

The Pharmacist's Response to the Needs of Patients Undergoing Treatment With Psychotropic Medication

Mary Ann Sant Fournier, B.Pharm., M.Phil.

Completion of Assessment Questions following this article entitles members to one credit towards C.E. requirement.

The usage of psychotropic (Table 1) medication is considerable world wide. In Malta, this can be attested to by the numerous studies that have been conducted by the University of Malta Department of Pharmacy (in conjunction with other institutions and individuals).

This could be an indictment to the prescribing trends of psychotropic medication, and, also, to the structures in place with the objective of controlling the usage but which may also be proving to be the barriers to the timely intervention of pharmacists to influence the rational use of these medicines and to deliver effective pharmaceutical care services.

On the other hand, and most significantly, the traditional informality

and accessibility of our community pharmacies do not carry the "stigma" of "psychiatric services", although understandably, some patients do find it difficult to discuss their condition where there is lack of privacy.

Community pharmacists are in a unique position to support community-based patients through advice, counselling and monitoring of their medication regimes; together with providing support, and acting as an information resource, to carers and family members, where relevant.

Pharmacists can also act as "gate-keepers" to the national health services, by referring to the family doctor or caring consultant psychiatrist, those patients who are defaulting or are not able to maintain their medication regime. This

necessitates an in-depth knowledge of psychotropic medicines and their use, so that pharmacists are able to effectively influence the management of psychiatric medication and attain therapeutic objectives with outcomes that guarantee the improvement of patients' quality of life.

Pharmacists should also be familiar with the main psychiatric disorders.

In parenthesis, however, one must not overlook the fact that pharmacists' knowledge on medicines may be a determinant factor in "differentially diagnosing" drug-induced mental health disorders and suitably advising, counseling and referring patients for review of their medication.

Psychiatric Disorders: Classification And Range

Psychiatric disorders are classified to identify groups of patients who share similar clinical features so that suitable treatment can be planned and the likely outcome predicted. Diagnosis is "syndrome" based, depending on the symptoms and the phenomena observed; this is due to the fact that aetiology and underlying physical and psychological pathology are still only partially understood.

Two major classifications for Psychiatric Disorders are in use:

- The WHO, ICD-10 - International Classification of Diseases 10th Edition, in use in Malta since 1994;
- The DSM-IV - Diagnostic And Statistical Manual (IV) Of Mental Disorders, Fourth Edition, Washington DC, Criteria American Psychiatric Association 1994

A basic classification of mental illnesses, which would suffice within the context of this review (and is not according to the rigid parameters of either the ICD or DSM), subdivides them into two major groups, psychoses and neuroses.

Psychoses are major mental illness which are characterized by severe symptoms, such as disturbance of thinking, e.g., delusions; and of emotions etc., e.g., hallucinations. They are themselves subdivided into organic psychoses, e.g. dementia, and functional psychoses, e.g., schizophrenia and the affective disorders such as depression and mania. Neuroses have symptoms which are much closer to normal experience. Other disorders include those associated with substance addiction.

Table 1 Psychoactive/Psychotropic

- The term psychoactive embraces all those substances which affect the mind, including narcotics and psychotropic drugs.
- "Psychotropic" covers only those which influence mental processes and can lead to dependence.

Source: World Health Organisation. Report Of The Working Group On The Role Of Schools Of Pharmacy In The Rational Use Of Psychoactive Drugs. London, 1989

Table 2 Classification Of Psychotropic Drugs By Chemical And Pharmacological Sub-Groups

- tranquillizers-anxiolytics,
- anxiolytics-antipsychotics
- neuroleptics and antipsychotics
- sympathomimetics
- nootropics
- MAOI
- antidepressants
- antiparkinsonian drugs
- anticonvulsants
- hallucinogenic agents
- additional groups

Source: Psychotropics 1997/98

Table 3 Classification Of Psychotropics Viewed As Drugs Acting On The Central Nervous System

- Hypnotics
- Anxiolytics
- Barbiturates

Drugs Used In Psychoses & Related Disorders

- Antipsychotics
- Antipsychotic Depot
- Antimanic Drugs

Antidepressant Drugs

- Tricyclic And Related Antidepressant Drugs
- MAOI
- SSRIs And Related Drugs
- Other Antidepressant Drugs

Source: BNF, September 1997

Table 4 Rational Use

Rational use means that the right drug will be taken by the right patient, in the right dose, and for the right duration of therapy, and that the risks of therapy will be acceptable.

