. Significant increase in side effects (mainly weight gain) in treatment group.
Morrison et al. (2004)[18] **EDIE**	CBT 12 months follow-up	Significantly lower rate of transition in the CBT group (6% vs 26%). Greater reduction in psychiatric symptoms at 12 months. These differences were not maintained at the 3 year follow-up.
Morrison et al. (2012)[19] **EDIE-2**	CBT Monitoring 24 months follow-up	No difference in transition rates between two groups. Overall rate of 8% over 24 months. Significant improvement in severity of attenuated psychotic symptoms compared to monitoring.
van der Gaag et al. (2012)[20]	CBT TAU 12 months follow-up	Significantly lower rate of transition to psychosis in CBT versus TAU (10 cases vs. 20 cases; p=0.03). At 18 months, CBT group has higher remission rate.

Table continues over page

TABLE 2. **UHR INTERVENTION STUDIES** CONTINUED

STUDY	STUDY DETAILS	MAIN FINDINGS
Bechdolf et al. (2007)[21]	CBT SC	Cognitive therapy superior to supportive therapy in reducing progression to sub-threshold to full-threshold psychosis over 24 months.
Amminger et al. (2010)[22]	Omega-3 PLA 12 months follow-up	Omega-3 significantly lowered the rate of transition to psychosis; effects persisted for 12 months (4.9% vs. 27.5%; p=0.007).
Cornblatt et al. (2007)[23]	Antidepressants SGA	43% of patients on SGA developed psychosis over 24 months and none of the patients treated with antidepressants.

CBT= cognitive behavioural therapy; CM= case management; OLAN= olanzapine; PLA= placebo; RISP= risperidone; SC= supportive counselling; SGA= second-generation antipsychotics; ST= supportive therapy; TAU= treatment as usual

Overall, the evidence indicates that specific interventions can be successful in delaying or preventing FEP in UHR patients. A meta-analysis by Preti and Cella reported that specific interventions resulted in significantly lower transition rates compared to control treatments.[24] Van der Gaag et al. (2013) published a meta-analysis that examined 10 studies and found that at 12 months the overall risk reduction was 54% (RR=0.463; 95% CI=0.33–0.64) with a number needed to treat of 9 (95% CI=6–15). Additionally, a risk reduction of 37% (RR=0.635; 95% CI=0.44–0.92) and a NNT of 12 (95% CI=7–59) was reported at the 24–48 months follow-up.[25] Hutton and Taylor (2013) conducted a meta-analysis of CBT intervention studies and reported that CBT-informed treatment in UHR patients reduced risk of transition to psychosis at 6, 12 and 18–24 months, and reduced symptoms at 12 months.[26]

Earlier data suggests that antipsychotic medication prevented or delay transition to psychotic disorder in the UHR population; however, the potential serious side effects associated with the use of antipsychotic drugs (weight gain, sexual dysfunction and extrapyramidal side effects) may be too distressing for young people. Naturalistic data also suggests that antidepressants may be associated with a lower transition rate to psychosis than antipsychotics. Furthermore, omega-3 fatty acids (fish oil) reduced transition rate to psychosis when compared with placebo in a randomised controlled study. The current Australian Clinical Guidelines for Early Psychosis recommendations are to use CBT and fish oil in addition to case management during the initial stages for young people [27], which is in line with the clinical staging model. Antipsychotics are not recommended for use in this population.[14,28]

Assessment, engagement and formulation

Assessment, engagement and formulation

Assessment in ultra high risk

A comprehensive assessment of any young person referred to an early psychosis service is essential for providing treatment and engaging with clinical care. During the assessment process a variety of information is gathered about the range of presenting symptoms, the history of symptoms, information about the young person's developmental and family history and other relevant personal and contextual factors. Information from this assessment is used to form a provisional diagnosis, and to develop an initial case formulation which will inform a short-term management plan and initial treatment planning. The format essentially follows the framework of a comprehensive psychiatric assessment with the main elements represented below.

ELEMENTS OF ASSESSMENT

Reason for the referral
Including the pathway to the service and the young person's own understanding of the referral process and reasons for referral.

Presenting problems
What are the presenting issues and their impact on the young person's functioning? What cognitive, behavioural, and social changes have occurred? How has the person attempted to adapt and cope with these?

Non-psychotic symptoms
Comorbid symptoms and disorders like anxiety and depression are very common, and are often the primary source of distress and disability.

Attenuated psychotic symptoms or brief psychotic symptoms
The Comprehensive Assessment of At Risk Mental States (CAARMS) has been developed as a specific tool to assess the range of attenuated psychotic symptoms evident during the prodromal phase of psychotic disorders. The positive symptoms section of the CAARMS is used to assess UHR status and provide a comprehensive picture of the presenting attenuated psychotic symptoms.

ELEMENTS OF ASSESSMENT CONTINUED

This section includes the following scales:

- **Unusual thought content**
  This scale rates psychotic symptoms such as delusional mood and perplexity, ideas of reference, thought insertion, thought withdrawal, thought broadcasting, mind-reading, and passivity experiences.

- **Non-bizarre ideas**
  This scale rates psychotic symptoms such as suspiciousness/paranoia, grandiosity, delusions related to the body, guilt, nihilism, jealousy, religion, and erotomania.

- **Perceptual abnormalities**
  This scale rates perceptual disturbances such as visual, auditory, olfactory, gustatory, tactile and somatic changes.

- **Disorganised speech**
  This scale rates subjective and objective disturbances of speech corresponding to thought disorder, such as flight of ideas, poverty of thought, thought blocking, loosening of associations, tangentiality, derailment, etc.

Experiences of negative symptoms or basic symptoms

- The experience of negative or basic symptoms can be assessed using the CAARMS (long version).
- Negative symptoms include low motivation, emotional apathy, cognitive and motor slowness, underactivity, lack of drive, poverty of speech and social withdrawal.
- Basic symptoms include impaired tolerance to normal stress, increased self-reflection, decreased spontaneity, decreased capacity to discriminate between emotions, unusual bodily sensations.

It is important to assess the degree of distress associated with these symptoms, as well as how they might relate to other symptoms. For example, it is common for attenuated psychotic symptoms to become more severe or intrusive during periods of heightened anxiety. The young person's interpretation of these symptoms should also be gauged. For example, does the young person interpret these experiences as indicative of 'going mad', losing control, a stress reaction, and so on. Attenuated psychotic symptoms might be considered by the young person to be more unusual than other symptoms, such as low mood, and may therefore be associated with more anxiety or shame, so it can be helpful to develop some rapport before addressing these symptoms.

ELEMENTS OF ASSESSMENT CONTINUED

Medical history
The medical history is reviewed, including current and past medications. Medical issues are more thoroughly investigated in a medical review with a psychiatrist.

Psychiatric history
Including current and past contact with psychiatric services.

Drug and alcohol use
Encompassing current and past use, type, dosage and circumstances of drugs and alcohol. Any relationship between the drug and alcohol use and the attenuated psychotic symptoms should be assessed.

Family history
Of mental illness and nature of family relationships.

Personal history
Including early developmental milestones, academic performance, cultural issues, current support network, recreational interests, religiosity, premorbid personality, identity.

Forensic history
Including any history of contact with forensic services or illegal activity.

Risk assessment
Including history of suicidal, homicidal or aggressive behaviours; deliberate self-harm; other risky behaviours; vulnerability to abuse and exploitation; impulsivity.

Mental state examination
Structured assessment of the young person's cognitive, affective and behavioural functioning

Young people may be confused or distressed by their symptoms and often have not discussed this with others because they are embarrassed or ashamed. The process of assessment can provide an opportunity for young people to share their explanatory model and for clinicians to provide non-stigmatising information using the stress-vulnerability concept, which will assist young people to understand their symptoms and guide the course of therapy. Even during the earliest stages, the therapist can emphasise the collaborative nature of the treatment process and identify the most appropriate interventions based on the young person’s developmental level and symptomatic presentation, and the strength of the therapeutic relationship.

The full range of presenting symptoms and issues must be taken into account when developing an individualised formulation and treatment plan. For further information about comprehensive assessment for early psychosis clinicians please refer to the ENSP manual *'Let me understand...' assessment in early psychosis*. An expanded discussion about assessment and case formulation with young people identified as UHR for psychosis can be found in books by Van der Gaag, Nieman and van den Berg (2013) and Addington, Francey and Morrison (2006).

Engagement in ultra high risk

Young people identified as UHR of psychosis presenting to a youth mental health service can be difficult to engage for a range of reasons. The non-specific nature of presenting symptoms, lack of familiarity or stigma about mental health services, ambivalence about the need for treatment, and the presence of symptoms, which can affect motivation and cognitive function (memory, concentration and executive functioning) have an impact on engagement. Some techniques to engage young people in these circumstances are listed below.

TOOLS FOR ENGAGEMENT
Excellent communication skills that include active listening, empathy, and respect for the young person's needs.
Offering practical assistance through case management.
Working initially with the young person's primary concerns and sources of distress before moving on to issues that they might not have yet considered such as the potential to develop a psychotic disorder.
Flexibility with the timing and location of therapy (see the ENSP manual *There's no place like home: home based care in early psychosis*)
Providing information and education about symptoms, adapting the format and style to the individual and repeating information as needed.
Working collaboratively with family members, with the knowledge and consent of the young person (see the ENSP manual *In this together: family work in early psychosis*).

The case scenario of Jason illustrates the importance of a comprehensive assessment, positive engagement and providing accurate information about symptoms and is described below.

CASE SCENARIO **JASON**

Jason, aged 18, was an apprentice mechanic whose mother had schizophrenia. He presented to his GP because he was having difficulty coping at work and getting on with his colleagues, who had bullied him since he started there 5 months earlier. He had become anxious and depressed. He developed infrequent auditory hallucinations, especially at night, of some of his colleagues' voices taunting him and making derogatory comments. He started to believe that he was 'hopeless' and that even people outside his workplace would think this too. He found himself becoming mistrusting of strangers at times, even though he realised that this was likely to be unfounded and that he was generalising from his traumatic experiences at work.

His GP referred him to a youth mental health service. He was assessed as being not frankly psychotic but as having some attenuated psychotic symptoms, including perceptual disturbances and suspiciousness. The clinician who assessed Jason informed him that he had significant anxiety and depression related to his traumatic experiences at work. He was also told that he presented with certain features which suggested that he might be 'more at risk than the average person' of developing a psychotic disorder, namely his family history of schizophrenia and the recent onset of attenuated psychotic symptoms. He was also told that his anxiety and depression would be treated and his unusual experiences monitored regularly for signs of them becoming worse. If this were the case, timely treatment would be provided. Jason welcomed this feedback. He had been concerned that he was 'going crazy like my mum'. He was pleased to hear that if his attenuated psychotic symptoms got worse they could be treated at the youth mental health service and that he would not have to attend the same mental health service as his mother.

Jason was concerned that his 'at risk' status would be communicated to his employers. He was reassured that this would not happen. Jason brought his girlfriend to his third appointment as he wanted her to be involved in further discussions about his condition. The couple found it particularly helpful to hear that the symptoms that had been concerning them both (hallucinations and suspiciousness) would be monitored and treated if they worsened.

Aetiological case formulation in ultra high risk

What is case formulation?

Aetiological case formulation is the process of collating information that has been gathered during an assessment. It is an attempt to synthesise information across biological, psychological and social domains to provide a cohesive narrative about what may have led to the symptoms and difficulties the young person presents with. Case formulation offers hypotheses about factors that lead to, or maintain, the presenting problems, and provides a rationale to guide subsequent treatment interventions. In addition, the collaborative nature of case formulation provides an opportunity to include a discussion of the young person's strengths and protective factors, which may ameliorate the impact of emerging mental health problems.[29,30]

Why use case formulation for young people identified as ultra high risk?

The application of psychiatric diagnoses when working with young people who are experiencing mental health difficulties can be fraught with potential challenges. For early intervention services, the aim of getting in early to prevent or reduce the impact of full-threshold disorders means that the diagnostic picture is often unclear. For young people identified as UHR there may be a number of presenting symptoms for which they are help-seeking. One of the challenges of working with this group is how to determine whether APS or BLIPS may be attributable to other presenting features (e.g. amphetamine use), or represent a precursor to full-threshold psychotic disorder. In practice, it is not possible to have diagnostic clarity unless the young person subsequently experiences a worsening of psychotic symptoms. Once this occurs, the picture often remains unclear and diagnoses are commonly revised a number of times over the course of psychotic illness.

The critical point is that we must provide care for the young person and address those difficulties for which they are seeking help while retaining a focus on the potential for emerging psychosis so that symptoms can be identified, monitored and treated promptly. The use of case formulation to conceptualise presenting symptoms using a stress-vulnerability framework provides a way of balancing these priorities. It emphasises the importance of understanding the young person's explanatory model about their presenting symptoms and allows us to consider a number of working hypotheses about the likely aetiology of symptoms.[31] The benefits of using this model are that it can be applied in a flexible manner to the wide array of UHR presentations and that it allows for an individualised treatment approach that is non-stigmatising and optimistic.[32]

Case formulation provides a rationale for treatment and specific targets for intervention for clinicians, the treating team, and most importantly the young person and their family or significant others. The case formulation should be considered a collaborative process, where the young person and clinician come to a shared understanding, or explanatory model, about the presenting problem. This process allows the young person to be actively engaged with their treatment and is more likely to lead to a comprehensive understanding of relevant factors that may impact on successful outcomes. The content of the case formulation may be regularly revised as new information becomes available. Therefore, the depth and content of the case formulation following the initial assessment will likely be very different once the young person has been seen for some time.

Core elements of case formulation

There are a number of different methods for aetiological case formulation that vary with respect to the structure or theoretical background that is emphasised. Case formulation is considered as an essential component for most psychological therapies including cognitive-behavioural therapy (CBT). The model presented below is consistent with the stress-vulnerability model that includes a consideration of biopsychosocial factors in the development of mental health problems. The core elements of this model are known as the '5Ps' and a description of each is outlined below.

