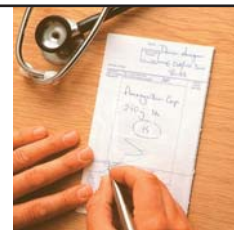




# Managing schizophrenia in general practice



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## BACKGROUND

The lifetime risk of schizophrenia is about one in 100. It is an illness associated with substantial disability and increased risk of physical illness.

## OBJECTIVE

This article updates general practitioners on the physical, psychological and social management of patients with schizophrenia.

## DISCUSSION

General practitioners have a key role in managing patients with schizophrenia, including early detection of prodromal symptoms, monitoring and preventing relapses, and providing high quality primary and secondary prevention for common physical problems. Effective care requires a thorough understanding of local specialist services, pharmacotherapies, and familiarity with psychosocial interventions that will genuinely benefit patients.

The lifetime risk of schizophrenia is about one in 100,<sup>1</sup> leading to significant morbidity, mortality and loss of quality of life.<sup>2</sup> Worldwide, over 20 million people suffer from schizophrenia, consuming an estimated 2.5% of the total worldwide health care expenditure.<sup>3</sup> This reflects the substantial disability and increased risk of physical illnesses associated with schizophrenia. In Australia, it has been estimated that schizophrenia cost \$1.85 billion in 2001; almost \$50 000 on average for each Australian with the illness.<sup>4</sup> Over one-third of this cost is borne by people with the illness and their carers.<sup>4</sup>

Surveys of general practice suggest that most practices see 3–4 patients with psychosis, although some general practitioners with a special interest may see more.<sup>5</sup> A recent Australian study reports that 81% of patients with psychosis saw a GP in the previous year.<sup>6</sup> The majority of GPs manage schizophrenia with guidance from specialist services, however, some rural GPs take a more extensive clinical role. A key issue for people with schizophrenia is stigma,<sup>7</sup> and general practice is potentially a less stigmatising experience than attending a mental health service. However, this requires that all health professionals, including GPs, are aware of their own attitude toward schizophrenia, its management

and prognosis, so they don't contribute to what has been termed 'iatrogenic stigma'.<sup>8</sup>

A systematic approach to assessment, management and follow up is required for optimal management of patients with schizophrenia. Early recognition of prodromal symptoms, understanding the novel antipsychotics and attending to the physical care of patients is particularly important. These points are demonstrated in the accompanying two case histories.

## Assessment

The first step of any assessment is building a therapeutic alliance with the patient. There is considerable variability in the level of disturbance, anxiety, irritability, and suspiciousness depending on the nature and phase of the illness. The GP can build trust by initially addressing less threatening problems such as physical illness. While it is not necessary to initially challenge unusual ideas, the GP should avoid colluding with delusional ones.

General practitioners are well placed to detect the early symptoms of prodromal illness, which can lead to early treatment and a better prognosis for patients.<sup>9,10</sup> Often the prodromal symptoms are indistinguishable from depression and anxiety disorders and include:

- reduced concentration
- lowered mood

### Case history – Michelle

Michelle, 21 years of age, is a previously well – albeit slightly ‘eccentric’ – TAFE student, currently living with her parents and two younger brothers in the regional suburbs of Sydney. Her mother, Leila, a regular patient of your clinic presents distressed about her daughter’s behaviour. She describes 6 months of increasing conflict with her daughter who has dropped out of her course, broken up with her boyfriend and spends most of her time, including the middle of the night, in her room surfing the internet. Leila is also concerned about her increasing marijuana use.

### Management approach

The patient needs careful assessment that will attempt to elicit prodromal symptoms of psychosis and depression (including suicidal ideation). Often the symptoms are difficult to distinguish from common disorders such as depression or anxiety disorders. It is essential to establish rapport, but this can prove difficult. Providing education and support for the family is an essential part of management. Physical examination and investigations should be undertaken when feasible. If early psychosis is suspected, a specialist assessment is necessary and community outreach services may be called in. Commencing a novel antipsychotic in the lowest possible dose would be usual.

- sleep disturbance, and
- anxiety.

Other symptoms to look out for are suspiciousness, social withdrawal and marked irritability. Specific risk factors such as schizotypal personality, family history and perinatal complications including hypoxia should also be kept in mind.

Engaging with the family and/or carers is essential. In the early phase of illness, they may be the only reliable source of observations about the patient’s behaviour.

