

Deprescribing antipsychotics: a guide for clinicians[†]

Swapnil Gupta, John Daniel Cahill & Rebecca Miller

ARTICLE

SUMMARY

Polypharmacy and the risks of long term use of antipsychotic medications point toward the need for identifying practices for deprescribing in psychiatry. The following article gives a brief overview of key points around deprescribing antipsychotic medications in psychiatry, including identifying risks and benefits, considerations around timing, and steps involved.

LEARNING OBJECTIVES

- Be able to define the concept of deprescribing as it relates to antipsychotic medications
- Know how to perform a risk–benefit analysis for a patient on antipsychotic medication
- Be able to identify the key steps involved in deprescribing antipsychotic medications

DECLARATION OF INTEREST

None.

Deprescribing is defined as the reduction or discontinuation of a medication when its current and potential risks outweigh its current or potential benefits, keeping in consideration the patient's medical status, functioning, values and preferences (Scott 2015). Applying this approach to antipsychotic medications is a somewhat controversial endeavour, given the severity and complexity of psychotic illness, as well as compelling evidence to support antipsychotics as the key intervention for relapse prevention (Goff 2017). However, it is essential that clinicians consider deprescribing given the limited evidence for indefinite continuation of antipsychotics, the potential for serious neurological and metabolic side-effects, and the growing rate of antipsychotic polypharmacy (Ganguly 2004). Furthermore, a substantial number of patients ask to discontinue their antipsychotics, and some do so on their own, regardless of the prescribers' advice. For instance, a systematic review of adherence in schizophrenia found rates varying from 42 to 95% (Sendt 2015).

Fittingly, the concept of deprescribing first originated in geriatric medicine, where normal age-related physiological changes and mounting health vulnerabilities may combine with polypharmacy to result in serious negative outcomes such as falls, altered mental state and cardiac arrhythmias

(Woodward 2003). More recently, deprescribing has been cited as having relevance in other medical specialties, including cardiology (Rossello 2015) and psychiatry (Gupta 2016). The translation of deprescribing to specialties might additionally challenge providers to take a broader view of a patient's bodily systems and to liaise more closely with primary care and other specialty providers. In psychiatry especially, there may be added complexity conferred by non-pharmacological effects of medications and the involvement of multiple stakeholders (Gupta 2016) – therefore extended preparation and the provision of additional psychosocial resources seems appropriate. Despite this, the basic principles of deprescribing via a thorough estimation of current and future risk/benefit ratios can be easily tailored and applied to the management of chronic psychiatric disorders such as schizophrenia. Deprescribing can be considered as an approach to psychopharmacology for people with serious mental illness, where a prescriber considers the possibility of antipsychotic reduction in every patient, but does not necessarily carry it out in everyone.

Why we need to think about deprescribing antipsychotics

Most standard guidelines for the management of schizophrenia recommend the indefinite continuation of antipsychotics following two or more episodes of psychosis (American Psychiatric Association 2006; Taylor 2015). This recommendation is based on the finding that individuals with schizophrenia who discontinued their antipsychotic were more likely to relapse than those who continued taking the medication (Gilbert 1995; Viguera 1997; Leucht 2012; Zipursky 2014). However, most of the studies included in these reviews conducted an abrupt cessation or rapid taper of the antipsychotics, did not mention the use of additional psychosocial interventions, and had vague definitions of relapse, all of which limit their inferences. Furthermore, many studies acknowledge the continued need to establish factors that might predict whether a patient may successfully discontinue a medication. In the absence of both longer-term effectiveness data for antipsychotics and predictors of successful discontinuation, well-intentioned psychiatrists may be incentivised to

Swapnil Gupta, MBBS MD, is a psychiatrist and assistant professor, Department of Psychiatry, Yale School of Medicine, USA. She teaches medical students and psychiatry residents at the Yale School of Medicine and is an attending psychiatrist in the outpatient department of Connecticut Mental Health Center, USA. **John Cahill**, MBBS, is a psychiatrist and assistant professor, Department of Psychiatry, Yale School of Medicine, USA. He supervises psychiatry residents and is medical director of the Specialized Treatment for Early Psychosis service at Connecticut Mental Health Center, USA. **Rebecca Miller**, PhD, is a clinical psychologist and assistant professor, Department of Psychiatry, Yale School of Medicine, USA. She directs peer support and family initiatives at Connecticut Mental Health Center in New Haven, USA. She is also a part of the training faculty for the psychology fellowship program. She has lived experience with mental illness and uses this to inform her work.

Correspondence Swapnil Gupta, Connecticut Mental Health Center, 34 Park Street, New Haven, CT 06519, USA. Email: swapnil.gupta@yale.edu

Copyright and usage

© The Royal College of Psychiatrists 2018

[†]For a commentary on this article, see pp. 303–304, this issue.

prescribe indefinite antipsychotic treatment to all patients with schizophrenia. Antipsychotic treatment entails exposure to serious neurological and metabolic side-effects and an increase in the overall mortality rate (Saha 2007), making it imperative to consider deprescribing in cases where lack of clinical evidence and individual factors shift the risk/benefit ratio, for example as the patient ages. Relevant age-related physiological changes include: decrease in creatinine clearance, altered hepatic drug metabolism, elevation of blood glucose, osteoporosis, loss of lean body mass and impaired locomotion (Boss 1981). Finally, the growing practice of antipsychotic polypharmacy, when done without justification and not well evidence-based (Ganguly 2004; Essock 2009), demands the development of deprescribing interventions in psychiatry. Despite the lack of evidence for additional benefit (Galling 2017), antipsychotics are often combined and continued indefinitely (Stahl 2004), increasing the risk of side-effects, early mortality, poorer quality of life, and cost both to the individual and society.

