



# THE CONTINUING PROFESSIONAL DEVELOPMENT PROGRAMME



This module is suitable for use by pharmacists as part of their continuing professional development cycle. Complete the record form on page viii for inclusion in your CPD portfolio. Previous modules in the Pharmacy Magazine CPD Programme are available to download at [www.pm-modules.co.uk](http://www.pm-modules.co.uk)

## MODULE 178

Welcome to the one hundred and seventy eighth module in the *Pharmacy Magazine* Continuing Professional Development Programme, which looks at schizophrenia. It is valid until July 2013.

Continuing professional development (CPD) is now a mandatory requirement for pharmacists. Journal-based educational programmes (unscheduled learning) are an important means of keeping up-to-date with clinical and professional developments and form a significant element of your CPD. Completion of this module will contribute to the nine pieces of CPD that must be recorded a year.

Before reading the module, assess your learning needs by answering the questions below. After reading the module, complete the record form on page viii for inclusion in your CPD portfolio. You can also test your knowledge by answering the multiple choice questions. A £3.75 marking charge applies to each module.

### Self-assess your learning needs:

- What are the key points of last year's NICE guideline on schizophrenia?
- What are the potential barriers to treatment adherence?
- What extrapyramidal symptoms are common in patients treated with typical antipsychotics?

This module supports the following CPD competences: C1b, C1c, C1d, C3e, C4b, C4e, C4f and C4g.  
More details on pvii

## CURRENT THINKING ON...

# THE MANAGEMENT OF SCHIZOPHRENIA

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### Introduction

Schizophrenia is a complex condition involving disturbance of thinking, perception, affect and social behaviour. It is the most commonly diagnosed major mental health problem yet, according to the World Health Organization, more than 50 per cent of individuals with schizophrenia are not receiving appropriate care.

In 2009 NICE issued an updated clinical guideline on schizophrenia and its management ([www.nice.org.uk/nicemedia/live/11786/43607/43607.pdf](http://www.nice.org.uk/nicemedia/live/11786/43607/43607.pdf)). The guideline covers incidence and diagnosis of schizophrenia, treatment with antipsychotics, psychological therapies and psychosocial interventions.

Recent research has focused on the biological aspects of schizophrenia and includes genetic studies and radiological investigations as well as

biochemical and neuropathological studies of the brain. The body of knowledge gathered over the years has led researchers to describe schizophrenia as a "disorder of the brain", although its exact aetiology is yet to be determined. There is no one identified cause for schizophrenia and it is likely to be the result of a combination of factors. More than 80 per cent of patients with schizophrenia have parents who do not have the disorder.

Mortality among people with schizophrenia is approximately 50 per cent above that of the general population, partly as a result of an increased incidence of suicide (about 10 per cent die by suicide) and violent death, and partly as a result of an increased risk of a wide range of physical health problems. These include those illnesses associated with cigarette smoking, obesity and diabetes.

## FOR THIS MODULE

**pharmacy** MAGAZINE  
FIRST IN PROFESSIONAL & BUSINESS DEVELOPMENT

**GOAL:** To provide pharmacists with an overview of the management of an individual with schizophrenia.

**OBJECTIVES:** After completing this module you should be able to:

- Discuss the updated NICE guideline and its implications
- Describe the different 'positive' and 'negative' symptoms of schizophrenia
- Explain which antipsychotic medicines are currently used, their effect on symptoms and their side-effects.



### Obstetric complications

Many studies have reported an association between obstetric complications that involve foetal hypoxic brain damage and a subsequent increase in risk for schizophrenia. Such complications include viral infection during pregnancy, first-trimester maternal starvation, rhesus incompatibility and maternal pre-eclampsia, anaemia and diabetes.

### Substance abuse

Co-morbidity with drug and/or alcohol misuse among people with schizophrenia is now recognised as a major problem. The mean age at onset of schizophrenia as well as the age at first admission is lower in patients with a history of substance use.

### Other risk factors

A “selection drift hypothesis” has been developed to explain the observation that schizophrenia is commoner in the lower social classes. According to the hypothesis, those vulnerable to schizophrenia go down in social class and drift to poorer environments, but this has not been replicated in other studies. Other risk factors include single marital status, being raised in an urban environment, environmental stress and advanced paternal age. Black and minority ethnic groups are over-represented in schizophrenia diagnoses and, in some inner city settings, account for at least 50 per cent of admissions and crisis care. Prognostic factors are listed in Table 1.

