The Practitioner

Early intervention key in first episode psychosis

Kelly BD. Early intervention key in first episode psychosis.
Practitioner Dec 2019;263(1832):11-14

Professor Brendan D Kelly
MD PhD MCPsychI FRCPsych FRCPI FTCD
Professor of Psychiatry and Consultant Psychiatrist,
Department of Psychiatry, Trinity College Dublin,
Trinity Centre for Health Sciences,
Tallaght University Hospital, Dublin,
Ireland

Practitioner
Medical Publishing Ltd

Early intervention key in first episode psychosis

AUTHOR
Professor Brendan D Kelly
MD PhD MCPsychI FRCPsych FRCPI FTCD Professor of Psychiatry and Consultant Psychiatrist, Department of Psychiatry, Trinity College Dublin, Trinity Centre for Health Sciences, Tallaght University Hospital, Dublin, Ireland

What are the key positive symptoms?

How should patients be assessed?

What are the treatment approaches?

PSYCHOSIS IS A STATE OF MIND IN WHICH A PERSON LOSES CONTACT WITH REALITY IN AT LEAST ONE important respect while not intoxicated with, or withdrawing from, alcohol or drugs, and while not affected by an acute physical illness that better accounts for the symptoms. Approximately 3% of the population are affected by psychotic disorders.[1]

PRESENTATION

People with psychosis can present in primary care with both positive and negative symptoms.[2] Positive symptoms mean that the patient is having an additional experience that others do not share, while negative symptoms reflect a deficit.

Common positive symptoms of psychosis include delusions and hallucinations (see table 1, p12). These symptoms are strongly influenced by the underlying cause of the psychosis: delusions in schizophrenia tend to be bizarre; delusions in depression negative; delusions in mania expansive.

Common negative symptoms of psychosis that GPs should look for include difficulties concentrating, anxiety, depressed mood, poor sleep, suspiciousness and social withdrawal. These symptoms can be very subtle and can overlap with depression.

In practice, presentations with psychosis vary greatly. One person might present with a long history of quiet, paranoid delusions possibly for many years. Another might present with a sudden onset of dramatic hallucinations commanding them to do certain things or go to certain places; such commands might be resisted or ignored but are usually either distressing or perplexing. Others might present with very vague symptoms, chiefly related to social withdrawal and self-isolation, and it might not be clear if the person is mentally ill, misusing drugs or simply choosing to live differently.

UNDERLYING CAUSES AND RISK FACTORS

Psychosis is a symptom rather than an illness. It is caused by a range of underlying conditions including schizophrenia, schizoaffective disorder, severe depression, severe mania (in bipolar disorder), delusional disorder and alcohol or substance misuse (in the longer term). It can also be related to organic problems (e.g. brain tumours), trauma, stress or the side effects of medication (e.g. steroids), and may occur in patients with delirium and up to half of patients with dementia (e.g. Alzheimer's disease or Parkinson's disease).

'It might not be clear if the person is mentally ill, misusing drugs or simply choosing to live differently'

The causes of psychosis are not fully understood. However, psychosis is likely to be multifactorial in origin. Schizophrenia is a good example because it probably results from a complex interaction of inherited genes, disruptions to brain development in utero and further contributory factors acting in childhood, adolescence and early adulthood.[3]

There appear to be multiple genes involved, possibly leading to dysregulation of dopamine and other neurotransmitters. There are also links between schizophrenia and birth injuries, season of birth (winter and early spring), psychological trauma in childhood, cannabis use, head injury, migration, social adversity and living in cities.[4-6]

Similar complex models of causation probably apply to other causes of psychosis, such as severe depression, mania in bipolar disorder and schizoaffective disorder (which includes both mood symptoms and features of schizophrenia).