Newer studies focusing on functional outcomes such as social relationships, independent living and employment have added further dimensions to risk–benefit calculations regarding continuous antipsychotic treatment of individuals with schizophrenia (Wunderink 2007, 2013; Harrow 2013). A randomised clinical trial of maintenance treatment with antipsychotics versus dose reduction/discontinuation in people with remitted first-episode psychosis showed that in the first 18 months after 6 months of remission, the relapse rate in the dose-reduction group was twice that in the maintenance group and the dose-reduction group reported worse functional outcomes. Nevertheless, of note was the result that 20% of the patients *remained well* despite antipsychotic discontinuation (Wunderink 2007). At 7-year follow-up, those who had been in the dose-reduction arm experienced twice the functional (but not symptomatic) recovery rates as those in the maintenance arm (Wunderink 2013). Similarly, the 20-year Chicago follow-up study suggested that antipsychotics may not necessarily facilitate functional recovery in individuals with schizophrenia (Harrow 2013). Recovery-oriented practices shift the focus from symptom reduction to quality-of-life outcomes as the valued goal; symptom levels may be statistically unrelated to quality of life and functioning. Individualising treatment to consider life goals and overall functioning mandates the careful consideration of dose and duration of antipsychotic use.

The benefits of deprescribing antipsychotics

In medical practice, it has been found that deprescribing improves medication adherence by reducing

polypharmacy and side-effects, reducing costs and increasing patient's knowledge, participation and engagement in their treatment (Reeve 2014a). The streamlining of medication regimes using the framework of deprescribing may yield similar results in the management of psychosis, but this requires study. Reduction and/or discontinuation of antipsychotics can also lead to improvement in side-effects such as tardive dyskinesia (Glazer 1990) and reversal of weight gain and metabolic syndrome (de Kuyper 2013; Calarge 2014). Furthermore, in any illness that causes chronic disability, choice, self-determination and empowerment are the cornerstones of treatment (Farkas 1989). By soliciting their opinions, personal experiences, values and preferences, deprescribing invites patients to be full participants in their treatment, thereby fostering choice and empowerment.

The risks of deprescribing antipsychotics

The most obvious risk of reducing or discontinuing antipsychotics is a relapse of psychotic symptoms and possible admission to hospital. Studies have found rates of relapse between 20 and 60% following the discontinuation of an antipsychotic (Gilbert 1995; Viguera 1997; Leucht 2012). For some patients, a relapse can result in loss of employment or housing, disruption of relationships, and further stigmatisation and hopelessness.

Some of the risks that deprescribing entails can be reduced by appropriate timing, individualised tapers, additional psychosocial measures to prevent relapse (e.g. family therapy, open dialogue), management of comorbid substance misuse, and early identification and effect management of relapse. Furthermore, it is argued within the recovery approach that patients retain the 'dignity of risk' and the 'right to fail' (Deegan 1993) and deserve a chance at a medication-free life.

The ethics of deprescribing

Reeve *et al* (2016) found that clinicians' fear of adverse outcomes and subsequent liability was a barrier to deprescribing and argue that the process respects the principles of patient autonomy, justice and non-maleficence. Rather than a potential withdrawal of treatment, initiating the discussion about risks and benefits of medications and eliciting preferences related to medication in the context of deprescribing constitutes due diligence. Hence, it is important to frame and regard deprescribing as a positive intervention rather than a reduction in level of care.

Recommendations for deprescribing antipsychotics in chronic psychosis

A review of deprescribing processes in medical practice identified five key components: preparing a