**Table 1: Prognostic factors in schizophrenia**

#### Good prognostic factors

- Female gender
- Married status
- Early treatment
- Acute onset of illness
- Rural background and cohesive family
- Absence of negative symptoms
- Predominance of florid (positive) symptoms
- Short duration of first episode
- Few episodes of similar illness in the past
- Good pre-morbid personality and adjustment

#### Poor prognostic factors

- Male gender
- Unmarried status
- Earlier age of onset of illness
- Delayed / irregular treatment
- Gradual (insidious) onset of illness
- Lack of social support
- More negative symptoms
- Positive family history of schizophrenia or major psychoses
- Poor social and occupational functioning before the onset of illness
- Large size of ventricles of the brain; presence of subtle neurological signs
- History of substance abuse or alcohol dependence
- Excessive criticism, hostility or over-involvement in the home; negative family atmosphere



Schizophrenia is the most commonly diagnosed mental health disorder – yet most sufferers receive inadequate care

### NICE guideline

The NICE guideline makes a number of recommendations for the treatment and management of schizophrenia. Its aims are to:

- Improve access and engagement with treatment and services for people with schizophrenia
- Evaluate the role of specific psychological and psychosocial interventions in the treatment of schizophrenia
- Evaluate the role of specific pharmacological interventions in the treatment of schizophrenia
- Evaluate the role of specific service-level interventions for people with schizophrenia
- Integrate the above to provide best practice advice on the care of people with schizophrenia and their family and carers
- Promote the implementation of best clinical practice through the development of recommendations tailored to the requirements of the NHS in England and Wales.

### Symptom presentation

Two classification systems (DSM-IV and ICD-10) have improved the reliability and consistency of diagnosis but there is still some argument as

### Reflection exercise 1

Identify one patient with schizophrenia in your pharmacy practice and check his/her patient medication record for adherence to medication. If there is non-compliance, how would you approach this?

to whether schizophrenia represents a single underlying disorder.

Schizophrenia can be thought of as a disorder that develops in phases: premorbid, prodromal and psychotic. The prodromal phase involves a change from premorbid functioning and extends up to the time when frank psychotic symptoms occur. It may last only weeks or months, but the average length of the prodromal phase is between two and five years. Difficulties during the prodromal period may include memory and concentration problems, social withdrawal, unusual and uncharacteristic behaviour, disturbed communication and affect, bizarre ideas and perceptual experiences, poor personal hygiene, and reduced interest in and motivation for day-to-day activities.

During this period, people with schizophrenia often feel that their world has changed, but their interpretation of this change may not be shared

by others. Relatives and friends frequently report that the person with schizophrenia has changed 'in themselves'. These changes may well affect the person's ability to hold down a job, study, or relate to family and friends.

Approximately 20-40 per cent of patients experience their first psychotic symptoms before 20 years of age. For men, the peak incidence of onset of schizophrenia is between 15 and 25 years; for women it is between 25 and 35 years. Women display a second peak of onset after 40-45 years, just before the menopause. Men appear to experience more negative symptoms and women more affective symptoms. The characteristic symptoms of schizophrenia are often divided into two broad categories – positive and negative (see Table 2).

The so-called 'positive' symptoms of schizophrenia (e.g. perceptual abnormalities, ideas of reference and suspiciousness) develop late in the prodromal phase and herald the imminent onset of psychosis. The first psychotic episode may be abrupt or insidious in its onset. This 'acute' phase is marked by characteristic positive symptoms of hallucinations, delusions, and behavioural disturbances, such as agitation and distress. Following resolution of the acute phase, usually because of treatment, positive symptoms are reduced or disappear for many people, leaving a number of negative symptoms for many patients. After an initial episode 14-20 per cent of patients will make a full recovery. For those who do not, this third psychotic phase (which may last many years) is often interrupted by acute exacerbations or 'relapses', which may need additional interventions.

Historically, many psychiatrists and other healthcare professionals have taken a pessimistic view of the prognosis for schizophrenia, regarding it as a severe, intractable and often deteriorating lifelong illness. This negative view has not been confirmed by any long-term follow-up studies, which have demonstrated considerable variations in long-term outcome.