Perhaps the clearest cause of psychosis identified to date is cannabis use. In 2017, the US National Academies of Sciences, Engineering and Medicine reviewed the evidence and concluded that the greater the use of cannabis, the greater the risk of psychosis.[7] This confirms clinical experience and »

highlights the particular dangers of the high potency cannabis products currently available.[8,9] Daily cannabis use is associated with a three-fold increase in the odds of developing a psychotic disorder; daily use of high-potency cannabis is associated with a five-fold increase; and high-potency cannabis now accounts for at least 12% of cases of first-episode psychosis.[10]

DIAGNOSIS

When someone presents with psychotic symptoms, it is important to take a full psychiatric history, perform a mental state examination and complete relevant investigations, as indicated in each individual case (see table 2, p13). In addition to the general history, useful questions include:

- *Do you have any unusual experiences that other people possibly do not have?*
- *Do you hear voices talking to you when there is nobody there?*
- *Are people trying to hurt or harm you in any way?*

Gaining the patient's trust can be challenging, especially during a busy clinic. It is important to listen carefully and actively, maintain a calm approach (even if the patient is agitated) and remain unflustered by whatever the patient says (however unusual it may be). Building a good relationship with the patient is more important than eliciting all the information at one consultation.

'The greater the use of cannabis, the greater the risk of psychosis'

Blood testing is appropriate in specific cases including suspected drug misuse (blood toxicology), suspected delirium (full blood count, kidney and liver function) or suspected endocrine disorder (thyroid disease).

Following assessment, a great majority, if not all, people with psychosis will be referred to specialist mental health services, often on an urgent basis, for further assessment, diagnosis and management.

Generally, psychotic symptoms alone are sufficient reason for referral, but additional reasons include disturbed behaviour, suicidality, treatment resistance or failure of outpatient care. Ongoing care will often involve both specialist mental health services and GPs.

Table 1

Key positive symptoms of psychosis

Symptom	Description	Example
Delusion	Fixed, false belief that is culturally inappropriate and persists despite evidence to the contrary	The belief that animals control the internet with the intention of interfering with your job prospects
Hallucination	A perception in the absence of an external stimulus	**Auditory:** Hearing voices in schizophrenia **Visual:** Simple visual hallucinations such as flashes of light or complex ones such as seeing faces **Touch:** A feeling of insects crawling on the skin in alcohol withdrawal **Smell:** Unpleasant olfactory hallucinations in depression **Taste:** Gustatory hallucinations of a taste of poison in paranoia
Thought disorder	Unusual thought form; thoughts do not follow logically from each other; thought block (interruption); reported interference with thought possession	**Bizarre or disorganised speech:** 'I am going to the happy or not, let's spot, going to the – do you see? Do you see?' **Disorders of thought possession:** The belief that one's thoughts are controlled by an external agency, in schizophrenia

EVIDENCE-BASED MANAGEMENT

Psychosis is a treatable condition. As with all mental disorders, treatment is based on a biopsychosocial approach: biological interventions include administration of medications, treatment of coexisting medical illness or substance misuse problems, and, in a small minority of cases, electroconvulsive therapy (ECT). Psychological and social interventions include specific psychotherapies for patients and families, as well as enhancing personal support and social participation.

Certain aspects of treatment will depend on the cause of the psychosis: depressive psychosis may require antipsychotic and/or antidepressant medication; severe mania in bipolar disorder may require antipsychotic and/or mood stabilising medication; schizophrenia will likely require antipsychotic medication and a range of other measures; and substance misuse may require antipsychotic medication in the short term and counselling or rehabilitation in the longer term.

Specialist care is usually required for specific groups such as children with psychosis, people with comorbid intellectual disability, patients with paraphrenia (organised delusional systems without deterioration of intellect or personality) and postpartum mental illness, which can involve psychosis.[11]

'NICE places especially strong emphasis on early intervention for first episode psychosis'

NICE places especially strong emphasis on early intervention for first episode psychosis, for which it recommends medication in conjunction with psychological interventions such as family interventions and individual cognitive behaviour therapy (CBT).[12]

The choice of medication should be made jointly by the patient, healthcare professional and, if appropriate, carer, taking account of likely benefits and possible side effects such as weight gain, movement problems (e.g. restlessness), and potential metabolic, cardiac or hormonal effects (e.g. raised prolactin).