Source: World Health Organisation. Report Of The Working Group On The Role Of Schools Of Pharmacy In The Rational Use Of Psychoactive Drugs. London, 1989.

Psychotropic Drugs: An Overview

It is not within the context of this article to address the individual drug classes, (Tables 2 and 3) but reference will be made to the main drugs in use, particularly, in practice settings, and with regard to, for example, clinically significant drug interactions and side effects, together with other factors which may limit their rational use (Table 4).

Classical (Typical) And Atypical Antipsychotics

Historically, the use of the classical typical antipsychotics such as the thioxanthenes, e.g., flupenthixol and clopenthixol, the phenothiazines e.g. fluphenazine, and butyrophenones, e.g., haloperidol, in their various forms, has caused concern about their use including the occurrence of side effects such as extrapyramidal symptoms (EPS), tardive dyskinesia, sudden death, neuroleptic malignant syndrome and hormonal disturbance. Other issues, such as non-compliance which may be due to a lack of patients' and carers' understanding of the condition and the importance of medication to treatment and prevention of relapse, together with antipsychotic polypharmacy, excessive use of anticholinergic drugs, excessive doses of the antipsychotics themselves have also raised concerns.

Doses of atypical antipsychotics e.g., clozapine, have also been reported to be too high. These drugs have been introduced into clinical use relatively recently and have less EPS and prolactin-related effects, but, they do not do not belong to a specific class (hence, atypical).

Clozapine has been reported to be the only atypical antipsychotic with proven efficacy in refractory schizophrenia; while it lacks EPS, it has been associated with a range of other adverse effects including agranulocytosis, necessitating regular blood monitoring in patients requiring this treatment.

Mood Stabilisers

Many mood stabilisers are the result of serendipitous discovery. Those in current use include lithium, carbamazepine, sodium valproate and other anticonvulsants, thyroid hormones and calcium channel blockers.

The most common failure of therapy is non-compliance. Mood disorders

could be resistant to single agents, polypharmacy is therefore common and pharmacists' focus should be on side effects and interactions.

Lithium with its long half life and narrow therapeutic index requires serum level monitoring. Monitoring is a clear indication of the degree of compliance by patients to the medication and is a valuable tool to educate the patients and inform them on the outcome options basing on their understanding of the importance of their adherence to their treatment plan. Serum levels are also a quality assurance tool of the prescribing practices of lithium, to ensure that patients are not receiving too high or too low a dose, but the right dose for the management of a particular patient.

The pharmacist should focus on the propensity for interaction of lithium with other drugs. The likelihood of the occurrence of clinically significant interactions is increased with drugs that

- induce or inhibit hepatic microsomal enzymes
- have a low therapeutic index
- have a multiplicity of pharmacologic action
- and in high risk patient groups, such as the elderly, mentally ill and substance abusers.

The most common interactions, with a potential to lead to intoxication, are those with Non-Steroidal Anti-inflammatory Drugs, with reported increases in serum lithium levels of up to 60%; and with different diuretics and antihypertensive agents. The concomitant administration of lithium with other psychotropics, such as carbamazepine and other TCAs is relatively safe with strict monitoring of serum lithium levels.

It is suitable to remember that the ingestion of sodium chloride and sodium bicarbonate can cause a decrease in serum lithium levels.

The side-effect profile of lithium must also be given attention. These range from the transient, such as nausea, to the persistent but harmless (and which appear with normal serum lithium levels), such as weight gain, to the ones that are prodromal to intoxication. Pharmacists can help patients to be alert to recognise these symptoms.