While it is estimated that around three-quarters of people with schizophrenia will experience recurrent relapse and some continued disability, the findings of follow-up

**Table 2: Positive and negative symptoms of schizophrenia**

**Positive symptoms (florid)**

- Delusions
- Paranoid delusions
- Ideas of reference
- Hallucinations:
  - Sound
  - Vision
  - Smell
  - Taste
  - Feeling of being touched

**Negative symptoms**

- Affective flattening:
  - Restricted range and intensity of emotional expression
  - Poor eye contact and reduced body language
- Reduced thought
- Poverty of speech (alogia)
- Lack of pleasure or inability to experience it (anhedonia)
- Loss of motivation (avolition)

studies over periods of 20 to 40 years suggest that there is a moderately good long-term global outcome in over half of people with schizophrenia, with a smaller proportion having extended periods of remission of symptoms without further relapses. Some people who never experience complete recovery from their experiences nonetheless manage to sustain an acceptable quality of life if given adequate support and help.

**MANAGEMENT**

The management of schizophrenia has three key goals. They are to:

- Reduce or eliminate symptoms
- Maximise quality of life and adaptive functioning
- Promote and maintain recovery from the debilitating effects of illness to the maximum extent possible.

Stigma remains a major barrier for individuals affected by schizophrenia. NICE guidelines state that individuals suffering from the condition prefer to be described as "service users" or "people with schizophrenia" rather than "patients". When a diagnosis has been completed, the next step is to identify the targets for treatment.

These could include:

- Positive and negative symptoms
- Depression
- Suicidal ideation and behaviours
- Medical co-morbidities
- Substance misuse
- Post-traumatic stress
- Social issues (e.g. homelessness, unemployment, social isolation).

It is essential that any patient barriers to treatment, such as cognitive impairment or social situations, are identified and managed. The social circumstances of the patient can have a profound effect on adherence and response to treatment. Living situations, family involvement, financial security, legal status and relationships with significant others (including children) are all areas that should be periodically explored by mental healthcare clinicians.

**Treatment considerations**

Treatment adherence is a particular problem in schizophrenia. In a survey of psychiatrists, which identified major treatment challenges, non-adherence in medication-taking ranked as the biggest problem, followed by the lack of efficacy of medication and lack of understanding on the part of patients. Predictors of non-adherence include:

- Lack/poor insight
- Positive symptoms
- Diagnosis
- Cognitive deficits
- Side-effects
- Sexual dysfunction
- Weight gain
- Extrapyramidal symptoms
- Length of illness/social circumstances
- More severe symptoms
- Depressive illness
- Co-morbid substance abuse.

Non-adherence is associated with relapse and rehospitalisation. With each relapse, there are

**Therapeutic alliance**

The NICE guideline on schizophrenia promotes a "therapeutic alliance". There is clear evidence that if a professional cannot engage with the person sufficiently to form a working therapeutic alliance, the effectiveness of psychological and psychosocial treatments is reduced.

**Reflection exercise 2**

How aware are you of support services, including psychological therapies, for patients with schizophrenia in your locality? Are they included in your 'signposting' list? Check the recommended patient/professional websites listed on page vii of this module and create a list of reference sources and self-help groups.



enormous consequences. For example, recovery can be slower and less complete, there are more frequent admissions to hospital, the illness can become more resistant to treatment and there is a risk of self-harm or homelessness.

Whenever someone is in a psychotic episode, it becomes harder to get back to the previous level of functioning, and there is a tremendous disruption in self-esteem and social relationships.

The American Association of Psychiatrists recommends that a focus on non-adherence should include:

- Considering a lack of response to therapy
- Evaluating the reasons for recurrence/exacerbation of acute symptoms
- Minimising acute side-effects
- Considering patient preferences, including route of administration
- Considering long-acting injectable antipsychotic agents for repeated non-adherence.

### Treatment

NICE recommends that the choice of drug should be made by the service user and healthcare professional together, considering:

- The relative potential of individual antipsychotic drugs to cause extrapyramidal (including akathisia), metabolic (including weight gain) and other side-effects (including unpleasant subjective experiences)
- The views of the carer if the service user agrees.

Potential interactions with other prescribed medications also need to be taken into account.

Antipsychotic drugs relieve florid psychotic symptoms, such as thought disorder, hallucinations and delusions, and prevent relapse.