Older, first generation (typical) antipsychotic medications include fluphenazine, flupentixol, haloperidol, zuclopenthixol, sulpiride and pimozide.

Newer, second generation (atypical) antipsychotics include risperidone, olanzapine, quetiapine, aripiprazole, amisulpride, ziprasidone and paliperidone. In practice, psychosis is now most often treated with a second generation antipsychotic medication, though first generation antipsychotics are still sometimes used. These newer second generation agents appear to be as effective as older agents in the management of delusions and hallucinations, with fewer adverse effects at recommended doses.

Side effects can include weight gain, impaired glucose tolerance and diabetes mellitus, as well as dry mouth, sedation, possible cardiac effects, dizziness and impotence. With all antipsychotics, neuroleptic malignant syndrome can occur; this is a rare adverse effect (very high temperature, confusion, muscle rigidity, perspiration, tachycardia) that needs to be managed in hospital and can be fatal if not treated.

It is recommended that, prior to commencing these medications, all patients should have: an ECG, weight and height checked, and a set of basic blood tests, including blood glucose. These should be monitored annually.

In first episode psychosis, the duration of trial of an antipsychotic will vary »

Table 2

Assessment and investigation of patients with psychosis

Full psychiatric history

Presenting complaint
- What, precisely, brought this person to see you?
- Are there any relevant 'negatives' in the history?

History of presenting complaint
- Were there any identifiable triggers for the psychosis?
- What is the duration of untreated psychosis?
- Are there any alleviating or worsening factors?
- Have antipsychotic treatments already been tried?

Past psychiatric history
- Has the patient had psychosis previously?
- What treatments helped in the past?
- Is there a history of psychosis, mental illness or attempted suicide?

Past medical history
- Are there any major medical or surgical problems?
- Is there any history of epilepsy or head injury?

Medication
- Is the patient on any medication, either prescribed or over the counter?
- Is the patient on contraception and/or receiving injections (e.g. depot antipsychotic medication)
- Does the patient have any allergies?

Family history
- Is there a family history of any psychiatric or other illnesses, or suicide?

Personal history
- Were there any problems at birth or during childhood or schooling?
- Is there a history of abuse?
- Has the patient been in education or employment?

Social history
- Where does the patient live, and with whom?
- What is the patient's source of income?
- What is the patient's relationship status and does the patient have children?
- Does the patient use alcohol, cigarettes or illegal drugs?

Forensic history
- Has the patient any history of offences or convictions?

Premorbid personality
- How would the patient describe himself/herself before developing psychosis?
- How would others describe the individual?

Mental state examination

Appearance and behaviour
- Is the person well dressed, with good self-care?
- Does he/she establish good eye contact and rapport?

Speech
- Note the rate, volume and tonal modulation of speech

Mood
- How does the patient rate his/her own mood, and how does it appear objectively?

Affect
- How does the patient react in conversation with you? Is the patient normally reactive (nodding, smiling, etc.) or are the reactions blunted, muted, labile or inappropriate?

Thought
- Thought content: does the patient have delusions, obsessions or overvalued ideas? What are the chief themes of his/her thoughts?
- Thought form: do the patient's thoughts move too quickly or too slowly? Do thoughts follow logically from each other, or jump from theme to theme? Are the patient's thoughts being interfered with?
- Does the patient have thoughts of self-harming or harming others? Suggested question: 'Are there times when things get so difficult that you feel that you can't carry on, that you want to end your life, or that you want to kill yourself?' Does the patient have thoughts of harming other people?

Perception
- Does the patient have hallucinations or illusions, which are misperceptions of real stimuli (often associated with tiredness or anxiety)?