THE '5PS' OF CASE FORMULATION		
Presenting	Initial signs, symptoms or other issues that are clinically important for the young person	For example, paranoia, low mood, homelessness
Predisposing	Factors that infer vulnerability or increase the risk for the presenting problems	For example, early childhood trauma, family history of psychotic disorder
Precipitating	Personal or circumstantial stressors or triggers that are associated with the onset of the presenting problems	For example, relationship break-up, began using cannabis, bullying
Perpetuating	Factors that maintain or exacerbate the severity of the presenting problems	For example, regular substance use, interpersonal problems, poor social support
Protective	Personal or circumstantial factors that buffer or ameliorate the impact of the presenting problems	For example, previous success at school, supportive family, good coping skills

One method of representing the information that has been collected about the young person's history can be seen in Table 3 for the case of the young person 'Jack'. The grid format allows you to categorise information quickly and to highlight where there may be missing information that requires further assessment. In the example below, we can see that we need to gather information about biological factors such as family history, early developmental problems or substance use. The grid format can also be a useful tool for discussing treatment goals and interventions with a young person, although there should be careful consideration about if, when and how this information is discussed as it can be experienced as challenging or confronting by the young person.[33]

TABLE 3. **BIOPSYCHOSOCIAL CASE FORMULATION GRID FOR CASE SCENARIO JACK**

	BIOLOGICAL	PSYCHOLOGICAL	SOCIAL
Presenting	Attenuated psychotic symptoms	Anxiety and distress Suspiciousness of others Occasional thoughts that others want to harm him Occasional perceptual disturbances	Limited social contact Missing school Spending long hours on the internet playing games
Predisposing		Childhood social anxiety Core belief – 'I am vulnerable' and 'people can't be trusted'	Bullying during late primary school and early high school
Precipitating	Sleep disturbance for past month	Worsening anxiety Beliefs that others are watching him, laughing at him Disclosure to mum that he thought that he was 'losing his mind'	Poor functioning over past year Withdrawal from social contact
Perpetuating		Anxiety and distress Hypervigilance to possible threat Distress and confusion related to occasional perceptual disturbances	Avoids leaving the house and contact with friends
Protective	Nil reported substance use Nil known history of pre-natal or developmental problems Nil known family history of psychiatric disorder	Able to reality test suspicious thoughts	Supportive family Previous success academically Able to feel safe when in bedroom

Generally, the case formulation is summarised into a narrative or written synopsis about the young person for clear communication with members of the treating team, this is updated at relevant points in their treatment. An example of a written summary for the case scenario of Jack can be seen over the page.

CASE FORMULATION **JACK**

Jack is a 17-year-old male who was referred to a youth mental health service by his mother following 1 year-long deterioration in his social and educational functioning with worsening anxiety and attenuated psychotic symptoms over the past 6 months.

There were no clear biological predisposing factors reported at the assessment and further information about developmental and family history was required. Jack's experience of bullying during his late primary and early high school years is possibly related to the development of long-standing anxiety symptoms and stated beliefs that he is vulnerable and that others should not be trusted. Given the severity of this bullying, Jack said that he must be guarded and aware of others around him at all times.

Jack's worsening anxiety, poor sleep, increased avoidance of friends and school and his increased time spent playing computer games precipitated his referral to the youth mental health service. He disclosed to his mum that he believed that people were watching him or secretly taking or laughing about him at school, which he found distressing. Jack also reported occasional perceptual disturbances, hearing his name or his brother's name being called and fleeting movements out of the corner of his eyes for the past 6 months.

Jack's ongoing avoidant behaviour has meant that he has lost contact with some of his friends, exacerbating his fears about what they may think of him. His hypervigilant behaviour when he leaves the house has led to him misinterpreting the responses of others and he has indicated that he feels safest when he remains in his room at home. His poor school attendance has led to increased attention from teachers when Jack does go to class, which he finds anxiety provoking. In the absence of alternative means of coping with distress and confusion about his beliefs and perceptual disturbances Jack's avoidance has worsened, maintaining both his symptoms and the situational triggers.

Protectively, Jack's parents are very supportive of him and have been actively involved in helping him to access treatment. He has previously performed well at school academically and has a small group of close friends who have continued to try and keep in touch with him. Jack has insight that his suspicious beliefs may not be true despite the distress they cause him and is motivated to gain skills to cope better with his anxiety.

Discussing case formulation with a young person

Case formulation is a collaborative process between clinician and young person that usually begins at the same time as assessment and engagement. It is important to remember that case formulation should be revisited regularly and may evolve over time. Sharing the formulation with the young person in verbal or written form is an opportunity to enhance engagement and, promote optimism.[34] It shows that the clinician is interested in understanding the 'whole person', and helps to clearly articulate how treatment will specifically be targeted. Formulation should be flexible and be adapted as needed to developments that occur during treatment.[32]

Methods for presenting the case formulation vary and may include the use of diagrammatic representation or as a letter to the young person and should be tailored to the individual. The use of case formulation from a cognitive behavioural perspective is discussed in the 'Clinical interventions for UHR' section of this manual. An example of diagrammatic CBT case formulation for the example of young person Jack can be found in Appendix 1. You can find more detailed information about how to use case formulation in your clinical practice in the online module *Introduction to case formulation*.

Case management in ultra high risk

Case management in ultra high risk

An integrated model of case management and CBT are used when working with young people identified as UHR, with both treatment approaches delivered by the same clinician. In practice, both components are incorporated into treatment delivery based on the individual case formulation about the treatment needs of the young person. This may mean that both components are provided within the same session with a balance struck between the components. Some young people will have many case management requirements with a greater emphasis placed on reducing external or situational stressors such as housing, education or physical health needs. For others it might be possible to focus more exclusively on CBT interventions with less need for case management work. For a number of reasons it may not be appropriate or possible to provide formal CBT for each young person identified as UHR. Irrespective of this, all case management interventions should be informed by an understanding of the CBT model.

The term 'case management' was first used in psychiatry in the 1960s at the start of the process to close large inpatient institutions and progressively base the care of most mental illness in the community. Case management aimed to avoid fragmentation of available community services and provide a point of accountability for the care of young people with complex problems. A consensus has since emerged on the general features of case management that include:

- assessment of young person's needs
- development of a comprehensive service plan to meet these needs
- arrangement of service delivery
- monitoring and assessment of services
- evaluation and follow up.[35]

The relationship between the clinician and the young person is pivotal to treatment. The case manager should be central to all decisions across inpatient and outpatient settings, and remain involved with the young person and the family throughout their time with the service. Young people and families have identified factors that they regard as important in their relationship with a case manager, including:

- **Accessibility**
  Both the young person and family need to know they can contact the case manager in a crisis.
- **Flexibility**
  The clinician needs to be responsive to the changing needs of the family and young person, rather than dogmatically adhering to a particular theory or practice.

- **Maintenance of optimism**
  Promoting recovery and expecting the young person to be actively involved in the recovery process.
- **Capability**
  The case manager possesses relevant training, knowledge and skills.

Goals of case management

The practical goals of case management are listed below.

PRACTICAL GOALS OF CLINICAL CASE MANAGEMENT
Ongoing monitoring of the young person's mental state and risks.
Ensuring the young person, their family or significant others are appropriately informed about the nature of the mental health issues and their treatment.
Reducing the trauma or anxiety associated with any necessary inpatient admissions.
Facilitating adequate treatment for comorbid disorders.
Assisting in reducing any adverse impact of the illness on the young person's psychosocial environment, for example in relationships, accommodation, education, employment, financial security.
Fostering the recovery of the young person, reintegration into society, and restoration of a normal developmental trajectory.

The extent to which the case manager can fulfil each of these roles depends on the circumstances, including the nature and severity of the young person's symptoms, the response to treatment, the extent of concurrent medical, psychological and social difficulties, the structure of the mental health service and the resources that are available.

During the initial stages, case managers can be helpful in providing 'damage control'. For example, practical matters such as work or education, relationships with friends, legal issues, financial matters and access to accommodation can be severely disrupted in at risk individuals. These issues can contribute significantly to stress in the young person's life, which may in turn maintain or exacerbate their symptoms. By assisting the young person to deal with these issues, the case manager can potentially reduce the level of stress and improve their symptoms.

A case manager can act as an advocate and broker for the young person, for example, by contacting (with consent from the young person) an employer, school or university to explain the person's current difficulties, informing the police about the reasons for property damage or other events that might have occurred, or ensuring that access to social security benefits is preserved.

Young people identified as UHR are often help-seeking and present with significant functional difficulties, whether in the social, educational, or vocational domains. These functional difficulties are present whether or not the young person with UHR develops FEP or not. It is therefore important to provide comprehensive case management targeting these functional difficulties regardless of the illness trajectory.

Clinical interventions for ultra high risk

Clinical interventions for ultra high risk

Risk assessment and crisis management

Clinical experience and research data show that young people who are identified as UHR of psychosis can experience significant crises and can at times be at risk to themselves and others.[36,37] Assessing the risk of harm to self and others is an essential component of case management. While risk assessment tends to focus on the risk of physical harm to the young person (especially suicide) or to others, other aspects of risk such as neglect of dependents or victimisation also need to be considered. The risk may be associated with the young person's attenuated psychotic symptoms (e.g. self-harming ideation and/or behaviour in response to paranoid thoughts) or may be associated with co-occurring conditions such as depression or personality disorder. Regular formal risk assessments are required with the results carefully recorded and communicated to other staff and supports involved in treatment and supervision. Emergency and after-hours services should be available, and young people and their families be informed about how to access after-hours support should they need it. As with all clinical populations, risk management plans may need to be in place and revisited regularly. For more information on crisis and risk assessment in early psychosis services please see the ENSP manual *'Let me understand'…assessment in early psychosis.*

Information giving

The case manager should explain the rationale for young people attending the early psychosis service and engaging in treatment. The explanation should carefully describe the rationale of treating current symptoms and disability while aiming to prevent progression to a full-threshold psychotic disorder. This process should emphasise that psychosis is not the inevitable result of UHR status, monitoring of mental state will be provided and timely treatment and intervention will be provided for current problems and worsening symptoms. It is important not to alarm the young person or their family by speaking of 'transition' or 'psychosis' in a manner that conveys the view that this is a terrible outcome. It is well known that many young people recover well from FEP and that functional outcome in UHR groups is not dependent on whether a young person at UHR develops FEP or not. In other words, most young people identified as UHR never transition to psychosis yet continue to experience significant functional difficulties, while other young people identified as UHR develop psychosis yet recover well both symptomatically and functionally. While the particular language used should be tailored to the individual young person, it is common to speak with young people and families

about ‘symptoms worsening’ or ‘problems getting worse’ rather than ‘transitioning to psychosis’. Similarly, the term UHR can be overly alarming to young people and their families; this term was originally introduced to define a clinical population for research purposes rather than for everyday use in clinical practice. It is often more acceptable to speak with young people and their families of an ‘at risk mental state’ or simply of being ‘at risk’ of symptoms worsening.

Clinical experience indicates that stigma is not a significant issue for young people identified as UHR. This is supported by research in this area that indicates that the experiences of young people ‘labelled’ as being at increased risk of a psychotic disorder were generally positive with limited instances of stigmatisation by family and friends.[38]

The possible stigma of being labelled as being at risk of a psychotic disorder can be addressed in a number of ways:

- The service’s environment should be non-stigmatising and acceptable to young people; it is helpful to not have an overly medical or ‘surgery-like’ setting.
- Information should be provided in a sensitive way.
- Assure the young person that their UHR status will remain confidential.
- Provide continued opportunities to discuss both the risk of psychosis and the need to deal with the normal developmental challenges of adolescence and early adulthood (e.g. individuation, peer relationships, identity development, educational and vocational demands).
- When referral to other mental health services is needed choose services that also emphasise early intervention and focus on recovery, ideally an early psychosis service with specialised care for FEP.

Group interventions

Group interventions have been found to be useful for young people identified as UHR.[39] This can be due both due to the content and process dynamics of group interventions. Groups aim to support young people by enhancing their strengths and working on their personal goals in a group context. Group interventions can include:

- vocational groups focusing on school, study and work
- groups focusing on improving physical health, through physical fitness or reducing drug use
- stress management and relaxation strategy groups
- social and leisure groups that foster social relationships and enhance social skills
- groups focused on self-knowledge such as outdoor adventure and music and art groups
- groups aimed at developing independence and assertiveness skills.

Participating in groups with other young people experiencing similar difficulties offers a number of benefits. It can have a normalising effect, provide support, be behaviourally and cognitively activating, and assist with difficulties such as poor self-esteem, social anxiety and anger management. For some young people, group programs are more acceptable than individual psychotherapy. Further information on the use of group programs can be found in the ENSP manual *All together now: therapeutic work for early psychosis*.

Family interventions

It makes sense, given the nature of early intervention and the age at which young people are usually identified as being at UHR, that part of our work will be done with families. Within the EPPIC model, working with families and significant others is considered to be a core component of the care offered by a young person's primary case manager, their doctor and other members of the treating team across acute or psychosocial services.[40] This section describes the rationale for family work in UHR and the elements of family work considered to be most important when working with young people identified as UHR. There are some shared philosophical underpinnings and practical rationales for family work in both UHR and FEP that are outlined below. An expanded discussion of specific family work interventions using a phase-based approach can be found in the ENSP manual *In this together: working with families in early psychosis*.

Principles of family work common to ultra high risk and first episode psychosis

The family are not to blame for the young person's mental health problems

A negative consequence of early research into the contextual and social factors implicated in the development of mental health problems (such as schizophrenia) was the actual or perceived attribution of blame to parents and families. It is important for clinicians to understand the ways in which the behaviour and attitudes of family members may be implicated in the onset and maintenance of the young person's symptoms. However, when addressing this with both the family and young person it is important to take a non-blaming stance, to acknowledge challenges to responding differently, highlight existing strengths and to view interventions as a means to assist both the young person and family together.[41]

Assumption of least pathology

For the clinician to hold the opinion that the family and individuals within the family unit are doing their best in difficult circumstances. It is important to remember that clinicians are often observing families in crisis, where they may be responding to stress ('state') in ways that are not typical of their usual patterns ('trait'). Notions of 'expressed emotion' ('EE') are considered to be less helpful for families of both young people identified as UHR or with FEP for this reason.[42]

The moral imperative

All families are entitled to receive care and collaboration from services. Often family members of young people identified as UHR or with FEP are distressed and anxious about the changes they have noticed in their relative. They may feel guilty or blamed for the young person's symptoms or are distressed by their observation of risks (of suicidality, self-harm, violence or risk taking behaviour). Clinicians working within the service are best equipped to provide support and accurate information that may assist in reducing this distress.