### Case history – Guy

Guy, 33 years of age, is a single man living in a special accommodation hostel who developed schizophrenia 6 years previously and has continued on maintenance treatment. He has minimal family support and relies on the case worker from the community mental health service to facilitate essential activities including medical appointments with the GP. Of note, he is obese (BMI=32), smokes 60 cigarettes per day and has recently been diagnosed with hypertension. Current medications include an antihypertensive and his oral antipsychotic medication that he takes according to his ‘dosette box’ which is refilled each week. The patient requires ongoing monitoring of physical and mental states. Reduction of cardiovascular mortality is a key focus and active management of the smoking, obesity and hypertension is essential. This includes regular physical examinations and relevant investigations (*Table 3*) as part of overall management. It is also important to consider if the antipsychotic medication is exacerbating physical illnesses.

Additionally, it provides the GP with an opportunity to attend to the family and/or carer’s distress and to supply accurate information about the illness (*Figure 1*). Family and carers are critical to the long term care of the patient and relapse prevention, so building rapport early on helps build an effective partnership.

The assessment should include a full history and mental status assessment. In particular the GP aims to elicit the following symptoms and manifestations of schizophrenia:

- positive symptoms (delusions, hallucinations, formal thought disorder)
- negative symptoms (flat affect, poverty of thought, lack of motivation, social withdrawal)
- cognitive symptoms (distractibility, impaired working memory, impaired executive function)
- mood symptoms (depression, mania, suicidal or hostile symptoms), and
- alcohol or drug use and dependence.

Useful questions for eliciting psychotic symptoms are listed in *Table 1*.

## Management

A critical aspect of the management is to identify the temporal course of the illness, as this will determine the management approach. The phases of management are usually classified as the following<sup>10</sup>:

- prodrome
- acute/first episode
- recovery phase

- maintenance (rehabilitation and relapse prevention), and
- relapse.

The physical examination and investigation of people with schizophrenia serve a number of purposes and are in part determined by the phase of management. For first episode presentations, the priority is to exclude any specific organic cause of psychoses (*Table 2*). For patients already receiving antipsychotic medication, the physical examination and investigations are focussed on detecting side effects of those medications. During the maintenance phase, a primary objective for the GP is preventive care especially cardiovascular risk reduction and managing common comorbidities such as obesity, drug use and smoking (*Table 3*).<sup>11</sup>

Management of schizophrenia also requires an understanding of the various community and specialist services available in one’s local area, a sound grasp of the novel antipsychotic medications (*Table 4*), adjunctive treatments, and an appreciation of the various psychosocial interventions that are likely to assist the patient.

## Treatment and setting

Availability of services varies depending on location, and to some extent this influences the GP’s degree of independence in making clinical decisions. The nature of the illness, the severity and phase, as well as the degree of risk to self and others will determine whether community outreach or hospital care is the

# Schizophrenia

## What is schizophrenia?

Schizophrenia is an illness, a medical condition. It affects the normal functioning of the brain, interfering with a person's ability to think, feel and act. Some do recover completely, and, with time, most find that their symptoms improve. However, for many, it is a prolonged illness that can involve years of distressing symptoms and disability.

## What are the symptoms?

If not receiving treatment, people with schizophrenia experience persistent symptoms of what is called psychosis. These include:

- **confused thinking** – when acutely ill people with psychotic symptoms experience disordered thinking, the everyday thoughts that let us live our daily lives become confused and don't join up properly
- **delusion** - delusion is a false belief held by a person that is not held by others of the same cultural background
- **hallucinations** – the person sees, hears, feels, smells or tastes something that is not actually there. The hallucination is often of disembodied voices which no one else can hear. Other associated symptoms are low motivation and changed feelings.

## What causes schizophrenia?

The causes of schizophrenia are not fully understood. They are likely to be a combination of hereditary and other factors. It is probable that some people are born with a predisposition to develop this type of illness, and that certain things, eg. stress or use of drugs such as marijuana, LSD or speed, can trigger their first episode.

## How many people develop schizophrenia?

About one in 100 people will develop schizophrenia at some time in their lives. Most of these will be first affected in their late teens and early 20s.

## How is schizophrenia treated?

Treatment can do much to reduce and even eliminate the symptoms. Treatment should generally include a combination of medication and community support. Both are usually essential for the best outcome.

- **Medication**  
Certain medications assist the brain to restore its usual chemical balance. This then helps reduce or get rid of some of the symptoms.
- **Community support programs**  
This support should include information, accommodation, help with finding suitable work, training and education, psychosocial rehabilitation and mutual support groups. Understanding and acceptance by the community is also very important.

## How do I find out more?

It is important that you ask your doctor about any concerns you have. SANE Australia produces a range of easy to read publications and multimedia resources on mental illness. Visit [www.sane.org](http://www.sane.org) or phone (03) 9682 5933 for details.

Figure 1. Patient education  
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**Table 1. Useful questions for assessment of schizophrenia<sup>12</sup>**

**Anxiety** Have you been feeling especially nervous or fearful? Have you felt tense and shaky, or experienced palpitations?