TABLE 1 Steps of deprescribing in psychiatry

Step	Purpose	Implementation
Assess the timing of the intervention	To avoid initiating deprescribing at a time when the individual may be particularly vulnerable to a relapse, e.g. a period of psychosocial instability and/or heavy substance use, recent hospital admission	Assess housing, employment, financial status, social relationships, impending changes in these, and substance use
Review psychiatric and medication history	To minimise chances of relapse or clinical risk during deprescribing	Review psychiatric records, obtain history from the patient and available collateral sources Assess any previous trials of deprescribing/attempts at reduction or discontinuation Contact other physicians involved in the patient's care and compile a complete medication list Document the dose, route, duration, indication, perceived benefit and side-effects for each medication
Initiate the discussion about deprescribing	To assess the patient's thoughts and feelings about deprescribing If appropriate (e.g. in antipsychotic polypharmacy) a hierarchy of medications with highest to lowest risk/benefit ratio could be generated	Assess the patient's learning style and check for understanding Explore preferences and values Explore current knowledge Explain risks and benefits Examine choices
Involve the team and social supports	If the patient agrees, to acknowledge and support them in their decision, help them maintain wellness, monitor for early signs of relapse and notify the care team if signs are noticed. With the patient's consent, all providers involved in care should be aware of the initiation of deprescribing, including visiting nurse services, therapists, case managers and primary care	Consider a meeting with family, friends and other significant individuals Establish reliable means of contact, such as telephone or secure email Invite participation and contact from friends and family as desired by the patient
Develop and initiate psychosocial interventions	To help define, detect and address any increase in symptoms To add supports to help the patient cope with anxiety, threats and challenges related to deprescribing	Develop a relapse prevention plan such as WRAP Consider additional support through psychotherapy, potentially targeting specific symptoms Consider self-help and mutual support groups
Develop and initiate the antipsychotic taper	To reduce the dose in a controlled and conservative way, in order to minimise negative impact	Decide which antipsychotic to taper Decide the rate of taper Adjust concomitant medications such as anticholinergics accordingly
Monitor and adjust taper according to response	To prevent, as much as possible, relapse or life disruptions due to the taper	Monitor for early signs of relapse Monitor functioning Monitor metabolic and neurological side-effects Slow the rate of taper if needed Reverse the taper if needed

After Gupta *et al* (2016).

comprehensive medication history, identifying potentially inappropriate medications, determining whether a potentially inappropriate medication can be ceased, planning the withdrawal regimen (e.g. tapering where necessary), and provision of monitoring, support and documentation (Reeve 2014b). For use in psychiatry, this five-step process has been expanded to include appropriate timing, inclusion of the patient's family, friends and mental health team in the deprescribing process, and development of a plan for relapse identification, prevention and management (Table 1).

Deprescribing hinges on effective relapse prevention. A biopsychosocial perspective on relapse prevention in schizophrenia highlights the significance of psychosocial stressors such as loss of employment or housing, bereavement or disruption of relationships (Birley 1970), as well stressors of a biological nature such as substance misuse (Swofford 1996) and also perhaps precipitous or ill-timed discontinuation of antipsychotics. We root deprescribing in psychiatry in recovery-oriented practices (Table 2), including

shared decision-making, a person-centred approach (Deegan 2006; Stanhope 2013) and the nurturing of empowerment and hope (Jacobson 2001).

The steps of deprescribing

1 Assess the timing

In exploring the possibility of deprescribing an antipsychotic, timing is a key consideration. Related factors might include how long the individual has been 'stable' or with good management of symptoms, the time since the last hospital admission, and the number or severity of current stressors. Although these factors may not preclude deprescribing, it is important to consider them.

If the risk–benefit analysis of the current medication regime is tilted heavily towards imminent risk (e.g. serious medical complications due to medications), it may mean that beginning the deprescribing process is advisable regardless of timing, and psychosocial issues would be addressed concurrently.

TABLE 2 Recovery-oriented practices in mental healthcare and their application to deprescribing

Practice	Description	Application to deprescribing
Shared decision-making (Deegan 2006; Davidson 2017)	A process of collaboration to arrive at a mutually acceptable treatment plan. It involves two experts: one who knows the scientific literature and has clinical experience, and one who knows their own preferences and subjective experiences	Collaboration and solicitation of the patient's preferences and values at every step are essential components of deprescribing
Person-centred care (Stanhope 2013; Tondora 2014; Davidson 2015)	Designed to promote service engagement by increasing patient self-determination during treatment. It is defined as a highly individual comprehensive approach to assessment and services and is more focused on developing customised plans for achieving life goals rather than on symptom relief	Deprescribing aims to increase patient engagement and participation in treatment. Person-centred care offers a framework in which individualised antipsychotic tapering plans as well as psychosocial supports are nested
Hope (Jacobson 2001)	Hope is the belief that recovery is possible. It involves the recognition and acceptance of the problem and a commitment to change	With its emphasis on individual goals and preferences, deprescribing is based on hope and, by its nature, instils hope
Empowerment (Jacobson 2001)	Empowerment may be viewed as a corrective for the helplessness and lack of control that an individual may face in the mental health system. It includes autonomy, courage and responsibility	Deprescribing empowers the individual by encouraging them to take charge of their treatment and providing the space for them to take risks, should they choose to do so

2 Review psychiatric and medication history

This step involves a thorough review of records, with a special focus on past trials of deprescribing and suicide and homicide risk. A medication list should be created that also includes non-psychotropic medications, with their doses, duration, side-effects, initial indications and perceived beneficial effects. Special note should be made of medications that may interact with each other to produce adverse outcomes.

3 Initiate the discussion

Any conversation about deprescribing should ideally employ a shared decision-making approach. The first step in shared decision-making is eliciting preferences for learning. Patients may prefer written material, websites, an oral discussion or a combination of these. For a patient to be an equal partner in the decision-making process, it is incumbent on the doctor to ensure that the patient understands the risk and benefits of discontinuing or decreasing medications. Techniques such as the teach-back method – asking patients to state in their own words what they need to know or do about their health (Agency for Healthcare Research and Quality 2012) – can be one way to assess the comprehension of information.