The practical imperative
Family members have been involved prior to the young person's contact with services and will be involved throughout the episode of care and thereafter. By working with families, clinicians and the service invest in potential treatment allies with the overarching aim of better treatment outcomes for young people.

Phase based family work

Consistent with the clinical staging model for treating psychosis, intervening at the UHR stage may reduce iatrogenic factors. As outlined previously, effective treatments in the UHR phase are usually less biological with an emphasis on psychosocial interventions. There is evidence in the research literature that working with families of individuals with psychosis can significantly improving the course of illness by reducing risk of relapse, reducing hospitalisation and improve treatment adherence.[43,44] Similarly, the use of phase-appropriate interventions for families of young people at the UHR stage may 'offer opportunities for secondary prevention'.[45] The approach considers that there are general goals to address for families that occur across each phase (e.g. engagement and crisis support, developing an explanatory model, or promoting recovery). For some families this will mean having to cope with a young person's transition from UHR to early psychosis.

Collins and Addington (2006) identify three priorities for family work in UHR outlined below. The authors propose a four-stage framework for addressing these priorities which is discussed in detail in the text *Working with people at high risk of developing psychosis: a treatment handbook.*[46]

Management of the presenting problems
It is vital that we address the symptoms and issues both the family and young person are seeking help for. Often there will be an agreement between young people and their family about the presenting problems but occasionally clinicians may need to work on parallel goals with different individuals in the family unit. Providing information to family members about risk for psychosis, the stress-vulnerability model and the presence of co-occurring symptoms is important as it helps reduce their distress and encourages them to avoid inadvertently stigmatising the young person. While information about progress and treatment should be provided as appropriate, communication with families must be sensitive to the young person's confidentiality and privacy.

Monitoring for possible emergence of psychosis
As discussed previously, the family can be seen as an ally to successful treatment. In addition to providing support and psychoeducation, clinicians should engage the family to assist with identifying early warning signs of co-occurring mental health problems (e.g. increased anxiety, depression, irritability) and to monitor for changes in existing symptoms that may indicate the emergence of full-threshold psychotic disorder. As with direct work with young people themselves, there remains a tension between an open discussion of risk factors for psychosis (genetic, psychological, trauma-related and drug-involved) on the one hand, and on the other hand, inducing unnecessary alarm about a condition that may never occur. If we consider one example from general medicine it would be considered good practice to inform a young person and relevant family of the risks of weight gain, smoking and poor diet for heart disease, without this information being construed as traumatising or even stigmatising.

Development and maintenance of psychological wellbeing and functioning in family members

Although there are general goals to be addressed based on the young person's phase of recovery, it is important to consider the individual treatment for each family. Families of young people identified as UHR are generally dealing with multiple stressors related to the young persons' experience of APS or BLIPS or co-occurring symptoms (such as depression, anxiety or substance use). Additionally, they may be negotiating relationship problems, socioeconomic issues, educational or vocational difficulties, or mental illness of other family members. To better assist the young person, it is logical then that clinicians support family members' wellbeing and functioning. It may become apparent that family issues (e.g. significant levels of conflict or abuse within the family) are a factor in the young person's distress and symptoms. These issues may be addressed by clinicians in the treating team or if complex, by a family therapist within the team, or may even require referral to a more specialised family service.

Transition from ultra high risk to first episode psychosis

When a young person does experience a worsening of psychotic symptoms and commences treatment for a FEP, there may be a need to shift the emphasis of work with the family. There may be a changed model and different expectations around the process of recovery and what this may look like for the young person and their family. Issues of grief and loss may become more apparent and it may be important to assist family members to engage with additional supports. Notions of attribution of behaviour may become more complex for those young people whose transition is marked. This may not be the case for those people where there is a more insidious change or modest worsening of symptoms. The primary case manager as family worker (with or without the aid of the specialist family worker) is an important component in managing the challenges of transition, including maintaining continuity of care, and dealing with any stigma arising from diagnosis.

The case example below illustrates the benefits of a case manager being able to identify, and respond to, family relationship issues and their impact on a young person's psychiatric symptoms.

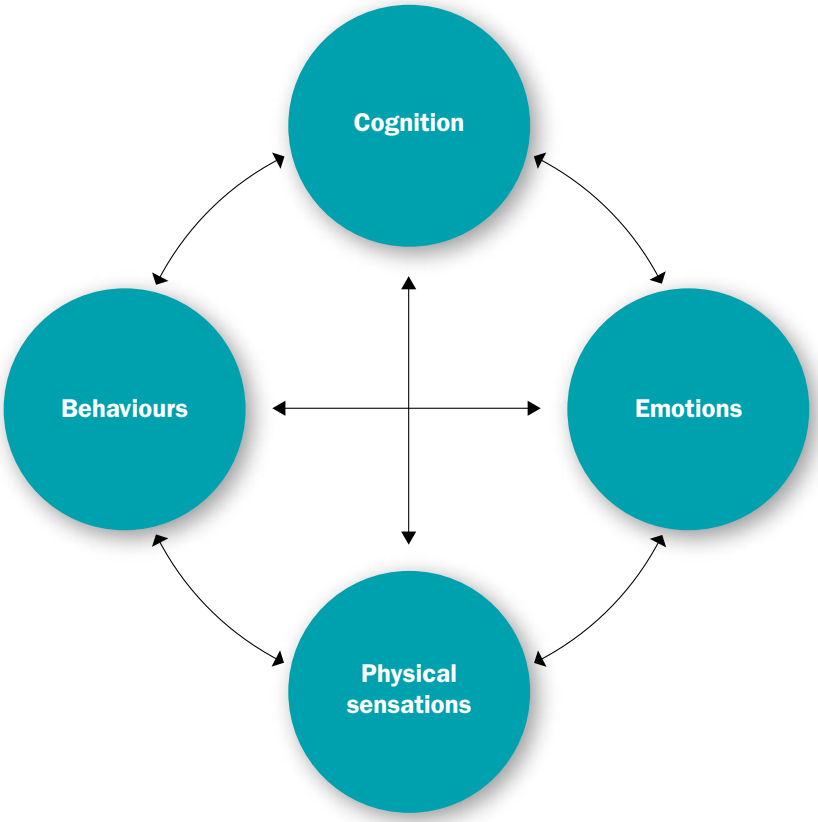
CASE SCENARIO **ANGELA**

Angela, is a 16-year-old girl living with her parents and her 20-year-old sister. She was referred to the youth mental health service by her school following a 6-month period of poor school attendance and withdrawal from others, deliberate self harm, suicidal ideation and disclosure of attenuated psychotic symptoms – perceptual disturbance (hearing her deceased father's voice). Angela had a maternal family history of psychosis and a significant family history of suicide; her father and multiple members on both sides of her family. Angela had a close but highly conflictual relationship with her mother. Individual clinical work involved treating Angela for her mood symptoms with antidepressant medication and CBT-informed interventions to assist Angela with returning to school and managing distress. Angela's functioning improved and her self-harm and suicidality remitted. Work around Angela's experience of perceptual disturbance led to an understanding of this in the context of trauma and complex grief, and over time these substantially reduced in frequency and intensity. Family work engaged Angela and her mother in shared exploration of family issues including her mother's mental illness, her father's suicide and Angela's emerging problems. Angela and her mother were able to work towards a more collaborative problem solving and also re-engage with extended family, from whom they had become estranged. At discharge from service, Angela had not transitioned to psychosis; family psychoeducation involved identifying early warning signs and recognition of risk factors for developing a psychotic illness.

Cognitive behavioural therapy in ultra high risk

The intervention with the most evidence to date for young people identified as UHR is cognitive–behavioural therapy. CBT can be provided within a case management framework to treat the APS and co-occurring conditions (such as mood or anxiety disorders) of the young people identified as being at UHR. In brief, CBT focuses on the interaction between thinking patterns (cognition) and an individual's emotions, physical sensations and behaviours, as summarised in Figure 4 on the following page.

FIGURE 4. **THE CROSS-SECTIONAL CBT MODEL**



While a full description of CBT is beyond the scope of this manual the basic premises of this therapeutic approach are that:

- There is an intimate relationship between how people think and interpret events (cognition), people's emotional states and their behaviour. All these aspects of a person's experience influence each other. The way a person thinks and interprets events (cognition) is a primary determinant of their emotional states and associated behaviours (e.g. a pessimistic and hopeless cognitive outlook may lead to depressed mood and withdrawal behaviour).
- Systematic cognitive distortions and poor coping strategies are important in the formation and maintenance of symptoms, negative affect and distress.
- Moment-to-moment thoughts are influenced by underlying beliefs, which in turn are based on past experiences. For example, as we saw in the case of Jack previously, past experiences of significant bullying led to an underlying belief that other people are a significant source of threat, a belief which manifests in a hypervigilant attitude and a cognitive style of jumping to conclusions.

There are a range of potential benefits of CBT-oriented approaches for people presenting with an at risk mental state, listed on the next page.

POTENTIAL BENEFITS OF CBT FOR YOUNG PEOPLE WHO HAVE BEEN IDENTIFIED AS HAVING UHR FOR PSYCHOSIS
Developing a shared understanding (formulation) of presenting symptoms.
In forming a therapeutic alliance.
Achieving clinical stabilisation.
Reducing the intensity and/or frequency of attenuated psychotic symptoms.
Delaying or preventing the transition to psychotic disorder.
Reducing the level of distress.
Providing alternative coping strategies to deal with stressful situations.
Protecting and enhancing self-esteem.
Preventing and reducing comorbidity and secondary morbidity.

Successful CBT depends on the therapist forming a strong, collaborative and respectful relationship with the young person. Although CBT includes elements of challenging and testing the young person's thoughts and beliefs, it is based on an empathic, supportive attitude from the therapist. The therapist aims to facilitate an environment in which the young person is accepted and cared for, and in which they can discuss concerns and share experiences.

Principles of CBT for young people identified as ultra high risk

CBT for a young person identified as UHR adapts strategies developed for the acute and recovery phases of psychotic illnesses. Cognitive models approach psychotic symptoms as being derived from disturbances in the processing or interpretation of internal and/or external events (information processing disturbances), that can lead to positive symptoms such as delusions and hallucinations. These information processing disturbances are driven by cognitive and perceptual biases, that are underpinned by dysfunctional 'core beliefs' about self and others/world, as well as possible neurocognitive disturbances.[18,25,47-49] CBT assists young people to develop an understanding of the cognitive processes (including cognitive biases and maladaptive appraisals) that influence their moment-to-moment thoughts and emotions, and to develop more adaptive views of themselves and events around them.

In general, CBT aims to assist young people to:

- monitor negative automatic thoughts
- recognise the cognitive biases underlying these negative automatic thoughts
- recognise the connections between cognitions, affect and behaviour
- challenge the cognitive biases and underlying dysfunctional beliefs
- promote a more adaptive, reality-oriented cognitive style.

Information processing biases (cognitive and perceptual) are a particular focus in work with young people with an at risk mental state. Young people identified as UHR may be more able to engage with CBT for their symptoms than those with FEP because the psychotic symptoms have not yet evolved to point of full disorder, have not become entrenched and insight is still maintained. Young people identified as UHR may present with a variety of cognitive biases. Examples of these are listed below.

INFORMATION PROCESSING BIASES IN UHR

Perceptual biases

Selective attention for threat

This refers to paying particular attention to (and being particularly sensitive to) threat-related stimuli in the environment. For example, a person may selectively notice comments or behaviours from others that might indicate that they think negatively of them or mean them harm, yet ignore cues that do not convey this message. Similarly, indistinct perceptual experiences such as something moving in the corner of one's visual field might be interpreted as a potential source of threat (e.g. a dangerous animal or predator) rather than as a neutral or positive experience.

Source monitoring

This refers to a bias towards remembering and attributing sensations, thoughts or phrases to others rather than to oneself. This may contribute to the emergence of attenuated psychotic symptoms, particularly hallucinatory experiences. For example, a person experiencing intrusive sexual thoughts may not identify with these thoughts at all and start hearing these thoughts aloud in his head. The person may be confused by this experience and start wondering whether the thoughts may in fact have an external origin (i.e. originate from another source rather than his own mind).

Attributional biases

Hindsight bias

The hindsight bias refers to a pattern of believing that one knew a particular answer or outcome all along, even if this was not the case. The 'correcting' ability of past memories is weakened due to this bias, with the reconstructed hindsight memories seeming to support a particular conclusion. This cognitive bias may contribute to the onset of delusional thinking. For example, a person may start believing that there is a connection between the content of their dreams and events that happen the following day and start entertaining the thought that they have powers of premonition. In fact, this person may be selectively remembering or elaborating aspects of their dream that are consistent with the day's events.

INFORMATION PROCESSING BIASES IN UHR CONTINUED

Personalisation bias
This refers to a pattern of attaching personal meaning to irrelevant external events. This may contribute to ideas of reference and paranoid delusional thinking and is sometimes evident in young people with ARMS. For example, a person may start thinking that what is being spoken about on the radio may have a particular significance or meaning for them.

Covariation bias
This bias refers to an overestimation of a connection or causality between events and an underestimation of chance. This may contribute to delusional thinking. For example, a person may describe experiences of noticing others looking at them at the same time that they are thinking angry or aggressive thoughts. This person may start wondering whether other people can in fact read their mind, particularly when they are having thoughts of this nature.

Reasoning biases

Jumping to conclusions
This cognitive bias refers to quickly coming to a conclusion or adopting a particular belief without having sufficient information or data. An intolerance of uncertainty may drive this tendency to 'jump to conclusions'. This may contribute to delusional thinking. For example, a young person with ARMS may describe experiences at work of his co-workers ignoring his question or seem to rush away from him, which he quickly interprets as them not liking him and thinking poorly of his work, rather than considering that this may be due to work pressure associated with tight deadlines or other reasons.

Negative expectation bias
This refers to a pessimistic cognitive style, including expecting a poor outcome of events or that you will be unable to cope with particular events. This is of course a classic feature of depression, but can also be apparent in emerging psychotic symptoms and can be associated with paranoid thinking and negative psychotic symptoms. For example, a person may describe that she has started avoiding using her car because her friend's car was stolen recently and she fears that same will happen to her car is she parks it away from her house. This expectation and behavioural pattern is one instance of her larger tendency to always think and expect the worst to happen.