### Table 3: Antipsychotic agents

#### First generation (typical) antipsychotics

- Phenothiazine derivatives:
  - Group 1:** chlorpromazine, levomepromazine (methotrimeprazine) and promazine
  - Group 2:** pericyazine and pipotiazine
  - Group 3:** fluphenazine, perphenazine, prochlorperazine and trifluoperazine
- Butyrophenones (benperidol and haloperidol)
- Diphenylbutylpiperidines (pimozide)
- Thioxanthenes (flupentixol and zuclopentixol)
- Substituted benzamides (sulpiride)

#### Second generation (atypical) antipsychotics

- Amisulpride
- Olanzapine
- Quetiapine
- Risperidone
- Zotepine
- Clozapine

They are thought to act by interfering with dopaminergic transmission in the brain by blocking dopamine D<sub>2</sub> receptors, which may give rise to extrapyramidal effects (see page *v*), and also to hyperprolactinaemia.

Antipsychotic drugs may also affect cholinergic, alpha-adrenergic, histaminergic and serotonergic receptors. Conventional or 'typical' antipsychotics are now also known as 'first generation antipsychotics' (FGAs) and 'atypical' antipsychotics as 'second generation antipsychotics' (SGAs). Antipsychotic agents are listed in Table 3.

Clozapine is considered where schizophrenia is inadequately controlled despite the sequential use of two or more antipsychotics (one of which

should be an atypical antipsychotic), each for at least six to eight weeks.

The Cost Utility of the Latest Antipsychotic Drugs in Schizophrenia Study (CULASS 1) showed that when patients with schizophrenia needed to change their medication, either because of ineffectiveness or intolerable side-effects, the newer, non-clozapine SGAs did not appear to offer significant benefits over FGAs.

The Royal College of Psychiatrists states that, unless otherwise stated, doses in the BNF are licensed doses – any higher dose is therefore unlicensed. Antipsychotics should be used with caution in patients with hepatic and renal impairment, cardiovascular disease, Parkinson's disease, epilepsy, depression, myasthenia gravis, prostatic hypertrophy or a susceptibility to angle-closure glaucoma. Caution is also required in severe respiratory disease and in patients with a history of jaundice or those who have blood dyscrasias. As photosensitisation may occur with higher doses, patients should avoid direct sunlight.

### Side-effects of antipsychotic medication

Side-effects of antipsychotics are a crucial aspect of treatment because they often determine medication choice and are a primary reason for medication discontinuation. NICE states that, as mentioned previously, important side-effects include extrapyramidal, metabolic and others. Antipsychotic medicines may induce endocrine abnormalities (e.g. diabetes and galactorrhoea), neurological disorders (e.g. tardive dyskinesia), metabolic abnormalities (e.g. lipid abnormalities and weight gain) and cardiovascular side-effects (e.g. lengthening of the QT interval on electrocardiography).

The Clinical Antipsychotic Trials of Intervention Effectiveness (CATIE) Schizophrenia Study was an independent comparison of the newer atypical antipsychotics with each



Antipsychotics are thought to work by interfering with dopaminergic transmission in the brain

### Pregnancy & schizophrenia

Women with schizophrenia who are planning a pregnancy or who are pregnant should be treated according to the NICE clinical guideline. However, where the woman is taking an atypical antipsychotic, consideration should be given to switching to a low-dose typical antipsychotic (e.g. haloperidol, chlorpromazine or trifluoperazine). If the woman is breastfeeding and receiving depot medication, she should be advised that the infant might show extrapyramidal symptoms several months after administration of the depot. These are usually self-limiting.

other and with a conventional antipsychotic. The study aimed to determine which medications are most effective and, as a result, help to improve the treatment and quality of life of people with schizophrenia. All antipsychotic agents were found to be associated with a high rate of intolerable side-effects and failure to control symptoms. The study highlighted the need for careful evaluation of the trade-offs between efficacy and side-effects.

### Extrapyramidal symptoms

Extrapyramidal symptoms (EPS) are especially common in patients treated with the typical antipsychotics and occur to varying extents with several of the second generation agents, especially higher doses of risperidone. They occur most frequently with the piperazine phenothiazines, butyrophenones and depot preparations. EPS can broadly be divided into acute and chronic categories.

### Acute EPS

Acute EPS occur in the first days and weeks of administration and are dose dependent.