Hearing from their psychiatrist that they may consider reducing an antipsychotic is disconcerting for some patients and may generate anxiety or even anger. In this case, the psychiatrist may do well to gently explore these feelings.

4 Thoroughly explore the patient's values and preferences

This step is particularly important, as there is very little reliable evidence regarding what will happen when a given patient decreases or discontinues an antipsychotic in an individualised taper with additional psychosocial support. Without solid evidence, it is essential to discuss all possible outcomes and identify which might be unacceptable or partially acceptable to the patient. For instance, one individual might not be willing to risk being readmitted to hospital, but may be willing to risk an increase in hallucinations. Another might prefer to risk hospital admission rather than take antipsychotics. Preferences may change with the individual's stage of life, psychosocial situation and even during the decision-making process as different options are considered. Key practices include remaining flexible and continuing to elicit preferences over time, as the person may discover their values while considering the decision.

5 Identify the medications to be deprescribed

Finally, the discussion will involve identifying medications that might be priorities for deprescribing, the various choices, and the risks and benefits of each.

Involving clinical and social supports

Identifying and involving a team of clinical and other support (e.g. family, clergy) is an important step in building a foundation for successful deprescribing. Asking the patient directly whom they would or would not like to be involved is an important and empowering step in the process.

Family members, in particular, may have serious reservations regarding deprescribing, having seen the person at their worst, or having witnessed dire consequences of symptom increases when the person was previously off medications. Discussing their concerns openly and including them in plans for relapse prevention might alleviate their concerns and reduce stress on the patient. Often patients who have been in the mental health system long term have been given the message that they must 'take medications for the rest of your life' by doctors, family and the broader culture. Therefore, including family in the planning and discussions, openly considering risks and benefits, and acknowledging concerns and uncertainties can help in countering this message and help the patient feel more comfortable pursuing deprescribing. The family may also serve

as a key source of collateral information regarding any increase in the patient's distress, helping clinical providers to respond quickly and effectively to increase support for the patient.

In addition to family, other members of the clinical team may be consulted about deprescribing, to maximise support for the patient. For example, if the patient's team includes at-home/community nursing for medication administration, the nurse should be told of the plan and any concerns or questions should be addressed well in advance. This can prevent intentional or inadvertent undermining of the process, especially as the nurse has frequent contact with, and is often well-trusted by, the patient and may have their own unresolved doubts and anxieties about the process.

The primary care provider/general practitioner should be involved, especially if there are co-occurring physical health problems such as diabetes. As a reduction in antipsychotics may improve other health variables (such as high blood sugar), there may be an indication for a subsequent parallel reduction in insulin or oral diabetic treatments.

Planning and initiating psychosocial interventions

Depending on the needs and preferences of the patient, existing psychosocial resources may be sufficient. But in most cases, the deprescribing process can be helped by the addition of psychotherapy, social support, peer support and/or boosting meaningful activities such as work, hobbies, volunteering and connections to the community. Specific psychotherapeutic interventions that have shown to prevent relapse in schizophrenia include family therapy and cognitive-behavioural therapy (CBT) for psychotic disorders (Pilling 2002). Other interventions that have evidence for improving functional outcomes, but not specifically for relapse prevention, include cognitive remediation (McGurk 2007) and psychoeducation (McFarlane 2003).

Psychotherapy to target specific concerns may be warranted. For example, reducing antipsychotic medication may lead to more difficulty with sleep, particularly if the individual has been relying on the incidental sedative effects of an antipsychotic taken at night. Adding an intervention such as CBT for sleep (Sánchez-Ortuño 2012) or psychoeducation on sleep hygiene may be indicated in these cases, particularly as insomnia may predict symptom exacerbation in schizophrenia (Chemerinski 2002). Psychological interventions such as Acceptance and Commitment Therapy (ACT, Hayes 1999) may offer a non-pharmacological way to manage an increase in symptoms. The patient may also have strong feelings about a decrease in medications that can be addressed in psychotherapy. For example, a reduction in

medications can bring up strong fears and memories of previous hospital admissions or times when symptoms were very severe.

Another support is creating a psychiatric relapse prevention plan or other crisis planning to offer direction and support in the event of an exacerbation of symptoms. This might include a wellness recovery action plan (WRAP) (Copeland 1997), which helps a person to identify daily wellness strategies and early warning signs of relapse and to set up a crisis plan. WRAP is one approach among many that aim to empower a person to catch a relapse early on and to seek help so as to avoid further worsening of symptoms and possible hospital admission.

Relapse prevention in schizophrenia is incomplete without addressing any existing comorbid substance misuse, particularly as worsening of psychotic symptoms may be a trigger for or may lead to misuse. This may require antecedent bolstering of the patient's recovery from misuse, using pharmacological strategies such as naltrexone or disulfiram (Petrakis 2006) and/or motivational interviewing, CBT or family interventions (Barrowclough 2001; Drake 2008).