Belief inflexibility bias
This cognitive bias refers to an over-confidence in one's beliefs and reluctance to examine the evidence or validity of a certain belief. This bias may contribute to delusional thinking. For example, a client may describe thoughts that her family mean to harm her. Although she has no particularly strong reasons to hold this belief and her family members repeatedly reassure her that they do not mean to harm her in any way, she describes 'just knowing' that they do.

INFORMATION PROCESSING BIASES IN UHR CONTINUED

Emotional reasoning
This cognitive style refers to coming to conclusions about a particular situation on the basis of a subjective emotional response, at the expense of taking other factors into account. For example, a young person with ARMS might describe believing that he must be in danger and that he is threatened in some way due to his high levels of anxiety. His anxiety is taken as proof of the danger.

Confirmation bias
This cognitive style refers to seeking new information that is consistent with currently held beliefs or expectations and failing to consider disconfirming information. This cognitive style can reinforce existing beliefs and thereby strengthen emerging psychotic symptoms.

Behavioural bias

Avoidance behaviour
This refers to the avoidance of situations or triggers that are considered to be threatening. Avoidance behaviour is known to be problematic in anxiety disorders because it removes the opportunity to rule out fear-inducing beliefs. This is often the case in ARMS presentations. For example, a young person with ARMS with mild persecutory ideas might avoid social situations to avoid triggering the fear associated with the belief that others might humiliate or harm them in some way.

Other cognitive biases typical of non-psychotic disorders such as depression and anxiety are also frequently observed in young people identified as UHR. These may consist of:

- 'All-or-nothing' thinking, in which a situation or event is interpreted as either absolutely 'good' or absolutely 'bad'.
- Over-generalisation, in which events are assumed to have greater or wider significance than the facts would suggest.
- Disqualifying the positive, in which positive or beneficial aspects of a situation are neglected or denied.
- Magnification or minimisation of events.

For a full list and explanation of cognitive biases common to depression and anxiety please see Appendix 2.

For further reading, please see the references listed below.

van der Gaag, M., Nieman, D., and van den Berg. D. (2013). *CBT for those at risk of a first episode of psychosis*. Routledge, East Sussex.

Addington, J., Francey, S. M., and Morrison, A. (2006). *Working with people at high risk of developing psychosis: A treatment handbook*. John Wiley and Sons, West Sussex.

Structure of therapy

As with most psychotherapies, CBT for young people identified as UHR can be described in three distinct phases:

- Assessment, engagement, formulation and goal-setting
- Treatment
- Termination (including discharge planning, identification of early warning signs, and 'booster' sessions)

The therapy is generally provided as individual sessions every one or two weeks, with sessions usually lasting 30–60 minutes. An extended engagement phase may be necessary to build rapport and form clear goals and plans for treatment. These goals emerge from the formulation, as described above (see 'Aetiological case formulation in UHR'). For example, in the case of Jack, the main goals of treatment were to reduce his mistrust of other people, reduce his high level of anxiety and improve his functioning at school.

Therapy is usually conducted over a 6–12-month period, depending on the individual clinical and functional needs of the young person. It is important for the young person to be linked with a primary care service provider such as a GP as early as possible. The purpose of the primary care provider is to ensure the young person has strong links with a health practitioner beyond the realm of specialised mental health services. At the time of discharge, the young person can be referred to this provider for ongoing monitoring and care, or to other services as required. The primary care provider can re-refer the young person if required. If therapy progresses beyond the 6-month period the clinician should judge how often sessions are required for that individual (see 'Termination' section below).

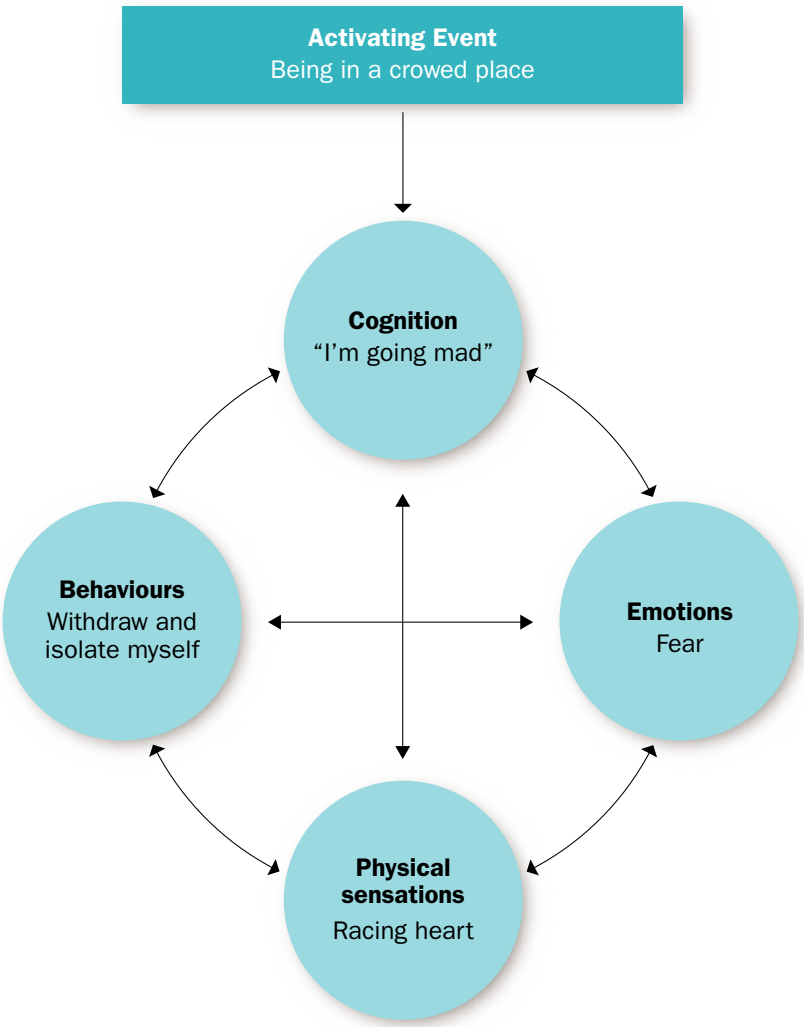
A key technique of CBT is to develop a model of the presenting symptoms and then to introduce cognitions or beliefs that are more adaptive than the cognitive styles currently responsible for the onset or maintenance of symptoms (i.e. cognitive restructuring). The activating event, beliefs and consequences (ABC) approach is often used to assist in developing this model and for ongoing monitoring of symptoms (see Figure 5). The 'activating event' refers to an external situation (e.g. being in a crowded place) or a particular experience (e.g. experiencing a perceptual disturbance such as hearing mumbling voices). The 'belief' refers to the automatic thought or interpretation of this event, for example, 'This is a sign that I am going mad'. The 'consequence' refers to the reaction to this belief – both the emotional reaction (e.g. fear, anger, desperation, etc.) and the behavioural reaction (e.g. withdrawing from others and isolating oneself). An example of an ABC sheet that can be used with young people identified as UHR is provided in Appendix 3.

FIGURE 5. **ABC – THOUGHT MONITORING**

A Activating event	B Belief	C Consequence
Being in a crowded place	"This is a sign that I'm going mad"	Fear Withdraw from others and isolate myself

One way of introducing this model to young people is to present it in diagrammatic form to highlight the interdependency of each element (thoughts, emotions, physical sensations and behaviour). The following diagram depicts the clinical example introduced in the figure above.

FIGURE 6. **THE CBT MODEL**



Mapping a number of experiences or symptoms using this approach (both in session and through recording-keeping) can assist with identifying the main cognitive biases the young person uses. Therapy then attempts to introduce and develop alternative, more adaptive cognitive styles. This may consist of 'disputation' or 're-appraisals' of the dysfunctional beliefs, analysing evidence for and against a particular belief, uncovering logical inconsistencies in the belief, and 'testing' the dysfunctional belief using behavioural experiments (see the modules below for examples).

Given the wide array of presenting symptoms in the UHR population a number of therapeutic 'modules' have been developed. They consist of:

- CBT Module 1: Stress management
- CBT Module 2: Positive symptoms
- CBT Module 3: Negative symptoms and depression
- CBT Module 4: Basic symptoms
- CBT Module 5: Co-occuring conditions

The formulation, including assessment of presenting problems and the young person's goals, guides the selection of modules and the emphasis on each module. They are not mutually exclusive – aspects of each module are drawn upon as clinically indicated.

CBT Module 1: Stress management

In keeping with the stress–vulnerability model of psychosis, elements of the stress management module should be offered to all young people identified as UHR. This module also provides an easily understood introduction to cognitive behavioural principles, and therefore sets the direction of future sessions. As mentioned above, group programs also provide a useful context in order to develop stress management skills.

The components of this module are drawn from traditional stress-management approaches including relaxation training, education about stress and coping, and more specific cognitive strategies. Some strategies for CBT to address stress management are listed below.

CBT strategies for stress management

Psychoeducation about stress and anxiety

This involves a detailed discussion of the physical, behavioural and cognitive signs of stress. The physiological reaction of the 'flight and fight' responses are described to help to distinguish between adaptive stress and, unhelpful, maladaptive stress.

Develop stress monitoring skills

Encourage young people to record their varying stress levels over specific time periods and identify triggers and consequences of anxiety or stress. This will be different for everyone as people have different cognitive, behavioural and affective signals of increased stress levels. For example, a young person at UHR might identify increased cannabis use as a sign that he is particularly stressed at the moment, whereas another young person identified as UHR may view a pattern of increased irritability or anger outbursts as a sign that she is stressed.

Introduce and develop stress management techniques

Such as active relaxation exercises (deep breathing exercises, progressive muscular relaxation, visualisation exercises, music listening), meditation, mindfulness, physical exercise, and distraction.

Identify maladaptive coping techniques

Excessive substance use or excessive social withdrawal. Help the young person understand the impact of these maladaptive coping techniques on their symptoms and functioning. For example, social withdrawal may have a cumulative negative impact on their social networks/relationships, increased substance use may ultimately exacerbate symptoms, etc. Work to replace these maladaptive coping techniques with the more adaptive stress management techniques mentioned above.

Identify beliefs/cognitions associated with subjective feelings of stress or heightened anxiety

For example, a young person with UHR may identify and describe thoughts such as 'I am not able to cope with these events in my life', 'These symptoms show that I am totally different from my friends', 'I am defective'. The ABC model and diary techniques can be helpful in identification of these beliefs/cognitions.

Encourage cognitive restructuring

Dysfunctional beliefs/cognitions that maintain anxiety and stress can be countered with a more adaptive or functional cognitive style, such as positive coping statements, positive reframing, and challenging. This may consist of 'disputation' or 're-appraisals' of the dysfunctional beliefs, analysing evidence for and against a particular belief, uncovering logical inconsistencies in the belief, 'testing' the dysfunctional belief using behavioural experiments. For example, in response to the belief/cognition of 'I cannot cope' attention can be drawn to the situations in which the young person has been able to cope and displayed resilience. It can often be useful to have written material (e.g. coping statements written on cue cards) that the young person can use between sessions. This can assist in eliciting these more adaptive and functional cognitions at times of heightened stress and anxiety.

Provide assertiveness training

If lack of assertiveness is identified as a factor contributing to the UHR young person's stress levels.

Develop problem-solving strategies

This may include brainstorming responses to difficult situations, role-playing possible solutions, goal setting, and time management.

CBT Module 2: Positive symptoms

The strategies in this module are drawn mainly from cognitive-behavioural approaches to managing full-threshold positive symptoms. The goal is to recognise triggers or early warning signs of these symptoms, to enhance strategies for coping with positive symptoms when they occur, and to use cognitive-behavioural strategies to prevent these symptoms from evolving into full-threshold psychotic symptoms.

The process of developing a cognitive behavioural formulation of the attenuated psychotic symptoms, including use of the Activating Event Belief Consequence (ABC) model of symptoms (see Appendix 2), helps the young person and therapist 'map' the links between their unusual experiences and their environment (i.e. identification of triggers and exacerbating factors). This can often have the effect of making the unusual experiences (e.g. perceptual disturbances, suspiciousness of others) more understandable to the young person and enhance their motivation and commitment to treatment. For example, a young person may report experiencing muffled voices and fleeting images in the corner of their visual field. Through the course of developing an ABC model the young person and therapist identify that these unusual experiences tend to occur more often when the young person is slightly anxious, for example, after an argument with a friend or family member, walking alone at night etc. Once this link has been made, the young person describes feeling that these symptoms might be able to be modified or controlled in some way. The young person is willing to discuss methods of predicting when the perceptual disturbances might occur and various ways of managing the heightened anxiety that seems to be triggering these symptoms. Furthermore, the young person tries these strategies between sessions to test if they are useful or not.

Some sensitivity is required in the use of language when addressing attenuated psychotic symptoms. Young people identified as UHR have not been diagnosed with a psychotic disorder, so the term 'psychosis' should be used with care. It is helpful to distinguish between psychotic symptoms, which can be experienced by any healthy person under certain circumstances (see normalisation intervention), and formally-defined psychotic syndromes and disorders. In general, use the language that the young person themselves has used to refer to their unusual experiences (e.g. 'hearing things', 'being on edge', 'freaking out').

The fact that the positive symptoms in people with an at risk mental state are less intense and/or less frequent than in frank psychosis is helpful in guiding individuals to recognise and manage these symptoms. For example, unusual perceptual experiences may be more easily recognised as anomalous, and attenuated delusional thoughts (such as overvalued ideas) might be more easily dismissed or challenged, than when such symptoms are more entrenched. Through CBT strategies, the therapist can help young people to use their insight into symptoms to challenge those symptoms.

Cognitive-behavioural strategies for addressing attenuated positive psychotic symptoms are listed below.

CBT strategies to address positive symptoms

Self-monitoring of symptoms

As mentioned above, this process can enhance the young person's understanding of how symptoms are related to other factors such as environmental events and emotional states. The use of diaries and other recording techniques, such as the ABC records, can be helpful. Self-monitoring assists young people to be alert to any worsening of symptoms, which should prompt them to seek assistance.

Coping enhancement techniques

These include strategies such as distraction, withdrawal, distancing/ignoring, eliminating maladaptive coping strategies, and stress-reduction techniques.