Cognition
- Is the patient oriented in time, place and person?
- If detailed assessment is needed, the General Practitioner Assessment of Cognition (GPCOG) can be used[13]

Insight
- Does the person believe that he/she is ill?
- If so, does the patient believe that he/she has a physical or a mental illness?
- Does the patient believe that treatment will help?
- Is the patient willing to accept treatment for psychosis?

Investigations

Collateral history
- This is the most important investigation in psychosis: try to speak to a family member or friend, with the patient's permission

Other investigations
- Depending on the individual case, other investigations can include drug testing (if substance misuse is suspected) or brain imaging (if an organic cause, such as tumour or head injury, is suspected)

key points

SELECTED BY

Dr Phillip Bland
Former GP with an interest in mental health, Dalton-in-Furness, UK

Psychosis is a state of mind in which a person loses contact with reality in at least one important respect while not intoxicated with, or withdrawing from, alcohol or drugs, and while not affected by an acute physical illness that better accounts for the symptoms. Psychosis can be caused by a range of underlying conditions including schizophrenia, schizoaffective disorder, severe depression, severe mania (in bipolar disorder), delusional disorder and alcohol or substance misuse in the longer term. It can also be related to organic problems (e.g. brain tumours), trauma, stress or the side effects of medication (e.g. steroids) and may occur in patients with delirium and up to half of patients with dementia.

Common positive symptoms of psychosis include delusions and hallucinations. These symptoms are strongly influenced by the underlying cause of the psychosis: delusions in schizophrenia tend to be bizarre; delusions in depression negative; delusions in mania expansive. Common negative symptoms that GPs should look out for include difficulties concentrating, anxiety, depressed mood, poor sleep, suspiciousness and social withdrawal. These symptoms can be subtle and can overlap with depression.

When a patient presents with psychotic symptoms, it is important to take a full psychiatric history, perform a mental state examination and complete relevant investigations, as indicated in each individual case. Following assessment, a great majority, if not all, people with psychosis will be referred to specialist mental health services, often on an urgent basis, for further assessment, diagnosis and management. Generally, psychotic symptoms alone are sufficient reason for referral, but additional reasons include disturbed behaviour, suicidality, treatment resistance or failure of outpatient care.

Treatment will depend on the cause of the psychosis: depressive psychosis may require antipsychotic and/or antidepressant medication; severe mania in bipolar disorder may require antipsychotic and/or mood stabilising medication; schizophrenia will likely require antipsychotic medication and other measures. Substance misuse may require antipsychotic medication in the short term and counselling or rehabilitation in the longer term.

Psychosis is now most often treated with a second generation antipsychotic medication. Side effects can include weight gain, impaired glucose tolerance and diabetes mellitus, as well as dry mouth, sedation, possible cardiac effects, dizziness and impotence. With all antipsychotics, neuroleptic malignant syndrome is a rare adverse effect that needs to be managed in hospital.

Before commencing antipsychotic medication, the patient should have: an ECG; their weight and height checked; and a set of basic blood tests, including blood glucose. These should be monitored annually. Support in stopping smoking, promotion of improved diet and lifestyle, and screening for cardiac risk factors are also important.

depending on the diagnosis; e.g. for schizophrenia, a six-week trial of an optimal dosage of a second generation medication should be combined with appropriate social and psychological treatment. If clinical results are not satisfactory after the trial period, therapeutic options should be reviewed and discussed with the patient and the family. Hallucinations (usually visual) are especially common in dementia and low-dose second generation antipsychotics can be used with caution and specialist advice.

It is important to establish if the patient is not taking the medication for any reason, and to address whatever concerns might be leading to this. Another antipsychotic medication (tablets or injections) can be tried for another trial period.

In the unlikely event that these steps do not produce sufficient clinical improvement, additional measures may be needed, depending on the cause of the psychosis. For example, clozapine is an antipsychotic medication that can greatly help people with difficult-to-treat schizophrenia, but it is reserved for treatment-resistant situations as it may cause agranulocytosis.