Antidepressants

Optimal outcomes can be achieved if commencement of treatment with antidepressants is not delayed, is vigorous and continued for at least 4- 6 months after the initial response. Achievement of these objectives however appear to be limited in practice. resulting in poor patient outcomes in the management of depression.

Pharmacoepidemiological studies suggest that patients who are treated with the older tricyclic antidepressants (TCAs) rarely completed an effective course of treatment, either in terms of receiving an adequate dose of antidepressant or completing a minimum period of treatment when an adequate dose was achieved. Initial choice of antidepressant appeared to be an important factor in determining subsequent treatment patterns; patients who began treatment with a selective serotonin reuptake inhibitor (SSRI) were considerably more likely to complete an effective course of treatment which should be reflected in better outcomes including better quality of life outcomes.

The pharmacist must also be aware of the varied indications associated with the use of the TCAs, which may preclude their prescription for "psychiatric" needs, but, for example, may be used for the treatment of pain. In giving advice, the pharmacist must identify the prescriber's objective and not volunteer information that might undermine the patient's trust in the prescriber and in the treatment.

Consideration of the pharmacokinetic profile of SSRIs may prove useful to support the choice of medication in specific cases. This is often overlooked and can lead to inadequate treatment and outcome.

Prevention Of Relapse

It is well established that antidepressants, antipsychotics and mood stabilisers prevent relapse if taken long-term. This however places a great deal of responsibility on the patients themselves, who will only comply if they accepted that something was wrong, that it needed correcting, that medication would help and that the risk-benefit ratio was acceptable.

Common reasons for discontinuation of psychotropics by patients include side effects (even if manageable), fear of addiction, lack of knowledge that the treatment prevented relapse, and pressure from (usually uninformed)

Table 5 Committee On Safety Of Medicines (UK) Advice

1. Benzodiazepines are indicated for the short-term (two to four weeks only) relief of anxiety that is severe, disabling or subjecting the individual to unacceptable distress, occurring alone or in association with insomnia or short-term psychosomatic, organic or psychotic illness.
2. The use of benzodiazepines to treat short-term, 'mild' anxiety is inappropriate and unsuitable.
3. Benzodiazepines should be used to treat insomnia only when it is severe, disabling or when it is subjecting the individual to extreme distress.

Source: British National Formulary, Number 34 (September 1997)

relatives and friends.

A positive attitude towards their treatment was generally essential for attaining objectives of better outcomes, particularly in the long term. A number of studies have shown the advantages of structured education and support of patients, and the subsequent positive effect on attitude and hence, adherence to treatment plans, prevention of relapse and quality of life.

Hypnotics and Anxiolytics

Benzodiazepines (Table 5) are the most commonly used anxiolytics and hypnotics. Studies have shown that in 1989, 11.92% of the Maltese population had consumed

benzodiazepines; and since 1993, there has been a change in the prescribing trend towards the shorter acting benzodiazepines such as lorazepam and triazolam, especially in the elderly (<66yrs).

However, in 1995, there were still a high 48.4% of elderly patients receiving long acting benzodiazepines such as, diazepam. Subsequently, it was confirmed that, in 1997, there was a consistent increase in benzodiazepine prescribing in the 45-65 age group. Females are also consistently reported to be the largest group of patients consuming benzodiazepines, accounting for more than double their male counterparts.

The needs of all patients to whom

benzodiazepines have been prescribed should be addressed by pharmacists who should refrain from acting as "passive conduits" complying to the legal requirements alone in the dispensing of benzodiazepines. Some of these needs are of a general nature whilst others are specific to the age group and, in some cases, to the gender concerned e.g. pregnancy and lactation.

It is to be emphasized that benzodiazepines have a "broad spectrum" of indications and may also be prescribed for their action as e.g., muscle relaxant, anticonvulsant and antiepileptic properties.