Examples:

Sean learnt to cope with his hypervigilance and suspiciousness of others by distracting himself from these thoughts by putting on his headphones and listening to music. Over time, he found that he would become immersed in the music and the hypervigilance and suspiciousness would fade after five minutes or so.

Leanne would experience an occasional voice in her head saying words like 'loser' and 'idiot', which she found mildly distressing and disruptive of what she was doing at the time. She learnt to cope with this experience by learning a 'mental trick' of refusing to believe what this voice was saying and ultimately ignoring the voice when it occurred. 'Like water off a duck's back' she would say to herself in her mind. Over time, she found that she was less troubled and disrupted by this voice and it occurred less often.

See Module 1 for description of stress-reduction strategies.

Normalising psychotic experiences

It is critical to provide psychoeducation about psychotic experiences. This includes providing information that normalises these experiences, that can significantly reduce any associated anxiety and self-stigma (e.g. interpretation of the experiences indicating to the young person that they are 'going mad' or 'different from everybody else'). It is important to highlight to the young person that unusual or strange experiences are reasonably common in the general population. About one in six people have experienced times when they hear voices or sounds without anybody around. About half of the general population report believing in telepathy and it is not uncommon for people to report experiences of magical thinking (e.g. believing there might be a connection between thinking of somebody in particular and then receiving a phone call from that person). These experiences are particularly common among young people. Tailor the information to the particular presentation. For example, if the young person is mainly distressed by a derogatory voice then provide information that normalises perceptual abnormalities and emphasise the high prevalence of these in the general population. If the young person is mainly distressed by thoughts about whether something or someone might be controlling his thoughts then explain that mental intrusions and cognitive problems are quite normal experiences with a reasonably high prevalence in the general population. It is important to convey the message that these unusual experiences are not uncommon but it is the reaction to, or interpretation of, these experiences that might be causing the young person distress and impairment (this can be tied in with the ABC model).

Psychoeducation

It can be helpful to provide information about the role of neurotransmitters in attenuated positive psychotic symptoms; this must of course be provided in layperson language. For example, the therapist can describe neurotransmitters as chemicals that convey messages from one brain cell to the next, sometimes these brain chemicals can become out of balance, possibly in response to prolonged stress. Dopamine is a chemical that helps us pay attention to aspects of our surroundings – the 'highlight marker' of the brain. When there is excessive dopamine in certain parts of our brain we may pay particular attention to a detail in the surroundings, and this may give you the impression that this detail has special meaning for you. For example, you might hear strange noises, have the sense that something very important is about to happen, believe that there are connections between events that aren't really there, or experience intrusive thoughts or experience thoughts as if they were alien.

Cognitive challenging of positive symptoms

A range of cognitive challenging techniques can be used to encourage alternative explanations, interpretations or beliefs to those identified using the ABC model (see Appendix 3). Socratic questioning is a common technique. This technique consists of posing questions in such a way as to induce doubt about the veracity of interpretations or to reinforce doubt that might already be present. Alternatively, the therapist and young person might together start brainstorming alternative interpretations or beliefs, which may then form the basis of behavioural experiments (see case scenario below). Discussing the evidence for and against certain beliefs or interpretations is also a useful technique.

The following case scenario is an example of gathering evidence for and against a core belief.

CASE SCENARIO **MARY**

Mary presents with regular experiences that her surroundings change in a strange, indistinct way (derealisation) and this is associated with a vague feeling that a significant event is about to occur (delusional mood). She interprets this experience as 'losing control of her mind' and that she may be ’going crazy‘. The therapist asks Mary whether she has evidence for this view. Mary mentions that her father regularly used to call her a ’crazy kid‘ and that the only way she has found to take away the feelings of derealisation and delusional mood have been to hurt herself in some way, generally by digging her nails deeply into her skin. The therapist asks Mary what evidence she has against this view. Upon reflection, Mary mentions that she has been having these experiences for a significant period of time now and has not yet gone mad. Upon further questioning by the therapist, Mary also recognises that she has not hurt herself every time she has had these experiences and that while they have lasted longer on these occasions they have eventually abated. Mary also draws upon earlier psychoeducation provided by the therapist that having derealisation experiences is not unusual and that these experiences may in fact occur more frequently if one worries about them so much. Finally, Mary mentions that one of her close friends has told her that she also has similar experiences every now and again. This friend has also told her that she believes Mary will improve now that she has started receiving help. The therapists lists the points made for and against in two columns in the course of this discussion. When analysing the reasons for and against the therapist emphasises that there are in fact quite a few good reasons against her interpreting that these experiences indicate that she is ’losing control of her mind‘ and ’going crazy‘. The therapist uses the cognitive biases of selective attention and emotional reasoning to illustrate that at times of heightened anxiety and confusion Mary may be biased to have a rigid interpretation of her experiences of derealisation and delusional mood. When she is able to somewhat distance herself emotionally and mentally from these experiences so she can view them from a more objective perspective. Mary and her therapist revisit this ’evidence for and against‘ table and adjust it in subsequent sessions. Over time, Mary’s conviction reduces her original interpretation of her experiences of derealisation and delusional mood.

Other similar cognitive techniques include the use of a pie chart, in which the young person and therapist can brainstorm and record the variety of possible reasons for an event, including the 'worst case' or feared explanation. The size of the section in the pie chart corresponds to the chance or probability of that particular explanation of the event being true. As depicted in the case example of 'Alex' below when all possible reasons for the activating event (e.g. 'Alex's boss not saying hello') are visually recorded in this way, the credibility of the single original assumption, explanation or belief (e.g. 'that Alex's boss wishes I would resign') tends be reduced.

CASE SCENARIO **ALEX**

Alex explains to his therapist that he often thinks that his co-workers disapprove of him and want him to resign from his job. They have mapped multiple examples of this situation using the ABC model. One example was the 'activating event' of his boss not responding to Alex saying hello in the corridor. His 'belief' was that his boss thought he was performing poorly in his job and wished he would resign. The 'consequence' was becoming anxious and avoiding further interaction with his boss or other colleagues for the rest of the day. Together, Alex and his therapist brainstorm all the possible reasons why somebody might not respond to a greeting in a corridor. These are listed on a pie chart according to their degree of probability. The reasons include: the corridor being busy or noisy so the person does not hear the greeting, the person being preoccupied with other thoughts so they are distracted, the person being late for something such as a meeting so they are in a hurry, the person being in a bad mood so is avoiding talking to other people, the person is shy, the person thinks that the person greeting them doesn't really like them. Another section of the pie is dedicated to 'other' for reasons the therapist and Alex might not have thought about. The therapist asks Alex to consider this variety of reasons and to think about how they might apply to the situation he described. The section of the pie represented by the interpretation that his boss believes he is performing poorly in his job and wishes he would resign is overshadowed by all the other reasons in the pie. This encourages Alex to believe that his original interpretation may not be accurate.

Behavioural experiments may be used to as a strategy for reality testing or modifying dysfunctional beliefs that underlie attenuated positive psychotic symptoms or symptoms of anxiety or depression. The type of behavioural experiment that is conducted must be specific to the particular beliefs or interpretations of anomalous experiences that have been identified. It is important to be creative and involve the young person in devising these experiments rather than to prescribe them. When discussing the possible outcomes of a behavioural experiment a significant amount of time should be taken to consider the meaning of both expected and alternative outcomes (e.g. 'what would it mean if people were talking about you?' and 'what would it mean if you did not hear people talking about you?'). A clinician may find that it is necessary to conduct multiple behavioural experiments to target one belief, before there is significant shift or change in conviction or distress. An example of this is outlined in the case of Jana below.

CASE SCENARIO **JANA**

Jana, a shop assistant aged 23, reported that she sometimes believed that she could foresee the future. For example, she thought that she could influence the songs that were played on the radio, and that by thinking about a friend, her friend would call her on the phone. These beliefs had arisen over the past year but were not continuously present over that time. Most of the time she was able to question the likelihood of influencing the behaviour of others but she reported one occasion lasting for 2 days when she was overwhelmed by what she believed was her ability to control events around her, and she was unable to attend work. She was later able to recognise that her beliefs were unfounded.

Jana and her therapist devised a test of her 'powers'. During a series of sessions they listened to a radio station and Jana predicted what songs were going to be played. Her accuracy rate was less than 5%. This convinced her that she could not influence the radio station. Jana and her therapist also tested her 'ability' to subconsciously encourage her friends to call her. They worked out a timetable of times when Jana was to think about a particular friend and then record whether that friend phoned her. There were very few examples of a friend calling after Jana had thought about them. Both of these tasks led Jana to question what she had believed were her special powers.

An example of how a behavioural experiment to address attenuated positive psychotic symptoms may be structured is outlined below.

A BEHAVIOURAL EXPERIMENT TO ADDRESS ATTENUATED PSYCHOTIC SYMPTOMS

Target Belief
A young person expressed the belief that others know what he thinks ('mind reading').

Behavioural Experiment
Deliberately induce thoughts that would lead to certain consequences if heard by another person (e.g. insulting a teacher during class).

Expected and Alternative Outcomes
The young person may expect the teacher to become angry and punish him for his thoughts if they were heard. Alternative outcomes that the young person discussed with his case manager were that the teacher spoke to him after class, or that the teacher would not react at all.

Meaning of Alternative Outcomes
If the expected reaction is not elicited, then the young person stated that it would be likely that the teacher had not heard his thoughts.

This can contribute to challenging this belief and reformulating it into the alternative view that others can't hear or read the client's thoughts. It may be necessary for this young person to try the above experiment with a teacher, a friend, and a stranger for an alternative belief to be accepted.

For further resources on working with positive symptoms of psychosis please see below.

Chadwick, P., Birchwood, M. & Trower, P. (1996). *Cognitive Therapy for Delusions, Voices and Paranoia*. NY: John Wiley & Sons.

Garety, P. A. & Hemsley, D. R. (1997). *Delusions: Investigations into the Psychology of Delusional Reasoning*. East Sussex, UK: Psychology Press.

Gleeson, J. & McGorry, P. (Eds) (2004). *Psychological Interventions in Early Psychosis: A Treatment Handbook*. UK: John Wiley & Sons, Ltd

Gumley, A. & Schwannauer, M. (2006). *Staying Well After Psychosis: A Cognitive Interpersonal Approach to Recovery and Relapse Prevention*. West Sussex, UK: John Wiley & Sons Ltd

Kingdon, D. G. & Turkington, D. (2005). *Cognitive Therapy of Schizophrenia*. NY: The Guilford Press.

Morrison, A. P., Renton, J. C., Dunn, H. et al (2004). *Cognitive Therapy for Psychosis: A formulation-Based Approach*. NY: Brunner-Routledge.

CBT Module 3: Negative symptoms and depression

Negative symptoms include low motivation, emotional apathy, cognitive and motor slowness, underactivity, lack of drive, poverty of speech and social withdrawal. These symptoms can often be difficult to distinguish from depressive symptoms, particularly in young people with UHR, although emotional flatness rather than depressed mood is often used as a key distinguishing feature. Similar strategies can be used to target these sets of symptoms.

CBT strategies to target depression and negative symptoms include the standard strategies developed for the treatment of depression itself, for which a large number of treatment manuals exist.[43,44] Some examples are listed below.

CBT strategies for negative symptoms and depression

Psychoeducation

Information should cover the biological, psychological and social aspects of depression and negative symptoms, and how they can interact with each other and with other symptoms. For example, social withdrawal due to depression and/or negative symptoms diminishes the opportunity to disconfirm beliefs that might be contributing to attenuated positive symptoms, such as suspiciousness of others.

Goal-setting

Identify achievable goals based on the young person's current functioning.

Activity management

Address mastery of necessary activities, and encouragement of pleasurable activities.

Cognitive restructuring

Dysfunctional cognitive styles contributing to depression and/or negative symptoms can be identified and challenged using cognitive restructuring techniques such as Socratic questioning, thought recording, identifying cognitive biases, examining the evidence, listing rational alternatives, guided imagery, cognitive rehearsal, decatastrophising, and reattribution. As in Module 2 the ABC model may be helpful.

Problem-solving

Further development of problem-solving skills can help break a negative cycle of depression, inactivity and poor function.

Social skills training: reduce depression and negative symptoms

Improving quantity and quality of social activity can help.

Physical activity interventions

Although these may be biologically driven, negative symptoms may compound avoidant behaviour related to those potentially stressful situations, which precipitate or exacerbate positive symptoms. If this appears to be the case, then encourage the young person to take a slow, graded approach to increasing activity levels and accepting more challenging tasks. An example of activity scheduling to address the impact of negative symptoms on occupational and social functioning can be seen in the case scenario below.

CASE SCENARIO **ELLIE**

Ellie is a 19-year-old female in her first year of university and living with two housemates in rented accommodation in suburban Melbourne. She was referred to the youth mental health service by the university support services when Ellie sought help after she failed her first semester subjects after having previously been high functioning academically. She described a loss of enjoyment, difficulty concentrating, feeling 'slowed down' both physically and mentally, and at assessment was observed as having flat affect, although she denied feeling subjectively sad or depressed. In addition, Ellie reported a range of odd and unusual experiences, including attenuated perceptual disturbances (such as the sensation of bugs crawling under her skin).

Initial therapy work focused on the development of a shared understanding about why she was unable to complete her university assignments. Over time it became clear that Ellie was finding it very difficult to motivate herself to attend classes and was missing out on the additional content and support in the tutorial groups. Ellie's case manager provided some psychoeducation around the maintenance cycle of reduced activity, anhedonia and motivation. Together they worked on an activity schedule that incorporated tasks (attending specific tutorials and homework) and activities that Ellie used to enjoy but had stopped doing (such as painting and socialising with friends). She was encouraged to set smaller targets initially and then build up her routine. Ellie noticed that, although she continued to experience difficulty with her concentration, she felt more motivated and energised the more she was able to achieve from the schedule.

Please see Appendix 4 for an example of an activity schedule.

CBT Module 4: Basic symptoms

'Basic symptoms' refer to subjectively-experienced disturbances in thought, language, perception, motor skills and energy. They are often experienced as distressing and confusing to the young person and represent some sort of shift or change in experience, that is, they have not always been present in the young person. Basic symptoms are often reported during the prodromal phase of psychotic disorder. It is thought that basic symptoms represent the subjective experience of an information processing overload and a deficient processing of social stimuli, which has been found in most people with psychotic disorders.