#### ■ Parkinsonism

Characterised by the symptoms of idiopathic Parkinson's disease (rigidity, tremor, akinesia, and bradykinesia), parkinsonism is the commonest form of EPS caused by first generation antipsychotics. The initial approach to treatment should be to lower the antipsychotic dose to the EPS threshold (i.e. the dose where minimal rigidity is detectable in a physical examination). If dose reduction does not sufficiently improve symptoms, then a switch to an atypical antipsychotic should be considered.

#### ■ Dystonia

Characterised by spastic contraction of discrete muscle groups, dystonias tend to occur with high-potency typical antipsychotic agents and are relatively rare with atypical antipsychotics. Dystonic reactions commonly affect the muscles of the neck (torticollis), larynx (laryngospasm), eyes (oculogyric crisis) and torso (opisthotonos).

#### ■ Akathisia

Patients characteristically complain of an "inner restlessness" and a difficulty in sitting still.

## Substance abuse

Nearly 50 per cent of patients with schizophrenia have co-morbid substance use disorders (excluding nicotine abuse/dependence, which exceeds 50 per cent prevalence in this group). The goals of treatment for these patients include harm reduction, abstinence, relapse prevention and rehabilitation.

Depressive symptoms are common at all phases of schizophrenia. A careful differential diagnosis that considers the contributions of side-effects of antipsychotic medications, demoralisation, the negative symptoms of schizophrenia and substance intoxication or withdrawal is recommended.

### Chronic EPS

Chronic EPS occur after months and years of antipsychotic administration, are not clearly dose dependent and may persist after medication discontinuation.

#### ■ Tardive dyskinesia

A hyperkinetic abnormal involuntary movement disorder, tardive dyskinesia can affect neuromuscular function in any body region but is most commonly seen in the oral-facial region.

#### ■ Tardive dystonia

A severe variant of tardive dyskinesia, this condition is characterised by spastic muscle contractions and is often associated with great distress and physical discomfort.

### Neuroleptic malignant syndrome

Neuroleptic malignant syndrome is rare. It is characterised by the triad of rigidity, hyperthermia and autonomic instability, including hypertension and tachycardia. The syndrome can be sudden and unpredictable in its onset and usually occurs early in the course of treatment, often within the first week of treatment or when the dose is increased. Although rare, if not recognised it can be fatal.

### Sedation

Sedation is a very common side-effect of typical antipsychotics, as well as several of the second generation agents, including clozapine,

risperidone, olanzapine and quetiapine. For agitated patients, the sedating effects of these medications in the initial phase of treatment can have therapeutic benefits. However, persistent sedation, including daytime drowsiness and increased sleep time, can interfere with social, recreational and vocational function.

### Cardiovascular effects

Cardiovascular effects include orthostatic hypotension, tachycardia, and QTc prolongation. With clozapine treatment initiation and dose escalation, there is a high risk of orthostatic hypotension and compensatory tachycardia, with rare reports of cardiovascular collapse. Patients who experience severe postural hypotension must be cautioned against getting up quickly and without assistance.

### Anticholinergic effects

Anticholinergic side-effects are common with typical antipsychotics and include dry mouth, blurred vision, constipation, tachycardia, urinary retention and thermoregulatory effects. These effects are also common with clozapine.

### Weight gain and metabolic abnormalities

Weight gain occurs with most antipsychotic agents. The risk of weight gain with clozapine is thought to be the highest of all antipsychotics. When weight gain occurs, clinicians should suggest or refer patients to diet and exercise interventions. If the benefits from current antipsychotic medication do not significantly outweigh the health risks of weight gain, a trial of an antipsychotic with lower weight-gain liability should be considered.

### Effects on sexual function

Disturbances in sexual function can occur with a number of antipsychotic drugs, including first and second generation agents. All first generation antipsychotics increase prolactin secretion by blocking the inhibitory actions of dopamine on lactotrophic cells in the anterior pituitary. This prolactin elevation may be even greater with risperidone than with first generation antipsychotics.

## Reflection exercise 3

NICE recommends a therapeutic alliance for individuals with schizophrenia. Referring to the NICE guideline, how can you maximise your contribution to this therapeutic alliance?



The association between the other atypical antipsychotics and sexual dysfunction is less clear. Sexual interest and function may be reduced in both men and women receiving clozapine, but generally to a lesser extent than with first generation antipsychotics.