Dosage and dosage regimens require particular attention not only from the legal supply aspect but with consideration to the management of the condition, prevention of misuse and the possible diversion of benzodiazepines to illicit use.

In consideration of adverse effects of benzodiazepines, the potential for the development of tolerance, dependence (Table 6) and the withdrawal syndrome must be given due regard. For example, patients should be warned of the effect of abrupt discontinuation of the medication which can result in increased anxiety, sleep disorder, aching limbs, nervousness, nausea, and influenza-like symptoms; and referred to their caring physician should they feel ready to discontinue their therapy.

Particularly in the elderly, problems associated with ataxia and consequent falls and injury, confusion, memory loss and cognitive impairment require attention.

The additive effects of benzodiazepines when administered in combination with alcohol and other CNS depressants such as neuroleptics and antipsychotics, hypnotics, anxiolytics and sedatives, antidepressants, narcotic analgesics - which can also lead to euphoria, enhancing the potential for psychic dependence of the latter - antiepileptic drugs and anaesthetics should also be of concern. Other potentially clinically significant drug interactions include the temporary increase of the sedative effect of benzodiazepines by the concomitant administration of cispripide; the possible enhancement of the activity of benzodiazepines by those drugs which inhibit certain hepatic enzymes particularly cytochrome P 450.

Zolpidem and chlormethiazole have a place as hypnotics for short term use,

Table 6 Definition - (Substance) Dependence

A maladaptive pattern of substance use, leading to clinically significant impairment or distress as manifested by three or more of the following occurring at any time in a time period:

- 1) tolerance, as defined by either of the following:
 - a) need for markedly increased amounts to achieve (intoxication or) the desired effects
 - b) markedly diminished effect with continual use of the same amount,
- 2) withdrawal, as manifested by either of the following:
 - a) the characteristic withdrawal syndrome for the substance
 - b) the same (or a closely related) substance is taken to relieve or avoid withdrawal symptoms.
- 3) the substance is often taken in larger amounts or over a longer period than was intended
- 4) there is a persistent desire or unsuccessful efforts to cut down or control substance abuse
- 5) a great deal of time is spent in activities necessary to obtain the substance e.g. visiting multiple doctors or driving long distances, use the substance (e.g. chain-smoking) or recover from its effects.
- 6) important social occupational, or recreational activities are given up or reduced because of substance abuse;
- 7) the substance use is continued despite knowledge of having a persistent or recurrent physical or psychological problem is caused or exacerbated by the substance.(e.g. continuing to drink alcohol despite ulcer in stomach)

Source: Adapted from Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Washington DC, Criteria American Psychiatric Association 1994

the latter particularly in the elderly. Their relative freedom from a 'hang-over' effect makes them particularly useful drugs. Chlome thiazole has a place in the treatment of alcohol withdrawal in the younger patients. Pharmacists should be vigilant for the phenomenon of abuse that has recently been associated with the use of these drugs.

Psychotropic Medication and Driving Performance

Benzodiazepines together with other psychotropic drugs such as

sedating tricyclic antidepressants, many anticonvulsants, neuroleptics may adversely effect driving performance and also the operating of machinery. Patients should be warned that drowsiness and impairment of psychomotor function as produced by sedating TCAs can impair driving performance.

This can occur with some drugs only on the first few days of treatment, but subsequently, there can be a slowing of reaction time and loss of mental concentration. Moreover, psychotropic drugs can alter the patients' perception

of their driving skills and the dangers on the road.

Drug induced side effects unrelated to drowsiness can also impair patients ability to drive. These include anticholinergic side effects also associated with the TCAs, such as blurred vision, dizziness and nausea. Patients should be advised for example, not to drive if unwell, to stop immediately, and take small breaks.

Long acting hypnotics and anxiolytics are associated with daytime sedation and drowsiness, together with impaired performance of complex hand-eye coordination tasks, increased reaction time and impaired cognitive function.

Attention should also be given to the potential interaction of dispensed pharmacist recommended medicines with these prescription drugs.