Both clozapine and ECT are prescribed by specialist mental health services and are limited to certain, well defined clinical circumstances.[14]

ONGOING TREATMENT

Even if response to treatment is good following a first episode of psychosis in mental illness, there is a high risk of relapse if medication is stopped within one to two years.

Ongoing management of a long-term psychotic illness involves much more than medication, and requires a multidisciplinary team working together. Psychoeducation for the patient and family helps develop understanding of mental illness and its treatment, and enhances the therapeutic alliance between the patient, family and healthcare providers.

Other psychological approaches include CBT, family therapy, art therapy, social support, occupational therapy and self-help groups, such as the Hearing Voices Network, see Useful information, right.

Continued care for physical health is especially important. Men with schizophrenia die 15 years earlier, and women 12 years earlier, than the rest of the population.[15] This excess is not accounted for by unnatural deaths; the leading causes are heart disease and cancer. As a result, there needs to be sustained focus on physical health, including support in stopping smoking, promotion of improved diet and lifestyle, and screening for cardiac risk factors (e.g. cholesterol, high blood pressure).

Competing interests: None

REFERENCES

1 Perälä J, Suvisaari J, Saarni SI et al. Lifetime prevalence of psychotic and bipolar I disorders in a general population. *Arch Gen Psychiatry* 2007;64(1):19-28
2 World Health Organization. International Classification of Diseases (10th edition). World Health Organization. Geneva. 1992
3 Howes OD, Murray RM. Schizophrenia: an integrated sociodevelopmental-cognitive model. *Lancet* 2014;383(9929):1677-87
4 Boydell J, van Os J, McKenzie K et al. Incidence of schizophrenia in ethnic minorities in London: ecological study into interactions with environment. *BMJ* 2001;323(7325):1336-38
5 Kelly BD, O'Callaghan E, Waddington JL et al. Schizophrenia and the city: a review of literature and prospective study of psychosis and urbanicity in Ireland. *Schizophr Res* 2010;116(1):75-89
6 Stilo SA, Murray RM. Non-genetic factors in schizophrenia. *Curr Psychiatry Rep* 2019;21(10):100
7 National Academies of Sciences, Engineering and Medicine. The health effects of cannabis and cannabinoids. National Academies Press. Washington DC. 2017
8 Berenson A. Tell your children: the truth about marijuana, mental illness, and violence. Free Press. New York. 2019
9 Freeman TP, Groshkova T, Cunningham A et al Increasing potency and price of cannabis in Europe, 2006-16. *Addiction* 2019;114(6):1015-23
10 Di Forti M, Quattrone D, Freeman TP et al. The contribution of cannabis use to variation in the incidence of psychotic disorder across Europe (EU-GEI): a multicentre case-control study. *Lancet* 2019;6(5):427-36
11 Catalao R, Adlington K, Protti O. Prompt detection vital in postpartum mood disorders. *Practitioner* 2019;263(1827):21-26
12 National Institute for Health and Care Excellence. CG178. Psychosis and schizophrenia in adults: prevention and management. NICE. London. 2014 www.nice.org.uk/guidance/cg178 [Last accessed 23 November 2019]
13 Brodaty H, Pond D, Kemp NM et al. The GPCOG: a new screening test for dementia designed for general practice. *J Am Geriatr Soc* 2002;50(3):530-34
14 National Institute for Health and Care Excellence. TA59. Guidance on the use of electroconvulsive therapy. NICE. London. 2009 www.nice.org.uk/guidance/ta59 [Last accessed 23 November 2019]
15 Crump C, Winkleby MA, Sundquist K et al. Comorbidities and mortality in persons with schizophrenia: a Swedish national cohort study. *Am J Psychiatry* 2013;170(3):324-33

See also *GPs are central to improving care of schizophrenia patients,* p15

Useful information

Hearing Voices Network
The Hearing Voices Network offers information and support for people who hear voices or have other unusual perceptual experiences, regardless of whether or not they identify as mentally ill
www.hearing-voices.org

NHS conditions
www.nhs.uk/conditions/psychosis

MIND
www.mind.org.uk