Examples of basic symptoms

Inability to divide attention

A difficulty in dealing with demands involving more than one sense at once (e.g. visual and auditory stimuli), so that young people have particular difficulties with integrating sensory input from both senses at once. For example, a young person may not be able to listen and pay attention to an oral presentation and take down notes at the same time; or when driving a car, the young person cannot attend to the traffic (a mainly visual task) and talk to the passenger or listen to the radio (an auditory task) at the same time. A young person may also complain that they cannot do normal housework or food preparation and talk to someone at the same time.

Thought Interference

This refers to insignificant on unrelated thoughts intruding and interfering with the young person's train of thought. These intruding thoughts are emotionally neutral, have no special meaning to the young person and no association with the current thought. These mental intrusions are generally experienced as coming 'out of the blue' but are sometimes evoked by external stimuli. The intruding thoughts are often so banal that the young person wonders why and how they come into his/her mind at all.

Captivation of attention by details of the visual field

This refers to a young person feeling a random single aspect of the visual field dominating their attention. An ordinary visual stimulus, or a part of it stands out strikingly, appears almost isolated from the rest of the environment and is emphasised so much that this single aspect of the environment catches and captures the person's whole attention. The young person has to look at this detail, although they do not want to and has problems to turn away from it. This might be described as a 'fixation of perception' or being 'spellbound'. Some examples of statements reflecting this symptom include: 'I really had to stare at the water pump in the garden with my mind blank.' 'Sometimes an object really seems to stand out from the rest of what I see. My eyes then have to fix it, like being spell-bounded, although I don't want to look at it at all.'

It is important to clarify whether there are any life circumstances, events, and experiences related to the onset of basic symptoms in order to decide whether the focus of the intervention should be stress management, psychoeducation, coping enhancement, cognitive restructuring, or a combination of these strategies. Young people often link such symptoms to threatening or traumatic events earlier in life, which can be associated with the development negative self-evaluations and beliefs (e.g. defective or worthless sense of self). This can lead to feelings of loss and demoralisation and, if unchecked, to depression, social anxiety and social withdrawal. If such negative self-evaluations have been identified, then standard cognitive approaches are applied, for example, identifying negative automatic thoughts and dysfunctional assumptions, reviewing the history of these cognitive patterns over the lifespan, and re-evaluating them.

Psychoeducation is also a key strategy. As with positive symptoms, a biopsycho-social account of the origins of basic symptoms can be developed with the young person. This helps to normalise the experiences, which might at times be quite alarming to the young person, reduce the negative appraisals that usually occur with the onset of symptoms, and enhance motivation for treatment. Understanding

the contribution of biological factors can be helpful. For example, as in Module 2, the concepts of neurons, synapses and neurotransmission can be introduced, explaining the biological basis of perception and thought. Such explanations must be adapted to the young person's level of interest and understanding, and then related to their own explanatory model. Individualised explanations can be developed for different types of basic symptoms. For example:

- **Thought interference or thought pressure:** 'If too many neurotransmitters are active, then too many thoughts are competing with each other so it's hard to form one clear idea. It ends up feeling chaotic and confusing.'

- **Thought blockages:** 'If too many ideas or outside stimuli arrive at the same time, your brain can 'shut up shop' because of the strain. Blocked ideas or a lack of ideas can happen like that – as a way of protecting you against stress – but it can be unpleasant and frightening.'

- **Disturbance of receptive speech (a disturbance in being able to understand verbal stimuli that are either read i.e. visually presented, or heard, i.e. orally presented):** 'If too many neurotransmitters are bouncing around the nervous system your brain is already in a state of overload and it becomes difficult for it to take in anything new – it becomes difficult to listen to someone else or read something.'

Developing coping techniques such as stress monitoring, distraction, activity scheduling, withdrawal, eliminating maladaptive coping strategies, and stress reduction techniques, can also be helpful for basic symptoms.

CBT Module 5: Co-occurring conditions

CBT strategies can be effective for the comorbid symptoms and disorders that UHR young people frequently present with. These include social anxiety, generalised anxiety, panic disorder, obsessive-compulsive symptoms, post-traumatic symptoms, personality disorder traits, and substance use. These presenting complaints may be more distressing to the young person with UHR that their attenuated psychotic symptoms. As mentioned above, it is important to assess if a young person's attenuated psychotic symptoms might relate to these non-psychotic symptoms. For example, it is common for attenuated psychotic symptoms to become more severe or intrusive during periods of heightened anxiety or depression or for their attenuated psychotic symptoms to improve as treatment is provided for comorbid symptoms.

Once again, psychoeducation is a key element of treatment. The stress–vulnerability model can be used to explain comorbid symptoms, and their possible interaction with attenuated psychotic symptoms. As in standard CBT for non-psychotic disorders such as depression and anxiety, work with the young person to develop a model to explain the symptoms based on their life experiences, coping strategies, developmental level, ongoing stressors, cognitive biases, available supports, and so on. This model can be used to develop goals for treatment of the non-psychotic symptoms.

More specific strategies might be employed depending on the presenting problems, including:

- management of the physiological symptoms of anxiety through relaxation, deep breathing exercises, progressive muscular relaxation, guided imagery, mindfulness and other stress management techniques
- exposure techniques, both *in vivo* and with imagery
- behavioural strategies such as thought stopping, distraction and activity scheduling
- motivational interviewing in relation to substance use
- cognitive strategies, including coping strategies and cognitive restructuring. The ABC model discussed above can be of value here.

Addressing substance misuse requires a close examination of the triggers of use, changing patterns of use over time, the perceived benefits and costs of use, the relationship between substance misuse and attenuated positive psychotic symptoms, and an evaluation of motivation to address substance use. Through this process, it may be revealed that other underlying conditions, such as depression, positive psychotic symptoms or anxiety, have been contributing to problematic substance use. This formulation can then guide the focus of therapeutic interventions. If substance use is seen as a response to stressors, then assistance in developing other coping strategies can be helpful. The therapist is also well placed to provide young people with information about the substances they use, and encourage them to reduce associated harm.

For further information please see additional texts to be added here.

Gillian Butler, Melanie Fennell, Ann Hackmann (2010). *Cognitive-Behavioral Therapy for Anxiety Disorders: Mastering Clinical Challenges*. Guilford Press. New York.

James Bennett-Levy, Gillian Butler, Melanie Fennell, Ann Hackmann, Martina Mueller, David Westbrook. (2004). *Oxford Guide to Behavioural Experiments in Cognitive Therapy.* Oxford University Press.

Willem Kuyken, Christine A. Padesky, Robert Dudley (2008). *Collaborative Case Conceptualization: Working Effectively with Clients in Cognitive-Behavioral Therapy*. Guilford Press. New York.

Linehan, M. M. (1993). *Cognitive-Behavioral Treatment of Borderline Personality Disorder.* Guilford Press. New York.

On the following page is a case example highlighting the use of graded exposure hierarchy to address co-occurring anxiety symptoms and suspiciousness. An example of a graded exposure hierarchy can be found in Appendix 5.

CASE SCENARIO **IBRAHIM**

Ibrahim felt very 'on edge' and suspicious of other people's intentions when out in public. He found it easier to stay at home and reduce the amount of time he was around other people. He would do a large amount of grocery shopping in one go to minimise the number of times he had to leave the house and rarely socialised. This lack of activity seemed to contribute to Ibrahim feeling increasingly more anxious about leaving the house, he began to experience panic symptoms when getting ready to leave the house and found it difficult to attend appointments unless driven in by his dad. Initially, his case manager devised an activity plan for him that involved him leaving the house daily. Ibrahim attempted to follow this plan. However, his levels of suspiciousness increased markedly and he became quite distressed. Ibrahim and his case manager adjusted the plan so that it consisted of an exposure hierarchy that started with events that caused him lower levels of anxiety (walking in the evening to the local milk bar to buy some milk, about 30/100 anxiety level), moving to events that caused higher levels of anxiety (spending an afternoon in a busy shopping area in the city, about 90/100 anxiety level). Once Ibrahim was able to do the lower anxiety level activities and cope with the associated suspiciousness of other people, he moved to higher anxiety-provoking activities in the hierarchy.

IBRAHIM'S EXPOSURE HIERARCHY

Distress rating 1 – 100	Situation
100	
90	Spending the afternoon in a busy shopping area in the city alone
80	Catching the train to come to my appointment with case manager
70	Meeting a friend in a busy cafe in the city for lunch
60	Walking down the main street near my house alone
50	Driving in the car with dad to the city and staying in the car
40	
30	Walking in the evening to the local milk-bar to get groceries
20	Taking the dog for a walk in the park behind my house
10	Sitting in my room when my parents have friends over

Termination and 'booster' sessions

The usual course of treatment for young people identified as UHR should be explained early in the young person's involvement with the service, promoting the concept that good progress is to be expected during therapy. Towards the end of therapy, it may be helpful to extend the interval between sessions, for example, from weekly to fortnightly, so the young person can start to adjust to coping independently. In the last several sessions, the therapist should review progress, including the initial presenting problems, the advances that have been made, and present a clear summary of the strategies that have been of most value to the young person. It is also useful to summarise what challenges the young person may still face. It is important to highlight the progress and effort demonstrated through the course of treatment. If possible, summarise useful strategies (cognitive, behavioural, etc.) in metaphors or mottos that will be easy for the young person to remember. Make sure there is a written record of these for the young person to keep. Explain that the young person can use this summary to refresh their knowledge of what they have learned in therapy or when they notice that symptoms might be returning or becoming worse. Encourage the young person to regularly 'check in' with themselves to see how they are going and to contact the service again if symptoms relapse. A long-term follow up study conducted at the PACE Clinic, Orygen Youth Health Research Centre found that risk of transition to psychosis can extend up to 10 years post clinic entry, with the highest risk being in the first two-three years.[13] After discharge, one or two 'booster' sessions may be scheduled to monitor the young person's progress and reinforce strategies that have been introduced during therapy. Avoid continuing the booster sessions for too long otherwise it may implicitly convey the message that the therapist believes the young person is not yet ready to function without these contacts. Ensure that all young people are linked with a general practitioner to provide ongoing monitoring of symptoms and coordination of services. The young person may be linked with other services as required for monitoring or further treatment. A significant portion of young people continue to experience non-psychotic disorders after discharge and will therefore require continuing care. It is also not uncommon for there to be ongoing APS, albeit of a reduced intensity, frequency or associated with less distress. A plan should be developed so that the young person can obtain a re-referral to an early psychosis service if they experience a return or intensification of psychotic symptoms. The case scenario below highlights the importance of a clear discharge and re-referral plan involving both young person and family.

CASE SCENARIO **MAY-LING**

May-Ling, aged 18, was a university student who shared a house with friends. She reported experiencing a 48-hour period of intense paranoia following an argument with her boyfriend. She became convinced that her housemates wanted to physically harm her and had hired a 'hit man' to do this. Over this period she secluded herself in her bedroom, staying away from windows as she was convinced that cars passing by were full of assassins. After 48 hours these thoughts subsided and May-Ling was able to recognise that they were unfounded beliefs. She spoke with a counsellor at university who referred her to a youth mental health service. May-Ling was seen at the service for 6 months, and was then discharged. During this time she had returned to her university studies after a short break and was living with a close friend, and continued her relationship with her boyfriend. There had been no evidence of psychotic symptoms over the intervention period.

Eight months after discharge, May-Ling's mother contacted the service saying that she was extremely concerned about May-Ling, who had recently broken up with her boyfriend. Over the past week May-Ling had barely left her house and only did so with someone else. She had not been eating or sleeping well and was not attending to her personal hygiene. An appointment was made for later that day and May-Ling's case manager went to her house to see her. Her paranoid thoughts had returned, she was extremely fearful of her housemate, and she was worried that passers-by would harm her if she left the house. May-Ling was thought to be psychotic at this stage and treatment was immediately arranged for her.

The case scenario of May-Ling below demonstrates that initial treatment was beneficial and may have deferred the onset of psychosis, and that her close engagement with the service and the potential for follow-up allowed an early and effective response to deterioration in her mental state.

Other psychotherapeutic approaches

CBT is the primary psychological intervention developed for young people identified as UHR. It is evidence-based, adaptable to a wide range of presentations, relatively short-term, and familiar to a large number of mental health clinicians. Other psychotherapeutic approaches may be appropriate, depending on the individual young person's presentation and preference.

For example supportive psychotherapy, does not specifically target psychotic symptoms but endeavours to provide emotional and social support. It incorporates many of the elements of Rogerian person-centred therapy, including empathy, unconditional positive regard and young person-initiated process. The therapist aims to facilitate an environment in which the young person is accepted and cared for, and in which they can discuss their concerns and share their experiences.

This supportive therapy may be informed by awareness of developmental challenges faced by this age group, including separation, individuation, independence and identity formation.

Specific evidence-based therapies may be used to treat comorbid personality disorders, such as Dialectic Behavioural Therapy[50], Mindfulness, and Cognitive Analytic Therapy (CAT).[51]

As mentioned above, clinicians should consider whether the UHR young person has treatment needs outside of the service (e.g. an adjunct family worker or vocational support) and to consult and refer as needed.

The following case scenario of Frank illustrates how supportive therapy is effective at addressing concerns and alleviating the symptoms experienced by the young person.

CASE SCENARIO **FRANK**

Frank, aged 24, was a self-employed graphic artist who lived with his parents and his older brother who had schizophrenia. He was referred to an early psychosis service for assessment and treatment by his GP. Frank was aware of changes in his thoughts and emotions in recent times and was concerned that he was developing a psychotic disorder. He was becoming increasingly anxious about financial issues because his work had not been as steady as he had hoped. He was planning to marry his girlfriend and was trying to save money for a deposit on a house. For a month before speaking with his GP, Frank had heard his name called on a few occasions when nobody was around and had heard snatches of conversations lasting for around a minute on four occasions over a fortnight.

Frank's therapist encouraged him to speak about his fears associated with his career and his concerns that he would not be able to contribute financially when he was married. Frank's fiancée was involved in some of this discussion. Frank and the therapist brainstormed ways for Frank to advertise his business in an attempt to obtain more work. They also discussed stress–management skills. Over time, Frank's anxiety and depressive symptoms improved. Both he and his fiancée reported that their relationship was stronger after they had discussed his concerns. Frank also felt that he could share his fears with his fiancée and not worry about how she might perceive him as a result.