Needless to say, the combination of alcohol with these medicines exacerbates these effects, especially in the elderly.

Pharmacists should clearly warn patients, both verbally and in writing, of these serious potential effects on traffic safety. A written note will act as a reminder when they are home.

Conclusion

Pharmacists are in an ideal position to respond to special needs of psychiatric patients (Table 7). They can:

- identify undiagnosed conditions, eg, depression, and refer to family doctor;
- reassure patients and carers and encourage them to seek treatment;
- support vulnerable patients and involve carers and/or family, whilst ensuring confidentiality;
- educate patients about their condition and its management and in particular, about their medication;
- encourage compliance and concordance, without ignoring patient vulnerability;
- monitor patient progress and avoid or minimise adverse drug effects to achieve therapeutic objectives and improve patients' quality of life;
- liaise with other health professionals for better patient care and outcomes.

Table 7 Case Study - An Example of Pharmaceutical Care Considerations Of Patients Undergoing Treatment With Psychotropic Medication

Mrs. Borg is a 55 year-old woman who presents her pharmacist with a prescription for a maintenance dose of a combination product containing fluphenazine hydrochloride 500 mcgs and nortriptyline 10 mgs. Mrs. Borg says that she is undecided whether to continue with her treatment since she has noted that she has been putting on weight and this is further increasing her distress.

- The pharmacist notes that Mrs. Borg is not a new patient, but on referring to the daily register, he notes that a number of months have elapsed since she has come to the pharmacy to refill her prescription.
- The pharmacist is concerned that if Mrs. Borg defaults on her therapy she could suffer a relapse. This would be a great pity as Mrs. Borg has been successfully controlled and maintained in the community where she has been improving her quality of life.
- The pharmacist takes the advantage of not having any patients or other clients in the pharmacy at the time and asks Mrs. Borg to sit down in a quiet corner and tell him more about her concerns.
- As she sits down, Mrs. Borg says that since her only son's wedding 3 months ago, she has found that she has plenty of time to herself and has taken to sit for long hours watching television and eating her favourite chocolates. She has also found that she has more time to sit at table with her husband during meals and has been adding little gourmet pleasures to their normal menu.
- The pharmacist explains that whilst the medicine itself may be responsible for some weight gain, the changed eating habits may have been more decisive in her case. Since the depression had been well controlled and she was feeling better, the pharmacist reinforced his counselling to empower Mrs. Borg to understand her condition and to achieve concordance with the medication regimen, with advice on healthy eating habits and other lifestyle modifications, including, exercise such as walking and the taking up of a hobby. He also gave her a leaflet in Maltese called "Kul għall-sahtek" together with another one on depression.
- Mrs. Borg agreed to take the medicine for a month, after which she would return to the pharmacy to weigh herself. The pharmacist then invited her to check her weight and recorded it. He suggested that should there be no decrease in her weight after one month, then he would refer her to her family doctor for review of her medication.

Through a concerted endeavour the barriers preventing pharmacists' full interventions in this important area of care can be identified and overcome. This is most significant at this moment in time when the health system is moving towards a policy of

decreasing institutionalisation of psychiatric patients and enhancing community based services, Pharmacists are the natural but still underutilised resource for this highly vulnerable patient group, their families and carers and the health system. ★