Planning and initiating the antipsychotic taper

Most standard guidelines provide detailed steps in the initiation of antipsychotic treatment and emphasise the use of a minimum effective dose. However, they remain inadequate in assisting the psychiatrist in deprescribing. Even when clear guidelines are offered, psychiatrists tend to err on the side of continuing the antipsychotic unchanged, for reasons that might include 'prescribing inertia' and fear of negative outcomes.

The Schizophrenia Patient Outcomes Research Team (PORT) treatment recommendations (Lehman 1998) state that 'reassessment of the dosage and need for continued therapy must be ongoing' and that maintenance doses should range between 300 and 600 chlorpromazine equivalents. If the dose to treat an acute episode was higher than 600CPZeqv, then they suggest that the medication may be reduced at the rate of 10% every 6 weeks. The American Psychiatric Association guidelines cite studies demonstrating that very low doses of depot antipsychotic (2.5–10 mg of fluphenazine decanoate every 2 weeks) in the maintenance phase were as effective in preventing a relapse as the standard recommended doses (25–50 mg of fluphenazine decanoate every 2 weeks) (American Psychiatric Association 2006; Lehman 2004; Dixon 2009). Targeted treatment strategies (initiating an antipsychotic at the time of relapse) have shown an increased risk of relapse in the long term, and the use of continuous low-dose antipsychotic treatment has been cited as a viable option (Schooler 1993,

2004). A systematic review by Viguera *et al* (1997) concluded that relapse may be related to the rate of taper of the antipsychotic, but a more recent meta-analysis suggested that rates of relapse were unaffected by the rate of taper (Takeuchi 2017).

Supersensitivity/withdrawal psychosis

The concept of supersensitivity psychosis (Chouinard 1991) may deserve attention while deprescribing antipsychotics. The emergence of psychotic symptoms after reduction or discontinuation of antipsychotics has to be considered in light of the evidence that the symptoms are potentially a withdrawal syndrome and not necessarily a re-emergence of the underlying condition. This emergence of symptoms is hypothesised to be a function of increased dopamine sensitivity following use of anti-dopaminergic compounds (Moncrieff 2006). The concept of withdrawal psychosis is relatively new, but it should be considered in the context of deprescribing as it changes the approach to utilising antipsychotics: it is suggested that the antipsychotic should not be reintroduced unless it is essential, as the symptoms should resolve on their own as synaptic activity returns to baseline. This idea remains to be tested.

The possibility of a withdrawal psychosis might suggest the need for psychosocial support rather than the immediate conclusion that deprescribing has failed and that the previous medication should be resumed.

Monitoring and adjusting the taper according to response

Close follow-up by the psychiatrist as well as the clinical team can help in intervening early to avoid relapse and in adjusting the treatment as needed. It must be emphasised that the psychiatrist should, without reproach, not hesitate to temporarily reverse the decision to deprescribe should the patient deteriorate rapidly and/or significantly. Flexibility and individualisation of the taper remain key at this stage of deprescribing. Any events should be processed, framed and integrated between the prescriber and patient.

Deprescribing in practice

The following case vignettes describe deprescribing for Mike and Jean, fictitious patients whose experiences are typical of many.

Vignette 1: Mike

Mike is a 45-year-old single unemployed African American living in supported housing in an inner-city neighbourhood. His goals of treatment are to obtain a part-time job, live in his own apartment and stop having to take haloperidol by his 50th birthday. Mike is a pleasant and engaging man and has not

had any symptoms of psychosis for the past 3 years. In the past he has had auditory hallucinations, persecutory delusions and aggression leading to over 5 years in jail for assault. He used cocaine and alcohol for several years in the past, but has been in remission for over 18 months.

When first seen in the clinic, Mike was on haloperidol 150 mg intramuscular every 4 weeks, valproate 1000 mg twice a day and benzotropine 2 mg twice a day. A review of records showed that valproate was initiated during his last hospital admission over 3 years ago, most likely to control Mike's aggressive behaviour. After a consultation with his social worker, his sponsor at Alcoholics Anonymous and his drug counsellor, Mike and his psychiatrist decided to taper the valproate first. This was carried out over 6 months (a reduction of 25% every 6 weeks) without any ill effects. Mike consulted his care team, his girlfriend and sister before next deciding on initiating a haloperidol taper. Over 18 months the haloperidol was reduced to 37.5 mg intramuscular every 4 weeks; the benzotropine was reduced and stopped early in the process. Mike concurrently joined a WRAP group at the mental health centre, which helped him to identify early warning signs of relapse and a range of wellness strategies. The decrements were not steady and were withheld on three occasions: a court hearing, the death of a family member and when Mike moved into his own apartment.

Mike is now 48, living in his own apartment, in recovery from substances and takes 37.5 mg of haloperidol every 4 weeks. He keeps a bottle of haloperidol 5 mg tablets for what he calls 'bad days'.