**Depressed mood** Have you been feeling sad or 'down in the dumps' recently, not enjoying activities as much as before?

**Elevated mood** Have you been feeling especially good in yourself, more cheerful than usual and full of life?

**Auditory hallucinations** Do you hear voices of people talking to you even when there is no one nearby?

**Thought insertion** Have you felt that thoughts are being put into your mind? Do you experience telepathy?

**Thought withdrawal** Have you experienced thoughts being taken out of your mind?

**Thought broadcasting** Have you felt that other people are aware of your thoughts?

**Thought echo** Have you experienced hearing your own thoughts spoken out loud?

**Delusions of control** Have you felt under the control or influence of an outside force?

**Delusions of reference** Do programs on the television or radio hold special meaning for you?

**Delusions of persecution** Do you feel that you are being singled out for special treatment? Is there a conspiracy against you?

**Delusions of grandeur** Do you feel special, with unusual abilities or power?

**Delusions of guilt** Do you believe that you have sinned or have done something deserving punishment?

best option for treatment. Sometimes legal measures are necessary to achieve appropriate hospitalisation and adherence to treatment.

Significant reforms have occurred in mental health services in Australia with an increasing emphasis on community based care and a greater role for primary care providers. General

**Table 2. Organic causes of psychosis<sup>17</sup>****Common**

- Amphetamines, stimulants
- Hallucinogens
- Cannabis/marijuana
- Temporal lobe epilepsy
- Cerebrovascular disease
- Brain tumours
- Cushing syndrome, corticosteroid production
- Thyrotoxicosis

**Less common**

- Central nervous system infections, eg. HIV
- Huntington disease
- Cerebral trauma
- Hyperparathyroidism
- Systemic lupus erythematosus
- Wilson disease

practitioners have a critical role in assisting patients, families and carers navigate a complex mental health system, and to ensure adequate communication. Services include community based mental health care, early intervention services,<sup>10</sup> outpatient clinics, and public and private consultant psychiatrists who, to a lesser or greater degree, share care with GPs. From a practical point of view, access to services varies greatly according to geography, therefore, the GP's local knowledge of services is essential to guide patients to the best care available.

**Pharmacotherapy****Antipsychotics**

Antipsychotic medications can normalise psychotic symptoms and are shown to improve the long term outcome for patients experiencing psychotic illness. The choice of medication and dosage is influenced by risk of side effects, in particular the debilitating extra pyramidal side effects (EPS) such as:

- dystonias (oculo-gyric crisis, torticollis, opisthotonos, laryngeal spasm)
- parkinsonism (muscle stiffness, bradykinesia, tremor, flat affect)
- akathisia (restless legs and other parts of

**Table 3. Useful investigations of patients with schizophrenia<sup>12</sup>****Diagnostic investigations at presentation**

- Full blood examination, erythrocyte sedimentation rate – looking for anaemia, infection, nutritional status
- Thyroid function tests – looking for thyroid disease
- Liver function tests – to detect alcohol use, medication effects, infection
- Urea and electrolytes – to determine renal function, hydration
- Random blood glucose – measure baseline as high risk of future elevation with use of novel antipsychotics
- Cholesterol and triglyceride levels
- Vitamin B12 and folate levels
- Calcium and phosphate levels
- Urinary drug screen – looking for illicit drugs, alcohol, benzodiazepines
- CT scan – head

**Diagnostic investigations in maintenance management**

Within the first 3 months, then every 6 months unless there is a special risk

- Fasting blood glucose
- Fasting cholesterol and triglycerides
- Full blood examination
- Liver function tests
- Thyroid function tests
- Urea and electrolytes
- Electrocardiogram
- Urinary drug screen – perform regularly if indicative history
- Prolactin level
- Other investigations as appropriate

**Diagnostic investigations indicated in certain cases**

Example: atypical presentation or history, neurological signs, history of fitting or head injury

- CT scan – head
- MRI scan – head
- Electro-encephalogram
- Serum ceruloplasmin – looking for Wilson disease
- Syphilis serology
- HIV serology
- Hepatitis serology
- Glucose tolerance test