As Frank felt more confident in dealing with life stresses he ceased experiencing the psychotic-like symptoms. He also was better able to monitor his own stress levels and to assess when he needed to take a break or speak to someone about his problems.

Dealing with the transition to psychosis

Transition to psychosis is defined by the onset of daily psychotic symptoms for a week or longer. Young people should be provided with appropriate treatment for psychosis following the Australian Clinical Guidelines for Early Psychosis, generally involving the use of antipsychotic medication, case management and psychosocial interventions.[14]

As treatment has already involved discussion and formulation of APS, commencing treatment for full-threshold psychosis can generally occur smoothly. In most cases it involves dealing with an increase in severity of existing symptoms rather than managing newly emerging symptoms, although there are cases when APS seem to abate and then return rather abruptly at full-threshold intensity. The pre-existing engagement, rationale and formulation facilitate appropriate treatment. Duration of untreated psychosis can therefore be reduced to a minimum.

As mentioned above, it is important to strike a balance between providing required care in response to an increase in severity of psychotic symptoms and not alarm the young person or their family by speaking of 'transition' or 'psychosis' in a manner that suggests that this is a terrible outcome. Many young people recover well from FEP and that functional outcome in UHR groups is not dependent on whether a young person with UHR develops FEP or not. In other words, some young people with UHR never transition to psychosis yet continue to experience significant functional difficulties, while other UHR young people develop psychosis yet recover well both symptomatically and functionally. While the particular language that is used should be tailored to the individual young person it is common to speak with young people and families about 'symptoms worsening' or 'problems getting worse' rather than 'transitioning to psychosis'.

Changes in usual treatment or management may largely occur within the clinical team through regular review processes. Clinicians should monitor any changes to frequency, duration and intensity of psychotic symptoms and review using the CAARMS tool as necessary. There may be a need to see the young person more frequently and/or to involve family or significant others more often to assist with both monitoring and management of worsening psychotic symptoms and associated distress. The following case scenario outlines the way in which treatment response may be modified for a young person during transition to a FEP.

CASE SCENARIO **ADAM**

Adam is a 19-year-old man adopted from Eritrea when he was 7 years old. At the time of referral he had no fixed address after moving out of home where he had previously lived with his adoptive parents in northern Melbourne. He was unemployed and receiving government benefits.

Referral and assessment

Adam was referred to the UHR clinic for treatment after an inpatient admission that followed a suicide attempt of high lethality, which he survived without serious injury. On assessment in the inpatient unit, Adam described a 6–12 month period of worsening anxiety and depressed mood in the context of family conflict. His parents reported that during his final year at school he had become very irritable and increasingly disengaged from family. Adam indicated that he had been avoiding others socially for the past month, as he believed that friends and strangers were disrespecting him or talking about him behind his back. He denied any threshold psychotic symptoms and after assessment using the CAARMS was referred to the UHR clinic based on attenuated symptoms (overvalued ideas) accompanied by a significant drop in functioning.

Interventions for UHR

During case management sessions Adam presented as flat, withdrawn and difficult to engage, except on the issue of finding crisis accommodation. He expressed themes of helplessness, hopelessness and suicidality. He believed that his parents were 'being nice to me now' after the shock of the admission; but he still felt that family wanted to kick him out. There was no objective evidence for this very firmly held belief. Adam's family was engaged to support them with working on the trauma of the suicide attempt and the longer history of conflict. His parents expressed the view that the changes in Adam were due to normal adolescent rebellion and possible adjustment issues relating to his adoption and cultural identity.

Adam's engagement and his mood symptoms improved enough for him to engage in the psychosocial group program as well as weekly psychotherapy with his case manager. In his sessions Adam and his case manager discussed the stress–vulnerability model as a way of understanding how his feelings of anxiety and depression were related to the worsening conflict with his family. Adam identified that the more he avoided others the more suspicious of others he had felt. He indicated that he had always felt 'different from others … like I didn't quite fit' because of his cultural background and adoption.

CASE SCENARIO **ADAM** CONTINUED

Transition to psychosis

Approximately 3 months into treatment Adam reported that he believed he was being followed. He became increasingly isolated and stopped going to the group program activities, stating that 'they talk about me, they think I'm a retard'. Adam also began to express a fixed belief that others were talking about him in public spaces and would hear voices at these times saying 'retard', 'loser', 'he's got a funny face'. He was extremely distressed by these experiences and indicated that he again felt that suicide was his only way of escaping the scrutiny and judgement of others.

Further assessment

Adam's case manager reviewed the changes in his symptoms using the CAARMS tool. This indicated that the frequency and conviction of Adam's beliefs now reached delusional intensity. In addition, Adam was experiencing auditory hallucinations that were distressing him. In consultation with Adam's treating doctor the decision was made that Adam was experiencing FEP and that he may benefit from a number of changes to his treatment plan including beginning antipsychotic medication.

Interventions for acute psychosis

Adam's case manager and doctor visited him at home to discuss the changes they were noticing and suggested changes to his treatment. During this appointment Adam indicated that he felt fearful and helpless, 'I can't take it, they keep talking about me … I just want it to stop'. His doctor and case manager provided a rationale for taking medication related to the explanatory model Adam had previously understood – 'it's another way of reducing these experiences and helping you to feel able to cope with them'. Adam agreed initially to a voluntary admission to hospital as he felt he might be safer there. Over a few days he also agreed to begin medication and to meet with his case manager and doctor more frequently for a couple of weeks. His case manager provided some additional support to Adam's family who were initially defensive and concerned about the implications of 'psychosis' and the recommended treatments for this. They were contacted by a family peer support worker to help them to negotiate the changes to Adam's treatment and to discuss fears about possible stigma and uncertainty about his recovery.

CASE SCENARIO **ADAM** CONTINUED

Early recovery

Adam experienced great improvement in his positive psychotic symptoms over a 2-month period. This allowed him to fully discuss his long-term issues of identity and belonging and the complex emotional beliefs about himself that were related to his background. His experiences were able to be normalised, in the context of multiple stressors of leaving school, gaining independence from his family and long-standing beliefs about himself that were exacerbated in the context of emerging psychosis. Adam was gradually able to change his view that the acute symptoms were catastrophic and that they could be treated using medication, stress management and cognitive-behavioural strategies. His parents were encouraged to develop more flexible parenting strategies to allow Adam to gain independence appropriate to his developmental stage and to manage fears and expectations, in the context of their son's recovery from psychosis.

Outcomes and reflections

In this example, Adam's treatment continued with his case manager and doctor, despite his transition to a FEP. The consideration of continuity of care and managing the stigma of diagnosis was thought to outweigh any advantage of referral to the first episode service.

The individual treatment of co-morbidities (anxiety, depression, individuation, family and cultural issues) was typical of general UHR work. During the period of transition further assessment was conducted and treatment was modified to include higher frequency of contact, use of hospital admission, medication and family psychoeducation and peer-support. Adam's episode of care was extended due to his diagnosis of FEP. During the early recovery phase the content of individual sessions reflected earlier work from the UHR phase looking at longer-standing beliefs and the stress-vulnerability model.

Medical care and pharmacotherapy

The initial medical assessment of young people with UHR is conducted in collaboration with the case manager and is ideally completed within the first two weeks of presentation. It is important to facilitate an early joint meeting with the young person, the psychiatrist and case manager to evaluate the level of symptoms, general risks, risk/presence of transition to full blown psychosis, and develop a collaborative formulation and treatment plan. The frequency of subsequent medical contacts is guided by the severity and complexity of the each young person but should occur at least every 6 weeks. More medical contacts are arranged if the young person appears to be close to transitioning to psychosis, in crisis, presenting with acute risks or if symptoms are worsening.

A full medical history, family history and risk factors for metabolic syndrome (being overweight or a family history of diabetes) are especially important from a medical perspective. Investigations (laboratory tests and imaging) are tailored to the individual rather than being dictated by a uniform protocol. If testing is indicated by the presentation, then the assessment battery should be similar to that for young people presenting with a FEP, including, for example:

- routine blood tests such as full blood evaluation, thyroid function tests, liver function tests, fasting glucose and full lipid profile
- a full physical and neurological examination when clinically indicated
- weight, height and waist circumference
- blood pressure
- brain scan (preferably an MRI) and EEG only when clinically indicated
- urine drug screens if a thorough assessment of past and current drug use is considered essential.

The young person and family should be informed about the reasons for requesting any tests, to avoid any undue alarm. It is important to recognise that the young person may have had little previous need for any invasive biological investigations.

A provisional diagnosis is sometimes made during the full medical evaluation, but it is important to remember that diagnostic ambiguity and diagnostic instability is common in this young person group. Comorbidity is very common, so the treating doctor needs to understand the links between the onset of psychosis and the co-occuring disorder (for example, personality and development disorders), especially during times of stress, and help the treating team to manage this. Developmental issues in the presentation need to be fully evaluated and integrated into the treatment approach.

The treating doctor should collaborate with the case manager in assessing and managing risks, including harm to self or others, poor physical health, deterioration in mental state and functioning, and damage to reputation. This cohesive, team approach will allow a more comprehensive and consistent way to manage complexity and plan interventions.

Trials of medication in young people with an at risk mental state have concentrated on the rate of transition to full-threshold psychosis. Randomised trials with low-dose antipsychotics appeared promising in the short-term, but the benefits were short-

lived. The risk of adverse side effects (i.e. weight gain, metabolic syndrome, extra pyramidal side effects) and limited efficacy with reducing the transition to psychosis indicates that the use of antipsychotics with young people identified as UHR is not appropriate.

Unfortunately prescription of antipsychotic medication prior to referral to the appropriate youth mental health service is still frequent, possibly due to a lack of knowledge of UHR treatment guidelines. All efforts should be made to reduce the use of non-indicated antipsychotic medication prescribed before referral to the appropriate service. This is done via careful psychoeducation on UHR status and medication (type, side effect profile, indication), use of non-medication strategies (CBT, family intervention, vocational), and slow withdrawal of antipsychotic medication.

Antidepressant medications may be used when clinically indicated (i.e. when CBT is not effective or when facing moderate to severe depression or OCD and Anxiety). Furthermore, preliminary evidence suggests that antidepressant medication may be of benefit in reducing rate of transition to psychosis and may be potentially neuroprotective.[23]

Some general principles of medication are summarised below and follow the Australian Clinical Guidelines for UHR management.[14]

PRINCIPLES OF MEDICATION USE IN UHR
Initially consider a ‘watch and wait’ approach, and expect diagnostic instability.
Psychological and, where appropriate, pharmacological treatment of comorbidities should be prioritised consistent with guidelines for those comorbidities. Pharmacological treatment of comorbidities should be considered first before specific pharmacological treatment of attenuated phenomena since this comorbidity may be the origin of, or contributing to, the prominence of attenuated psychotic symptoms.
CBT may reduce or obviate the need for antipsychotic medication in young people identified as UHR.
The role of omega 3 fatty acids in preventing transition to psychosis is still under investigation, but treatment may be considered.
Antipsychotic medication should NOT be considered as the first-treatment option for young people identified as UHR. However, if rapid deterioration of psychotic symptoms occurs, together with significant deterioration in functioning and elevated risk to self or others, a low-dose atypical antipsychotic may be considered for a limited period, in conjunction with close monitoring and support. Note that this is not justified in the majority of such situations.
If the young person transitions to a full-blown psychotic episode, the treatment should follow the Australian Clinical Guidelines for Early Psychosis.[14]

Formally diagnosed disorders such as major depressive disorder, anxiety disorder or personality disorders should be treated according to evidence-based guidelines. This will often involve a combination of psychological therapy with medication. Young people identified as UHR are often seen early during the course of co-occurring disorders, which means that progress and response of these symptoms to therapy requires close monitoring. Assessment and diagnosis must also account for any drug or alcohol use, and be reviewed after a period of abstinence. Access to drug and alcohol treatment services should be arranged when needed.

Other roles for the treating psychiatrist/registrar include:

- Providing information to the young person and family about the biological aspects of symptoms and treatment.
- Consolidating the treatment approach. For example, the case manager can provide individual therapy, while the medical doctor engages in motivational interviewing, works with the family, and provides other therapy in addition to the case manager.
- Determining whether a threshold of psychosis has been crossed, in collaboration with the case manager.
- Liaising with GPs.

Service level considerations for the ultra high risk population

Service level considerations for the ultra high risk population

The models of service delivery for UHR groups may vary between agencies. How these are organised depend on a number of factors such as expected numbers of UHR referrals, size of teams, and other logistical and organisational issues. Irrespective of the particular service structure employed it is vital that service settings are non-stigmatising and youth friendly, embracing values of optimism and hope for recovery. In addition, there are a number of important principles that need to be considered.

Considerations and primary principles of service structure

Continuity of care and therapeutic relationship

The principle of continuity of care places primacy on the engagement of a young person and their family with the mental health service. It assumes that the therapeutic alliance between the young person and their primary case manager and treating doctor is one of the central ways by which the young person is engaged with the service. A strong therapeutic alliance will influence both a young person's satisfaction with treatment[52] but also the extent to which they engage with psychological therapy tasks or adherence to prescribed medication.[53] Research studies have demonstrated a relationship between the therapeutic alliance, treatment adherence and treatment outcomes in mental health.[54] Additionally, it has been widely accepted that points of discharge and transfers of care are periods of increased risk of relapse for a range of disorders including psychosis.[55]

For young people who have been identified as UHR for psychosis and have commenced treatment with a specialised service, this principle places an emphasis on maintaining continuity of the existing therapeutic relationship irrespective of a change in presentation such as worsening psychotic symptoms. It makes sense that the existing treating team (of case manager and doctor) are best placed to facilitate any changes to required treatment such as medication, increased contact or family work at the point that the young person transitions to frank psychosis. By continuing treatment 'as usual', minimal distress and confusion surrounding treatment will be experienced by the young person, leading to a greater acceptance of recommended changes to treatment.

Feedback from young people and their families about their experiences of transitions of care has identified the following points:

- Experiences of frustration and loss of confidence in care when asked to repeat their story during assessment or history taking with new clinicians.
- Significant time needed to engender trust and form a working therapeutic relationship with the treating clinician.
- Personal attachment and comfort with the treating case manager and doctor as helpful and vital to success in treatment.
- Feeling rejected or distressed if required to transition to a new primary case manager. Sense of having to 'start over' with somebody new.