Vignette 2: Jean

Jean is 40 years old, single, working part-time at a grocery store and living with her father. She has had two episodes of psychosis in the past, one accompanied by depressive symptoms, but has never been admitted to hospital. She takes olanzapine 10 mg at bedtime and venlafaxine 300 mg daily and has remained asymptomatic for over a year. She has put on over 22 kg since the olanzapine was started and has developed prediabetes. She was furious when her psychiatrist first suggested medication change, saying that she did not feel the need for it. Her parents and social worker were invited for a discussion at her request. After three sessions, Jean decided that she wanted to try reducing olanzapine. Over 8 months olanzapine was reduced to 2.5 mg without any change in symptoms. At the end of the eighth month, however, Jean was brought to the emergency room by her father, who said that she was hearing voices and refusing to eat anything. A conversation with Jean revealed that she had been elated by the successful reduction of olanzapine till 5 mg and had discontinued all her medication roughly three months ago. In this stay on the observation unit, olanzapine was restarted at 5 mg and venlafaxine at 150 mg and Jean returned home after 2 days of observation.

Discussion

Both Mike and Jean are individuals with chronic psychotic disorders treated with antipsychotics over a long period of time. Both have factors that bolster

relapse prevention measures, such as good social supports (parents, partner, counsellor or AA sponsor), a well-coordinated team of people looking after them, no active drug or alcohol misuse and a degree of insight.

The two case examples demonstrate two of the possible outcomes for a deprescribing intervention. Individualization and attention to psychosocial supports is essential to the practice, and is demonstrated in these instances. Deprescribing as a concept in psychiatry is an emerging practice around which much research remains – both to further identify best practices, as well as further clarify potential cost savings. Our experience in the public mental health system in the USA indicates that, while this is a growing practice, there is much work to be done in educating clinicians and allaying fears in order to provide care that is most geared toward quality of life and pursuit of individual goals, rather than strict focus on symptom management.

References

- Agency for Healthcare Research and Quality (2012) *AHRQ Health Literacy Universal Precautions Toolkit* (2nd edn). AHRQ.
- American Psychiatric Association (2006) *American Psychiatric Association Practice Guidelines for the Treatment of Psychiatric Disorders: Compendium*. APA.
- Barrowclough C, Haddock G, Tarrier N, et al (2001) Randomized controlled trial of motivational interviewing, cognitive behavior therapy, and family intervention for patients with comorbid schizophrenia and substance use disorders. *American Journal of Psychiatry*, **158**: 1706–13.
- Birley J, Brown GW (1970) Crises and life changes preceding the onset or relapse of acute schizophrenia: clinical aspects. *British Journal of Psychiatry*, **116**: 327–33.
- Boss GR, Seegmiller JE (1981) Age-related physiological changes and their clinical significance. *Western Journal of Medicine*, **135**: 434–40.
- Calarge CA, Nicol G, Schlecte JA, et al (2014) Cardiometabolic outcomes in children and adolescents following discontinuation of long-term risperidone treatment. *Journal of Child and Adolescent Psychopharmacology*, **24**: 120–9.
- Chemerinski E, Ho BC, Flaum M, et al (2002) Insomnia as a predictor for symptom worsening following antipsychotic withdrawal in schizophrenia. *Comprehensive Psychiatry*, **43**: 393–6.
- Chouinard G (1991) Severe cases of neuroleptic-induced supersensitivity psychosis: diagnostic criteria for the disorder and its treatment. *Schizophrenia Research*, **5**: 21–33.
- Copeland ME (1997) *Wellness Recovery Action Plan*. Peach Press.
- Davidson L, Tondora J, Miller R, et al (2015) Person-centered care. In *Person-Centered Care for Mental Illness: The Evolution of Adherence and Self-Determination* (ed P Corrigan). American Psychological Association.
- Davidson L, Tondora J, Pavlo AJ, et al (2017) Shared decision making within the context of recovery-oriented care. *Mental Health Review Journal*, **22**: 179–190.