Table 4. Common antipsychotic medications – dosage and side effects<sup>12</sup>

Type of medication	Usual starting dose	Usual clinical dose	Common side effects
<b>Typical antipsychotics</b>			
<b>Low potency</b>			
Chlorpromazine (Largactil)	25–100 mg/day	300–600 mg/day	Sedation, anticholinergic effects, postural hypotension
<b>High potency</b>			
Trifluoperazine (Stelazine)	Review with a psychiatrist	15–20 mg/day	Extrapyramidal effects, sedation
Haloperidol (Serenace)		5–20 mg/day	
Pimozide (Orap)		2–10 mg/day	
<b>Depot antipsychotics</b>			
Fluphenazine decanoate (Modecate)	Based on existing oral doses	25–50 mg/2 weeks	Extrapyramidal effects, sedation
Flupenthixol decanoate (Fluanxol)	40–80 mg/2 weeks		
Zuclopenthixol decanoate (Clopixol)	200–400 mg/2 weeks		
Haloperidol decanoate (Haldol)	100–200 mg/4 weeks		
<b>Novel antipsychotics</b>			
Risperidone (Risperdal, Consta)	1–2 mg/day 25 mg/2 weeks	1–6 mg/day 25–50 mg/2 weeks	Hyperprolactinaemia
Olanzapine (Zyprexa)	5–10 mg/day	5–20 mg/day	Weight gain
Quetiapine (Seroquel)	Starter pack to 400 mg after 4 days	150–750 mg/day	Sedation
Amisulpride (Solian)	200–400 mg/day	400–800 mg/day	Hyperprolactinaemia
Clozapine (Clozaril)	Not started by GP	200–600 mg/day	Sedation, weight gain, cardiotoxic and haematological effects
Aripiprazole (Abilify)	15 mg	10–30 mg	Headache, nausea, insomnia

the body, and agitation), and

- tardive dyskinesia (irreversible, repetitive involuntary movements all over the body, especially visible around the mouth and tongue).<sup>12</sup>

Antipsychotic medications are usually classified as typical, depot and novel (or atypical) (Table 4). Typical antipsychotics (eg. chlorpromazine and haloperidol) tend to cause EPS at therapeutically effective doses. The novel medications (eg. risperidone, olanzapine, quetiapine and clozapine) have a lower propensity to such effects. While definitive studies have yet to be reported, accumulating evidence suggests that the atypical

antipsychotic medications, particularly clozapine and olanzapine, may significantly impair glucose metabolism and increase the risk of diabetes in patients with schizophrenia.<sup>11</sup> Therefore, it is important that patients receiving atypical antipsychotic medications are routinely screened for diabetes and other metabolic abnormalities including elevated lipids. Notably, clozapine can have serious haematological side effects and is generally only used in specialist settings.

The novel antipsychotics are generally considered first line therapy for patients with a first episode psychotic illness due to their improved tolerability and safety.<sup>12</sup> Their therapeutic effects

may take weeks to materialise and treatment is recommended for 12 months. Ongoing treatment is recommended for patients who relapse or have residual symptoms.

For those patients already comfortably stabilised on one of the older antipsychotics, with no significant adverse side effects, they may be continued, although the risk of tardive dyskinesia needs to be considered, particularly in older patients. Depot medications, which currently are almost all typical antipsychotics, have a role in the management of chronically insightful and noncompliant patients. The benefits need to be weighed against the increased risks of



extra pyramidal and other side effects.

### Adjunctive treatments

Other medications can be useful in helping stabilise the patient while waiting for antipsychotic medications to take effect and to target specific symptoms. Benzo-diazepines can be useful for anxiety, agitation and insomnia. In cases of patients with schizophrenia who have elevated mood, medications such as lithium, sodium valproate or carbamazepine may be appropriate. If there is evidence of depression, cautious use of antidepressants may be appropriate, but can sometimes worsen the psychosis. Anticholinergics are sometimes used to reverse or ameliorate dystonias and parkinsonism in the short term but there is a risk of abuse, and they have far less role alongside the newer or novel agents.

### Psychosocial interventions

A supportive relationship with a GP provides patients with continuity of care, ongoing monitoring of the illness and attention to physical care. It provides an opportunity for the GP to encourage continuation with treatment, discourage substance misuse where this is a factor, and to attend to general health issues such as smoking cessation, Pap tests, cardiovascular risk reduction, weight reduction and exercise programs. Ideally, the relationship encompasses:

- a patient centred approach
- provision of accurate information
- a clear emergency plan
- ongoing support of family and carers, and
- assistance with the common practical problems of employment, finances and accommodation.

Ongoing specific psychoeducation for the patient and the family can also be provided by the GP. In addition, the GP can direct and encourage the patient to attend specialists and programs that can provide specific psychological approaches that have been shown to be effective. These include cognitive therapy,<sup>14</sup> social skills training,<sup>15</sup> and vocational rehabilitation.<sup>16</sup> Group therapy can also be effective.

### Conclusion

General practitioners have a key role in managing patients with schizophrenia throughout all phases of the illness including early detection, relapse prevention and maintenance treatment. Effective care requires good communication with local mental health services, an understanding of the new pharmacotherapies and attention to the physical aspects of management.

Conflict of interest: Grant Blashki, Nicholas Keks and Andrew Stocky received an unrestricted educational grant from AstraZeneca to publish a related clinical guideline: 'Managing schizophrenia: a guide for general practice in Australia' in 2003.

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