> 'I had the first case manager then I think it had to do with moving around to different parts of Orygen and having to be reassessed, I had a different case manager for a short period of time. Then I didn't have that person and then I got another one so that was three case managers. I think I finally settled with that one so yeah that switching was a bit annoying.'
>
> Young person,
> Orygen Youth Health Clinical Program

Normalising treatment and reducing stigma

A related issue for young people during the period of worsening psychotic symptoms is the idea of stigma associated with illness, distress due to worsening symptoms and trauma that may occur as a result of treatment.[56] The service response and structure should place importance on minimising such distress and stigma by ensuring that treatment continues as usual, with appropriate changes in response based on the needs of the young person. It is important to consider how a young person may perceive a change in their treating clinic, case manager or doctor and that changes do not lead to a perception that they are now 'crazy' or that they have 'failed' in their current treatment. Depending on service structure and clinical resources, it may be necessary to transfer the care of a young person to another clinician or treating team who can best facilitate treatment that is consistent with the EPPIC model of care. If this occurs, it should be a priority to provide a normalising explanation to the young person and family and a streamlined handover that minimises the number of new clinicians involved in the process.

Clinician skill and specialisation in treating ultra high risk or first episode psychosis

Evidence has consistently shown that generic mental health services are not as effective in the treatment of early psychosis as specialised services.[57] It is important for clinicians who work with the UHR population to be skilled in providing psychosocial interventions aimed at reducing risk of transition to psychosis in addition to having the 'clinical space' to do so. Working with this population also requires flexibility and skill in treating a wide range of comorbid difficulties. Working predominantly with young people identified as UHR for psychosis provides an opportunity to hone specialist skills in assessment of APS using the CAARMS tool, and expertise in recognising pending transition to psychosis. A clinical team with resources dedicated to assessment and treatment of young people identified as UHR further enhances this specialisation. Clinicians have the opportunity to review assessment, formulation and treatment plans through clinical review discussion and professional development activities focussed on UHR for psychosis. The clear benefit of this specialisation is the likelihood of early detection of worsening psychosis, reduction of the duration of untreated psychosis and the ability to quickly modify treatment as required. Potential drawbacks to this level of specialisation are that clinicians working only with the UHR population may lose the opportunity to work clinically with individuals experiencing acute or chronic presentations of psychosis and that specialist clinics risk 'silos' developing within mental health services. A clinical structure where clinicians maintain a case-load with both UHR and FEP groups may provide an appropriate middle ground with respect to this principle.

Options for service models for ultra high risk

A number of options may exist for early psychosis services wishing to establish care for young people at ultra high risk of psychosis and their families. The following descriptions and analysis of benefits and risks of each model may help services to choose what best meets the needs of those young people and their families. The models appear in no particular order.

Model 1: Separation of ultra high risk and first episode psychosis teams

In this model, care for UHR and FEP are organised into distinct and separate specialised teams. This model maintains the 'purity' of the team as one which provides focussed and specialised UHR interventions to young people and their families. It provides a venue for richness of clinical discussion and focus on issues related to the UHR stage of illness including the intricacies of determining transition to psychosis. If a young person transits to psychosis then they would be transferred to the FEP team to receive care from that specialised part of the service. Thus the principle of speciality overrides the principle of continuity of care. The main benefit of this set-up is that it maintains the speciality of the team in providing UHR interventions. The main problem in this approach, however, is that there is a break to both the continuity of care and the therapeutic relationships developed occurring at the point of transition to psychosis. As well as there being a potential for heightened clinical risk associated with the transition to psychosis, this may be added to by the disruption in continuity of care and therapeutic alliance. Some of this risk may be mitigated by a collaborative, gradual and comprehensive handover of care to the new clinicians to be involved in the young person's care.

Model 2: The care of young people identified as ultra high risk and first episode psychosis is integrated in one team

In this model, the clinicians within the team are responsible for the clinical management of both young people identified as UHR and FEP together. Although the stages of illness are identified for each young person due to the need for a different and specialised approach to each stage, a clinician would have both young people at UHR and FEP on their caseloads. Clinicians continue to manage the care of the same young person and their family regardless of transition to psychosis. Here continuity of care overrides the principle of the need for speciality. In smaller early psychosis services with smaller local populations, this may be a more realistic model.

As well as continuity of care, the benefit of this approach is that clinicians develop experience in assessment and interventions for both UHR and FEP. The problem with this approach however, is that there may be a watering down of the speciality of UHR so that the expertise garnered in the approach of the previous model is lost. The acuity of FEP and the often associated increase in clinical risks associated with this, may override discussion and focus on issues related to UHR. There may be ways to address these problems. Clinical reviews for both groups may be done separately to maintain the focus on each stage of illness and foster the development of expertise in these fields. Additionally, a team may employ a senior clinician for the UHR 'stream of care' within the team whose role it would be to ensure and maintain the speciality of UHR and help to develop expertise among team members.

Model 3: Mix of both integrated and separate team approaches

Another option for service model involves a blend of the two previous models. For example, teams may be set up as two separate entities within a service, however, if a young person in the UHR team transits to psychosis then the clinicians already involved in the care continue to see that person even though there is transition to FEP. In this situation, the UHR team may also see some young people with FEP but only those ones who were previously managed within that team. Continuity of care is maintained although the specialisation of the UHR may be at risk.

In another example of a blended model, clinicians within one team maintain a specialist approach by only seeing young people at UHR or FEP but never both. If a young person transits to FEP then the care is transferred to a clinician specialising in FEP in the same team. The idea of this model is that speciality is maintained but continuity of care risks are mitigated by the clinicians working closely in one team.

Early psychosis services should weigh up the benefits and risks of each model as well as considering the impact each model has on the primary principles. Discussion around these issues in the idiosyncratic context in which each service exists locally will provide a platform on which to make an informed choice of model. No one model may fit one hundred percent, therefore, evaluation is imperative and may provide the opportunity for a service to change to another model in the future to best meet the needs of young people and their families.

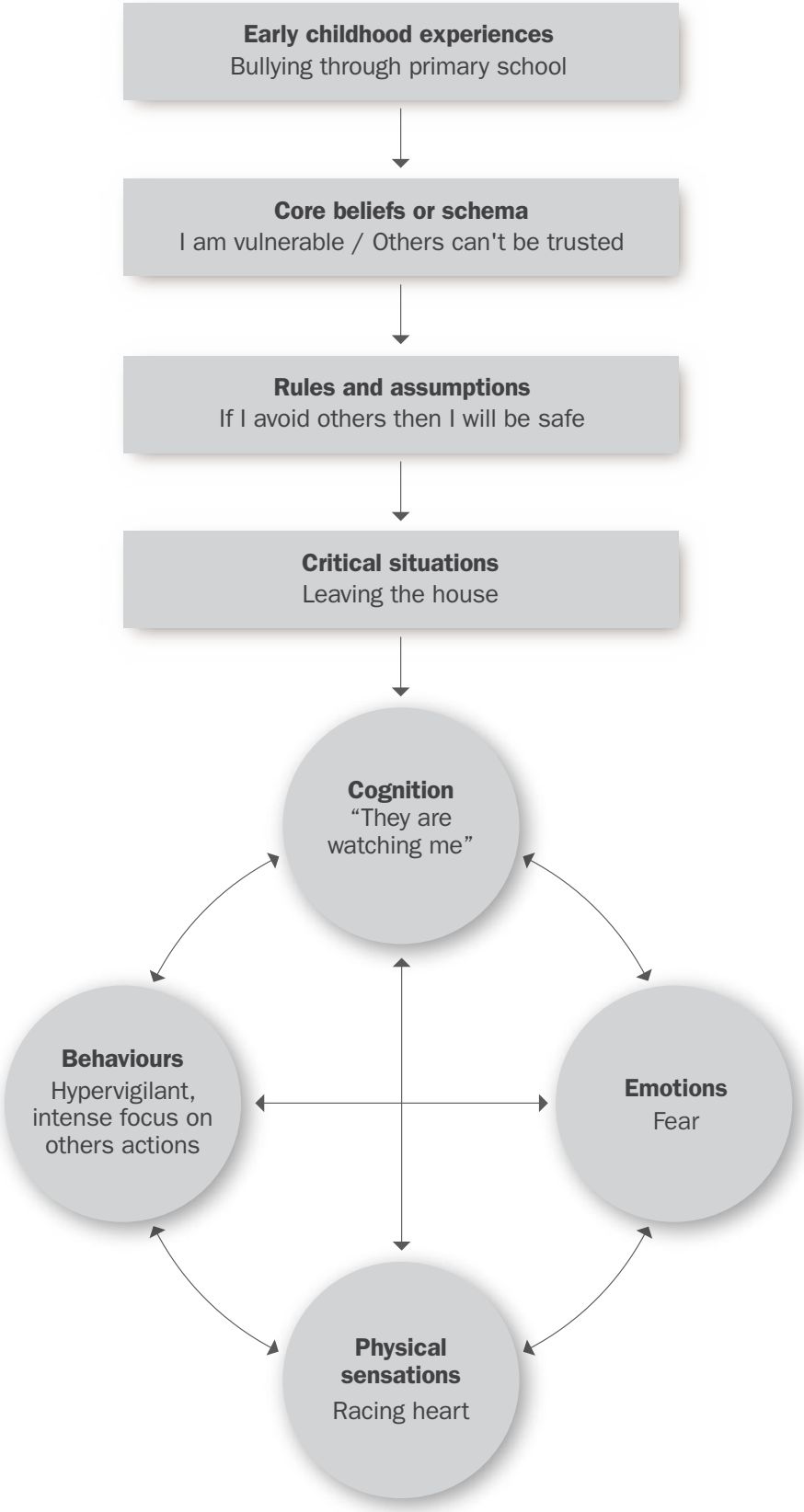
Summary

This manual has provided an overview of current research and recommendations for the identification and treatment of young people identified as UHR of psychosis. The aims of intervening with this group of help-seeking young people are to delay or prevent the onset of FEP, or if it does occur, to reduce the duration of untreated psychosis and minimise the impact of psychosis, on young people and their families. Additionally, early identification and interventions for young people identified as UHR of psychosis can address the decline in social and occupational functioning that often begins very early in the course of psychotic illness.

The comprehensive model presented in this manual incorporates elements of case management, family work, medical, psychological, social and occupational interventions. It emphasises a treatment approach based on the staging model of psychosis that is formulation driven, non-stigmatising and recovery focused. The key service principles that best support working with young people identified as UHR of psychosis are continuity of care, normalising treatment and clinician skill and specialisation. This manual is intended to provide an overview of interventions that may be used with young people identified as UHR of psychosis. Clinicians are encouraged to use the recommended texts and professional development training to further develop core skills in assessment of UHR using the CAARMS tool, the provision of cognitive-behavioural and other psychological therapies, and family and group-based interventions.

Appendices

Appendix 1: Diagrammatic CBT Case Conceptualisation for Jack



Appendix 2: Cognitive Biases

Sometimes described as 'unhelpful thinking styles' the cognitive biases below refer to patterns of thinking that are common to individuals experiencing depression or anxiety disorders, although they may be relevant across a range of mental health difficulties.

Mental Filter	**Viewing events through a filter where only the negative elements are noticed and the positive elements are dismissed.** *'I must be so stupid because I got a bad mark on my maths exam' (but did well in three other exams)*
All or Nothing Thinking	**Seeing only one extreme or the other without acknowledging that there are shades of grey. Often called 'Black and White' thinking.** *'I am either a success at everything or I am a failure'*
Jumping to Conclusions	**Making assumptions about what someone is thinking (mind reading) or predictions about what will happen in the future (fortune telling) based on very little or insufficient information.** *'She doesn't like me because she didn't say hello'*
Emotional Reasoning	To believe that something is true based on how we feel about it. *'I feel scared so I must be in danger'*
Personalisation	**Taking responsibility or blaming yourself for something without considering other plausible explanations.** *'He was rude to me because I did something wrong'*
Catastrophising	**Giving greater weight to the worst possible outcome, even if it is unlikely. Evaluating a situation as 'horrible' or 'unbearable' when it is inconvenient or uncomfortable.** *'If I make a mistake it will be terrible, I won't be able to cope'*
'Should or Must' Statements	**Having a fixed idea about how you or others should behave. Setting standards that are absolute, then feeling frustrated or thinking that you/others have failed if these standards are not met.**
Labelling	**Applying a fixed, global label to yourself or others** *'I am such a loser'*
Overgeneralisation	**Taking a past or present example and applying it to all current and future situations.** *'Everyone is...' 'I always...' 'Nothing ever...'*
Disqualifying or Discounting the Positive	**Telling yourself that any positive events, personal characteristics or achievements are irrelevant or do not count.** *'I got a good mark, but it doesn't mean anything...I got lucky'*

Appendix 3: ABC Thought Monitoring Template

A Activating event	**B** Belief	**C** Consequence	**D** Disputation	**E** Outcome
What happened? Where were you? Who were you with? What is the unusual experience?	What were you saying to yourself? What thoughts were running through your mind? Did you notice any images pop into your mind?	What did you feel emotionally? How strong was the emotion (0–100)? Did you experience any sensation in your body? What did you do? How did you respond?	What is an alternative thought or interpretation? How much do you believe in this alternative thought or interpretation (0–100)?	What is your emotional reaction to the alternative thought or interpretation? How strong is the emotion (0–100)? What is your behavioural response?

Appendix 4: Behavioural Activation: Activity Scheduling

	MON	Mood/Energy rating (1-10) (before, after)		TUES	Mood/Energy rating (1-10) (before, after)		WED	Mood/Energy rating (1-10) (before, after)		THUR	Mood/Energy rating (1-10) (before, after)		FRI	Mood/Energy rating (1-10) (before, after)	
8am		/10	/10		/10	/10		/10	/10		/10	/10		/10	/10
9am															
10am															
11am															
12pm															
1pm															
2pm															
3pm															
4pm															
5pm															
6pm															
7pm															
8pm															
9pm															

Appendix 5: Exposure Hierarchy

Distress rating 0 – 100	Situation
100	
90	
80	
70	
60	
50	
40	
30	
20	
10	

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