### Adjunctive medications

Adjunctive medications are also commonly prescribed for co-morbid conditions in the acute phase. Benzodiazepines may be used to treat catatonia as well as manage both anxiety and agitation until the antipsychotic has had time to be therapeutically effective. Antidepressants can be considered for treating co-morbid major depression or obsessive-compulsive disorder, although vigilance to protect against the risk of exacerbation of psychosis with some antidepressants is important. Mood stabilisers and beta-blockers may be considered for reducing the severity of recurrent hostility and aggression.

### Other interventions

As part of a comprehensive management plan, psychological therapies and psychosocial interventions can improve the course of schizophrenia when integrated with pharmacological treatments. These interventions can provide additional benefits for patients in such areas as relapse prevention, improved coping skills, better social and vocational functioning, and ability to function more independently. While pharmacotherapy focuses on symptom diminution, psychosocial interventions may provide emotional support and address particular deficits associated with schizophrenia. The choice of psychosocial approaches and particular interventions depends on the needs of the patient at various phases of his/her life and illness.

The different types of psychotherapy used in the treatment and management of schizophrenia include cognitive behavioural therapy (CBT) and family interventions. NICE recommends that CBT is offered to all patients diagnosed with schizophrenia and family interventions to all those who live with, or are close to, the



Art therapy is included in NICE guidance on schizophrenia

JOHN BAVOS/SCIENCE PHOTO LIBRARY

patient. Art therapy is also included in the NICE guideline with the recommendation that it is considered for all patients with schizophrenia, particularly to address negative symptoms.

Family members should be involved and engaged in a collaborative treatment process to the greatest extent possible. Family members generally contribute to the patient's care and require education, guidance and support, as well as training, to help them optimise their care-taking role and to improve their own well-being. The main goal of family interventions, referred to as "psychoeducation", is to decrease the risk of the patient's relapse.

CBT is recommended by NICE on a one-to-one basis in courses of at least 16 sessions. It is

based on the premise that there is a relationship between thoughts, feelings and behaviour. The assumption is that normal psychological processes can both maintain and weaken the fixity and severity of psychotic symptoms, especially delusions and hallucinations.

CBT may also help patients who have gained weight and are obese. A recent systematic review of non-pharmacological treatments including individual or group interventions, CBT and nutritional counselling indicated that these treatments were effective in reducing or attenuating antipsychotic-induced weight gain.

### MURs in schizophrenia

Community pharmacists are in the unique position of being able to monitor and support adherence to treatment and also tackle the wider health issues for people with schizophrenia.

NICE recommends that "GPs and other primary healthcare professionals should

### Reflection exercise 4

From your PMRs identify two patients with schizophrenia whom you could invite for a MUR. Write a short template of issues that you would cover in the MUR.

## Useful websites

- **SANELINE:** [www.sane.org.uk](http://www.sane.org.uk)  
Offers emotional support, crisis care and detailed information to those experiencing mental health problems, as well as their families and carers. Open every day of the year.
- **British Association for Behavioural and Cognitive Psychotherapies (BABCP):** [www.babcp.com](http://www.babcp.com)  
Regional lists of psychotherapists are available free. The full directory of psychotherapists is available online.
- **Carers UK:** [www.carersonline.org.uk](http://www.carersonline.org.uk)  
Information and advice on all aspects of caring.
- **Hearing Voices Network:**  
[www.hearing-voices.org](http://www.hearing-voices.org)  
User-led network. Information about coping strategies and support groups.
- **Rethink (formerly the National Schizophrenia Fellowship):** [www.rethink.org](http://www.rethink.org)  
Working to help everyone affected by severe mental illness, including schizophrenia, to recover a better quality of life.
- **Psychiatric Medication Advice Line:** tel: 020 3228 2999  
Can provide information and advice on all aspects of drug treatments and options available.