- de Kuijper G, Mulder H, Evenhuis H, et al (2013) Effects of controlled discontinuation of long-term used antipsychotics on weight and metabolic parameters in individuals with intellectual disability. *Journal of Clinical Psychopharmacology*, **33**: 520–4.
- Deegan PE (1993) Recovering our sense of value after being labeled: mentally ill. *Journal of Psychosocial Nursing and Mental Health Services*, **31**: 7–9.
- Deegan PE, Drake RE (2006) Shared decision making and medication management in the recovery process. *Psychiatric Services*, **57**: 1636–9.
- Dixon L, Perkins D, Calmes C (2009) *Guideline watch (September 2009): practice guideline for the treatment of patients with schizophrenia*. Arlington, VA: American Psychiatric Association.
- Drake RE, O'Neal EL, Wallach MA (2008) A systematic review of psychosocial research on psychosocial interventions for people with co-occurring severe mental and substance use disorders. *Journal of Substance Abuse Treatment*, **34**: 123–38.
- Essock SM, Covell NH, Leckman-Westin E, et al (2009) Identifying clinically questionable psychotropic prescribing practices for Medicaid recipients in New York State. *Psychiatric Services*, **60**: 1595–602.
- Farkas MD, Anthony WA, Cohen MR (1989) An overview of psychiatric rehabilitation: the approach and its programs. In *Psychiatric Rehabilitation Programs: Putting Theory into Practice* (eds MD Farkas, WA Anthony): 1–27. Johns Hopkins University Press.
- Galling B, Roldan A, Hagi K (2017) Antipsychotic augmentation vs. monotherapy in schizophrenia: systematic review, meta-analysis and meta-regression analysis. *World Psychiatry*, **16**: 77–89.
- Ganguly R, Kotzan JA, Miller LS, et al (2004) Prevalence, trends, and factors associated with antipsychotic polypharmacy among Medicaid-eligible schizophrenia patients, 1998–2000. *Journal of Clinical Psychiatry*, **65**: 1377–88.
- Gilbert PL, Harris MJ, MacAdams LA, et al (1995) Neuroleptic withdrawal in schizophrenic patients: a review of the literature. *Archives of General Psychiatry*, **52**: 173–88.
- Glazer WM, Morgenstern H, Schooler N, et al (1990) Predictors of improvement in tardive dyskinesia following discontinuation of neuroleptic medication. *British Journal of Psychiatry*, **157**: 585–92.
- Goff DC, Falkai P, Fleischacker WW, et al (2017) The long-term effects of antipsychotic medication on clinical course in schizophrenia. *American Journal of Psychiatry*, **174**: 840–9.
- Gupta S, Cahill JD (2016) A prescription for “deprescribing” in psychiatry. *Psychiatric Services*, **67**: 904–7.
- Harrow M, Jobe TH (2013) Does long-term treatment of schizophrenia with antipsychotic medications facilitate recovery? *Schizophrenia Bulletin*, **39**: 962–5.
- Hayes SC, Strosahl KD, Wilson KG (1999) *Acceptance and commitment therapy: An experiential approach to behavior change*. New York: Guilford.
- Jacobson L, Greeley D (2001) What is recovery? A conceptual model and explication. *Psychiatric Services*, **52**: 482–5.
- Lehman AF, Steinwachs DM (1998) Translating research into practice: the Schizophrenia Patient Outcomes Research Team (PORT) treatment recommendations. *Schizophrenia Bulletin*, **24**: 1–10.
- Lehman AF, Lieberman JA, Dixon LB, et al (2004) Practice guideline for the treatment of patients with schizophrenia. *American Journal of Psychiatry*, **161**(2 SUPPL): 1–56.
- Leucht S, Tardy M, Komossa K, et al (2012) Antipsychotic drugs versus placebo for relapse prevention in schizophrenia: a systematic review and meta-analysis. *Lancet*, **379**: 2063–71.
- McFarlane WR, Dixon L, Lukens E, et al (2003) Family psychoeducation and schizophrenia: a review of the literature. *Journal of Marital and Family Therapy*, **29**: 223–45.
- McGurk SR, Twamley EW, Sitzer DI, et al (2007) A meta-analysis of cognitive remediation in schizophrenia. *American Journal of Psychiatry*, **164**: 1791–802.
- Moncrieff J (2006) Does antipsychotic withdrawal provoke psychosis? Review of the literature on rapid onset psychosis (supersensitivity psychosis) and withdrawal-related relapse. *Acta Psychiatrica Scandinavica*, **114**: 3–13.
- Petrakis IL, Nich C, Ralevski E (2006) Psychotic spectrum disorders and alcohol abuse: a review of pharmacotherapeutic strategies and a report on the effectiveness of naltrexone and disulfiram. *Schizophrenia Bulletin*, **32**: 644–54.
- Pilling S, Bebbington P, Kuipers E, et al (2002) Psychological treatments in schizophrenia: I. Meta-analysis of family intervention and cognitive behaviour therapy. *Psychological Medicine*, **32**: 763–82.