Bibliography

- American Psychiatric Association (1994) Diagnostic and Statistical Manual of Mental Disorders, Criteria Fourth Edition, Washington DC
- Association of European Psychiatrists. (1998) Optimising Drug Therapy In Various Psychiatric Conditions. *Pharmaceutical Journal*, 26: 831.
- British Medical Association and Royal Pharmaceutical Society of Great Britain (1997) *British National Formulary Number 34*, London and Oxon.: 154.
- De Prins, L., (Ed) (1997) *Psychotropics 1997/1998*. H. Lundbeck A/S., Denmark.
- Debono, H. (1992) Schizophrenia in Malta. Pharmacy undergraduate project, Department of Pharmacy, University of Malta, Malta. (unpublished).
- Fenech, K. (1996) The Prescribing and Use of Benzodiazepines in Malta. Pharmacy undergraduate project, Department of Pharmacy, University of Malta, Malta. (unpublished).
- Magro, G. (1996) The Rational Use Of Clozapine In Schizophrenia. Pharmacy undergraduate project, Department of Pharmacy, University of Malta, Malta. (unpublished).
- Muscat, P., (Ed) (1996) *Handbook of Psychiatry*. Revised edition. Department of Psychiatry, University of Malta, Malta.
- Pace, E. (1998) Benzodiazepines Current Trends And Usage In Malta. In *Pharmacy Symposium Project Reports*, Seracino Ingloft, A. (Ed) Department of Pharmacy University of Malta, Malta. 167-171.
- Preca, F. (1991) Trends in Benzodiazepine Use In Malta. Pharmacy undergraduate project, Department of Pharmacy, University of Malta, Malta. (unpublished).
- Ross, Ingrid (1994) Compliance to Lithium Therapy in Affective Disorders in Malta. Pharmacy undergraduate project, Department of Pharmacy, University of Malta, Malta. (unpublished).
- Royal Pharmaceutical Society Of Great Britain (1989) Council Statement, London. Royal Pharmaceutical Society Of Great Britain, London.
- Sant Fournier, M.A. (1991) Psychotropic Medication in the Elderly. In: *Drugs In The Elderly, Proceedings of the International Symposium*. Department of Pharmacy, University of Malta, Secretariat for the Care of the Elderly, University Press, Malta, Rizzo Naudi, J. and Serracino Ingloft, A. (Eds). University Press, Malta: 93-112.
- Shaw, C. (1998) A Drug Utilisation Review at a Psychiatric Hospital. Pharmacy undergraduate project, Department of Pharmacy, University of Malta, Malta. (unpublished).
- Tabone, M. (1994) Alcohol, Drugs and Driving Performance. Pharmacy undergraduate project, Department of Pharmacy, University of Malta, Malta. (unpublished).
- World Health Organisation (1989) *Report Of The Working Group On The Role Of Schools Of Pharmacy In The Rational Use Of Psychoactive Drugs*. WHO, London.
- World Health Organisation (1993). *The ICD - 10 Classification of Mental and Disorders-Diagnostic Criteria For Research*, WHO, Geneva.
- Zammit S. (1998) Rationalising the Use of Selective Serotonin Reuptake Inhibitors. Pharmacy undergraduate project, Department of Pharmacy, University of Malta, Malta. (unpublished).

"Pharmaceutical care requires co-operation, communication and consistency among pharmacists as well as between pharmacists and other professionals."

Hepler

The Pharmacist's Response to the Needs of Patients Undergoing Treatment With Psychotropic Medication

Select only ONE option in each question by ticking the respective box on the Response Sheet (page 39).

Assessment Questions:

- Community Pharmacies can offer professional care services to psychiatric patients because pharmacies are:
 - not identified with "psychiatric services"
 - can offer privacy facilities
 - assure confidentiality
 - all of the above
- Pharmacists can support community based psychiatric patients by:
 - offering advice and counseling on their treatment
 - monitoring progress and outcomes
 - providing support to patients and carers
 - all of the above
- To influence the rational use of psychotropic medicines pharmacists must
 - be familiar with the main psychiatric disorders
 - be familiar with drug induced mental health disorders
 - have insight into the needs of psychiatric patients
 - all of the above
- A side effect which is specific to the use of clozapine is
 - tardive dyskinesia
 - neuroleptic malignant syndrome
 - agranulocytosis
 - prolactin-related
- The likelihood of occurrence of clinically significant interactions of lithium is increased
 - with drugs that have a low therapeutic index
 - with drugs that have a multiplicity of pharmacological action
 - in high risk patient groups
 - in all of the above situations
- The concomitant administration of lithium with one of the following drugs is relatively safe with strict serum lithium levels monitoring
 - NSAIDs
 - antihypertensives
 - diuretics
 - carbamazepine
- Optimal outcomes in depression can be achieved if treatment is
 - discontinued on achieving response
 - is delayed
 - is continued for at least 4-6 months after initial response
 - none of the above.
- Patients who are treated with the older TCAs
 - rarely complete an effective course of treatment
 - may not receive an adequate dose of antidepressant
 - may not complete a minimum period of treatment when an adequate dose was achieved
 - may not be suffering from psychiatric illness
 - all of the above
- Patients who are treated with an SSRI
 - have poorer outcomes than with TCAs
 - are more likely to complete an effective course of treatment
 - do not have better quality of life outcomes than with older TCAs.
 - all of the above
- Antidepressants, mood stabilisers and antipsychotics prevent relapse if taken long-term, depending on whether
 - patients accept that something is wrong with them
 - patients accept that what is wrong with them needs correcting
 - patients accept that medication would help
 - all of the above
- Common reasons for the discontinuation of psychotropic medicines by patients include
 - side effects (even if manageable)
 - fear of addiction
 - lack of knowledge that treatment prevented relapse
 - all of the above
- Prolonged treatment with benzodiazepines can result in
 - influenza-like symptoms
 - withdrawal syndrome
 - tolerance and dependence
 - all of the above
- The abrupt discontinuation of benzodiazepine treatment can result in
 - anxiety
 - influenza-like symptoms
 - sleep disorder
 - all of the above
- Which of the following should be registered in the Register of Psychotropic drugs
 - citalopram
 - zolpidem
 - chlormethiazole
 - all of the above
- Elderly patients on benzodiazepine treatment must receive the pharmacist's special attention with regard to
 - possibility of falls and injury
 - confusion
 - memory loss and cognitive impairment
 - all of the above
- Additive effects of concern are a result of the co-administration of benzodiazepines with the following drugs
 - alcohol
 - narcotic analgesics
 - anaesthetics
 - all of the above
- The following psychotropic medicines can have serious effects on driving performance
 - benzodiazepines
 - neuroleptics
 - sedating TCAs
 - all of the above
- Pharmacists should warn patients on the adverse effects of psychotropic medication on driving performance including
 - daytime sedation and drowsiness produced by long-acting hypnotics and anxiolytics
 - daytime induced anticholinergic side effects of TCAs such as blurred vision, dizziness and nausea
 - impaired performance of complex hand-eye coordination tasks, increased reaction time and impaired cognitive function produced by benzodiazepines
 - all of the above
- Pharmacists can respond to the needs of psychiatric patients by
 - identifying undiagnosed conditions and referring to the family doctor
 - supporting them and involving carers/family, whilst ensuring confidentiality
 - monitoring their progress and intervening where necessary in liaison with other carers to achieve therapeutic and quality of life outcomes
 - all of the above
- The barriers which preclude pharmacists from being fully effective in delivering pharmaceutical care services to psychiatric patients include
 - centralised system of the 'free' distribution of several classes of psychotropic medicines to a majority of patients which bypasses the community pharmacists
 - legislative structures controlling supply of drugs of dependence which restrict pharmacists' intervention.
 - pharmacy logistics, such as lack of private area, lack of time, limited computerisation and lack of teamwork with other health professionals
 - all of the above

Booklets have been produced by the Department of Pharmacy, University of Malta as part of BPharm(Hons) projects.

These include:

- It-terapija tal-Lithium - X'ghandu jkun jaf il-pazjent. There is also an accompanying video on this subject in English and Maltese
- The Pharmacist and Safe Driving - The Influence Of Medicines, Alcohol And Drugs on Driving

Other printed material includes:

- Is-sahha mentali - Department of Health Promotion

Sedqa leaflets

- Stop Droga campaign booklets and leaflets, Malta Chamber of Pharmacists

Pharmaceutical Companies with an interest in Psychiatry also produce patient-oriented leaflets on mental disorders, their treatment and management.