## CPD competences

This module supports the following community pharmacy competences:

Competences	Where this module supports competence development
C1b, C1c, C1d	The module addresses a number of issues, including the importance of treatment adherence in schizophrenia and recognising potential barriers including side-effects. It also encourages pharmacists to consider other barriers to medication adherence including stigma, lack of insight, social background and the healthcare professional's attitude. Recognition of such issues can assist pharmacists to better manage an individual with schizophrenia and to liaise with other pertinent healthcare professionals. Reflection exercise 1 encourages pharmacists to monitor at least one individual with schizophrenia as recorded on his/her patient medication record system, with particular emphasis on non-adherence
C3e	Schizophrenia is recognised as one of the most commonly occurring mental health conditions in the community. Pharmacists have a key role to play in the pharmaceutical care of such patients and the module addresses some of those issues that pharmacists must give serious consideration to when managing an individual with schizophrenia. Reflection exercise 2 encourages pharmacists to consider psychosocial approaches in addition to the medication approach as part of a holistic management of a patient with schizophrenia
C4b, C4e, C4f, C4g	The module outlines the key recommendations from the NICE guideline on schizophrenia and highlights the importance of a "therapeutic alliance" and the need for healthcare professionals to develop an integrated approach when working with patients with mental health conditions. Reflection exercises 2, 3 and 4 encourage pharmacists to explore what is available in their locality for patients with mental health conditions and to consider how they can contribute to a 'therapeutic alliance' including through MURs

monitor the physical health of people with schizophrenia at least once a year. Focus on cardiovascular disease risk assessment as described in 'Lipid modification' (NICE Clinical Guideline 67) but bear in mind that people with schizophrenia are at higher risk of cardiovascular disease than the general population. A copy of the results should be sent to the care co-ordinator and/or psychiatrist, and put in the secondary care notes".

A MUR for someone with schizophrenia might include:

- Discussion on antipsychotic treatment including adherence, side-effects and their tolerability
- Brief review of other prescribed and non-prescribed medicines
- Brief review of lifestyle with possible referrals

for a NHS health check, smoking cessation service, weight management service, alcohol screening service provided in the pharmacy or elsewhere

- Signposting to sources of advice and support in the community and online.

### Summary and conclusion

The severity of the symptoms and long-lasting, chronic pattern of schizophrenia often cause a high degree of disability. Even when treatment is effective, persisting consequences of the illness, lost opportunities, stigma, residual symptoms and medication side-effects may be very troubling.

The first signs of schizophrenia often appear as confusing, or even shocking, changes in

behaviour. Coping with the symptoms of schizophrenia can be especially difficult for family members who remember how involved or vivacious a person was before he/she became ill.

Pharmacists have an extremely important role in monitoring side-effects and informing the individual affected, family members and/or carers of anticipated side-effects. This can result in reduced non-adherence to medication and possibly decreased relapses and rehospitalisation.

It is important to bear in mind any other health problems the patient is being treated for, and to be proactive in offering health promoting advice, particularly for patients with schizophrenia who smoke.



Pharmacy Magazine's CPD modules are now available on Cegedim Rx's PMR systems, Pharmacy Manager and Nexphase. Just click on the 'Professional Information & Articles' button within Pharmacy KnowledgeBase and search by therapy area. Please call the Cegedim Rx helpdesk on 0870 841 1234 for further information.



# ASSESSMENT QUESTIONS

## MANAGEMENT OF SCHIZOPHRENIA

- What is the average age of onset of schizophrenia?
  - 15 years
  - 25 years
  - 35 years
  - 45 years
- What does the NICE guideline recommend about starting treatment with an antipsychotic?
  - An atypical (second generation) antipsychotic such as olanzapine should be used as first-line
  - A typical (first generation) antipsychotic such as chlorpromazine should be used as first-line
  - A typical or atypical antipsychotic or clozapine can be used first-line
  - Either a typical or atypical antipsychotic can be used depending on the preferences of the patient
- Which could be both a clinical feature of schizophrenia and a side-effect of treatment with an antipsychotic?
  - Diabetes
  - Agitation
  - Depression
  - Hyperlipidaemia
- Which is a 'negative' symptom in schizophrenia?
  - Delusions
  - Hallucinations
  - Ideas of reference
  - Poverty of speech
- Which best reflects NICE's recommendations on psychological therapies and psychosocial interventions in schizophrenia?
  - CBT should be offered to all patients
  - Arts therapy should be reserved for patients who do not respond sufficiently to treatment
  - Family intervention should be offered to all families of patients but not to patients themselves
  - 'Adherence therapy' should be offered to all patients
- In which circumstance should antipsychotics be used with caution?
  - Cardiovascular disease
  - Cataract
  - Rheumatoid arthritis
  - Multiple sclerosis
- Which is NOT an extrapyramidal symptom?
  - Dystonia
  - Tardive dyskinesia
  - Parkinsonism
  - Rigidity
- Which of the following drugs has been found consistently in clinical trials to reduce the negative symptoms of schizophrenia?
  - Chlorpromazine
  - Olanzapine
  - Clozapine
  - None of the above