MCQ answers

1 a 2 a 3 d 4 b 5 c

- Reeve E, Wiese MD (2014a) Benefits of deprescribing on patients' adherence to medications. *International Journal of Clinical Pharmacy*, **36**: 26–9.
- Reeve E, Shakib S, Hendrix I (2014b) Review of deprescribing processes and development of an evidence-based, patient-centred deprescribing process. *British Journal of Clinical Pharmacology*, **78**: 738–47.
- Reeve E, Denig P, Hilmer SN (2016) The ethics of deprescribing in older adults. *Journal of Bioethical Inquiry*, **13**: 1–10.
- Rossello X, Pocock SJ, Julian DG (2015) Long-term use of cardiovascular drugs: challenges for research and for patient care. *Journal of the American College of Cardiology*, **66**: 1273–85.
- Saha S, Chant D, McGrath J (2007) A systematic review of mortality in schizophrenia: is the differential mortality gap worsening over time? *Archives of General Psychiatry*, **64**: 1123–31.
- Sánchez-Ortuño MM, Edinger JD (2012) Cognitive-behavioral therapy for the management of insomnia comorbid with mental disorders. *Current Psychiatry Reports*, **14**: 519–28.
- Schooler NR (1993) Reducing dosage in maintenance treatments of schizophrenia: review and prognosis. *British Journal of Psychiatry*, **163**(suppl 22): 58–65.
- Schooler NR (2004) Maintenance medication for schizophrenia: strategies for dose reduction. *Focus*, **2**: 175–86.
- Scott IA, Hilmer SN, Reeve E, et al (2015) Reducing inappropriate polypharmacy: the process of deprescribing. *JAMA Internal Medicine*, **175**: 827–34.
- Sendt KV, Tracy DK, Bhattacharya S (2015) A systematic review of factors influencing adherence to antipsychotic medication in schizophrenia-spectrum disorders. *Psychiatry Research*, **225**: 14–30.
- Stahl S, Grady M (2004) A critical review of atypical antipsychotic utilization: comparing monotherapy with polypharmacy and augmentation. *Current Medicinal Chemistry*, **11**: 313–27.
- Stanhope V, Ingoglia C, Schmelter B, et al (2013) Impact of person-centered planning and collaborative documentation on treatment adherence. *Psychiatric Services*, **64**: 76–9.
- Swofford CD, Kasckow JW, Scheller-Gilkey G, et al (1996) Substance use: a powerful predictor of relapse in schizophrenia. *Schizophrenia Research*, **20**: 145–51.
- Takeuchi H, Kantor N, Uchida H, et al (2017) Immediate vs gradual discontinuation in antipsychotic switching: a systematic review and meta-analysis. *Schizophrenia Bulletin*, **43**: 862–71.
- Taylor D, Paton C, Kapur S (2015) *The Maudsley Prescribing Guidelines in Psychiatry* (12th edn). Wiley Blackwell.
- Tondora J, Miller R, Slade M, et al (2014) *Partnering for Recovery in Mental Health: A Practical Guide to Person-Centered Planning*. Wiley Blackwell.
- Viguera AC, Baldessarini RJ, Hegarty JD, et al (1997) Clinical risk following abrupt and gradual withdrawal of maintenance neuroleptic treatment. *Archives of General Psychiatry*, **54**: 49–55.
- Woodward MC (2003) Deprescribing: achieving better health outcomes for older people through reducing medications. *Journal of Pharmacy Practice and Research*, **33**: 323–8.
- Wunderink L, Neinhuis FJ, Sytema S, et al (2007) Guided discontinuation versus maintenance treatment in remitted first-episode psychosis: relapse rates and functional outcome. *Journal of Clinical Psychiatry*, **68**: 654–61.
- Wunderink L, Nieboer RM, Wiersma D, et al (2013) Recovery in remitted first-episode psychosis at 7 years of follow-up of an early dose reduction/discontinuation or maintenance treatment strategy: long-term follow-up of a 2-year randomized clinical trial. *JAMA Psychiatry*, **70**: 913–20.
- Zipursky RB, Menezes NM, Streiner DL (2014) Risk of symptom recurrence with medication discontinuation in first-episode psychosis: a systematic review. *Schizophrenia Research*, **152**: 408–14.

MCQs

Select the single best option for each question stem

1 It would be false to say that:

- a deprescribing requires the eventual cessation of medications that are deemed no longer necessary
- b deprescribing entails a risk-benefit analysis of each medication that the patient is taking
- c deprescribing takes into consideration the opinions of the patient and the significant others in their life
- d a decision to deprescribe may be influenced by the level of functioning of the patient
- e medical problems may constitute the impetus to deprescribe an antipsychotic medication.

2 A good candidate for deprescribing would be:

- a a 50-year-old man with schizophrenia (positive symptoms remitted seven years ago), hypertension and congestive heart failure taking risperidone 4 mg a day. He heard about the risk of gynecomastia on TV and wants to stop
- b a 33-year-old single mother of a two-month-old, working fulltime and taking haloperidol 7.5 mg daily for schizoaffective disorder. She struggles to attend appointments and asks whether if she discontinued her medication she could come in less frequently

- c an 18-year-old girl who attempted suicide three months ago, routinely uses cocaine and cannabis and takes 300 mg of quetiapine because she hears voices. Her sleep has now improved so she wonders whether she still needs the medication
- d a 50-year-old man, just returning to work following an episode of psychosis (his sixth) at the age of 49. He takes olanzapine 5 mg and does not have any side effects
- e a 53-year-old perimenopausal woman who has been diagnosed with schizophrenia and occasionally hears voices that bother her. She been taking aripiprazole 15 mg with minimal side effects and wants to know if she can stop her medication since it doesn't help with the voices anyway.

3 The most accurate description for discontinuation studies of antipsychotic medication in chronic psychotic disorders would be:

- a most of them involved intensive psychotherapy alongside the antipsychotic medication taper
- b most studies clearly outline the rate of taper and the use of rescue medications
- c most studies chose to enroll patients who were less likely to relapse based on their past history

- d approximately 50% of patients relapsed within 6–12 months of discontinuation of their antipsychotic medications
- e most studies conducted the antipsychotic taper in an individualized fashion.

4 When considering recovery-based practices in deprescribing, you would avoid:

- a shared decision-making
- b paternalism
- c person-centred care
- d providing choices
- e providing hope.

5 It would be false to say that:

- a the severity of tardive dyskinesia may reduce when antipsychotic medications are discontinued slowly
- b tardive dyskinesia may get exacerbated by sudden cessation of antipsychotic medication
- c tardive dyskinesia is completely reversible following the cessation of antipsychotic medication
- d dopamine supersensitivity may be responsible for withdrawal tardive dyskinesia
- e severe tardive dyskinesia may be an indication for a switch to clozapine.