## PHARMACY MAGAZINE CPD RECORD – AUGUST 2010

USE THIS FORM TO RECORD YOUR LEARNING AND ACTION POINTS FROM THIS MODULE ON THE MANAGEMENT OF SCHIZOPHRENIA AND INCLUDE IT IN YOUR CPD PORTFOLIO OR RECORD ONLINE AT WWW.UPTODATE.ORG.UK

Activity/development completed  
(Act)

Date:

Time taken to complete activity:

What did I learn that was new?  
(Evaluate)

How have I put this into practice? (Provide examples of how learning has been applied – what did you do differently as a result?)  
(Evaluate)

Do I need to learn anything else in this area?  
(Reflect)

If as a result of completing your evaluation you have identified another new learning objective, start a new cycle – this will enable you to start at **Reflect** and then go on to **Plan, Act** and **Evaluate**. This form can be photocopied to avoid having to cut this page out of the module.

## MODULE 178 ANSWER SHEET

**ENTER YOUR ANSWERS HERE** Please mark your answers on the sheet below by placing a cross in the box next to the correct answer. Only mark one box for each question. Once you have completed the answer sheet in ink, return it to the address below together with your payment of £3.75. Clear photocopies are acceptable. You may need to consult other information sources to answer the questions.

- |    |    |                          |    |    |                          |    |    |                          |    |    |                          |    |    |                          |    |    |                          |    |    |                          |    |    |                          |
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| 1. | a. | <input type="checkbox"/> | 2. | a. | <input type="checkbox"/> | 3. | a. | <input type="checkbox"/> | 4. | a. | <input type="checkbox"/> | 5. | a. | <input type="checkbox"/> | 6. | a. | <input type="checkbox"/> | 7. | a. | <input type="checkbox"/> | 8. | a. | <input type="checkbox"/> |
|    | b. | <input type="checkbox"/> |    | b. | <input type="checkbox"/> |    | b. | <input type="checkbox"/> |    | b. | <input type="checkbox"/> |    | b. | <input type="checkbox"/> |    | b. | <input type="checkbox"/> |    | b. | <input type="checkbox"/> |    | b. | <input type="checkbox"/> |
|    | c. | <input type="checkbox"/> |    | c. | <input type="checkbox"/> |    | c. | <input type="checkbox"/> |    | c. | <input type="checkbox"/> |    | c. | <input type="checkbox"/> |    | c. | <input type="checkbox"/> |    | c. | <input type="checkbox"/> |    | c. | <input type="checkbox"/> |
|    | d. | <input type="checkbox"/> |    | d. | <input type="checkbox"/> |    | d. | <input type="checkbox"/> |    | d. | <input type="checkbox"/> |    | d. | <input type="checkbox"/> |    | d. | <input type="checkbox"/> |    | d. | <input type="checkbox"/> |    | d. | <input type="checkbox"/> |

Name (Mr, Mrs, Ms) \_\_\_\_\_

Business/home address \_\_\_\_\_

Town \_\_\_\_\_ Postcode \_\_\_\_\_ Tel: \_\_\_\_\_ RPSGB/PSNI Reg no.

I am a PM subscriber  I confirm the form submitted is my own work (signature): \_\_\_\_\_

Please charge my card the sum of £3.75 Name on card \_\_\_\_\_  Visa  Mastercard  Switch/Maestro

Card No. \_\_\_\_\_ Start date \_\_\_\_\_ Expiry date \_\_\_\_\_

Date \_\_\_\_\_ Switch/Maestro Issue Number \_\_\_\_\_

**Processing of answers**  
Completed answer sheets should be sent to Precision Direct Marketing, Precision House, Bury Road, Buryton, Bury St Edmunds IP30 9PP (tel: 01284 718918; fax: 01284 718920; email: cpd@precisiondm.com), together with credit/debit card/cheque details to cover administration costs. This assessment will be marked and you will be notified of your result and sent a copy of the correct answers. The examiners' decision is final and no additional correspondence will be entered into.