Chapter 1

Psychotropic Drug Use: History and Context

Chapter overview

This chapter covers the following topics:

- evolution of the understanding of the basis of mental illness
- aspects of the history of psychotropic drug use
- context of medicinal drug use – the Australian National Medicinal Drug Policy and principles of Quality Use of Medicines
- drug-related problems.

Chapter learning objectives

After reading this chapter, you should be able to:

- describe aspects of the history of psychotropic drug development and use
- outline the salient features of the Australian National Medicinal Drug policy and principles of Quality Use of Medicines, and relate these to the concept of drug-related problems.

Key terms

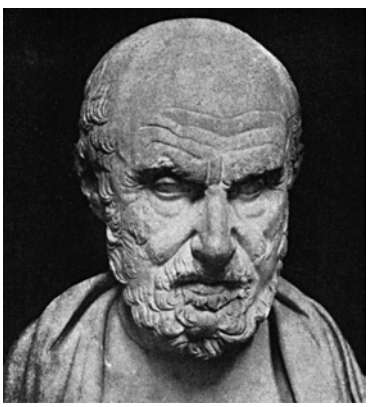
Drug-related problems
Medicinal drug policy
Psychotropic drugs
Quality Use of Medicines

Introduction

Mental illness is not a new phenomenon, having affected humankind for thousands of years. There is evidence to suggest that in the prehistoric era people suffered from mental illnesses that may have been similar to those affecting people today. When our ancestors observed unusual or irrational behaviours that we would now understand to arise from a mental illness, a common response would be to attribute the behaviour to the influence of an external force or power, with conceptual models such as demonic possession or religious influences invoked in many cases. Only relatively recently has the biological basis for mental illness been recognised and embraced as a basis for management interventions, and the role of biological interventions in psychiatry, in particular drug therapy, continues to evolve as new scientific and clinical information becomes available. Although the response to mental illness today is very different from responses recorded in the early history of humankind, substantial stigma is still associated with mental disease.

It was Hippocrates, regarded by most as the forefather of modern medicine, who first proposed that mental illness was due to an imbalance of the four 'humours', suggesting that there was some form of biological basis and internal locus for the origins of mental illness, rather than a reflection of external influences. Although the metaphor that was used by Hippocrates did not prove to be an accurate one, this model foreshadowed a movement from mysticism to a paradigm whereby psychopathology could be regarded as the effects of a disease of the brain, rather than demonic possession or the effects of an intervention from a deity. A quotation from the work of Hippocrates, *On the Sacred Disease*, provides insight into the extent of his understanding of normal human emotion and the processes of mental illness, rendered all the more remarkable by the fact that this passage was compiled so long ago.

Figure 1.1: Hippocrates – the first proponent of the organic basis for mental illness (Hippocrates, 400 BCE)



> Men ought to know that from nothing else but the brain come joys, delights, laughter and sports, and sorrows, griefs, despondency, and lamentations. And by this, in an especial manner, we acquire wisdom and knowledge, and see and hear, and know what are foul and what are fair, what are bad and what are good, what are sweet, and what unsavory; some we discriminate by habit, and some we perceive by their utility. By this we distinguish objects of relish and disrelish, according to the seasons; and the same things do not always please us. And by the same organ we become mad and delirious, and fears and terrors assail us, some by night, and some by day, and dreams and untimely wanderings, and cares that are not suitable, and ignorance of present circumstances, desuetude, and unskilfulness. All these things we endure from the brain, when it is not healthy, but is more hot, more cold, more moist, or more dry than natural, or when it suffers any other preternatural and unusual affection. And we become mad from its humidity. For when it is more moist than natural, it is necessarily put into motion, and the affection being moved, neither the sight nor hearing can be at rest, and the tongue speaks in accordance with the sight and hearing … In these ways I am of the opinion that the brain exercises the greatest power in the man.

Broadly, the treatments that are used for the management of mental disorders are usually categorised as either 'psychological' or 'biological'.

Psychological treatment

Psychological therapies include such approaches as cognitive therapy, behavioural therapy, family focused therapy or psychoanalysis. Often based around counselling, these techniques are known to be effective for the management of many mental disorders, and in some cases are the preferred forms of treatment of many conditions. Over time, and in the backdrop of research findings, psychological treatments can be conceptualised in the context of mental disorders – for example, in the case of bipolar affective disorder there is moderate to strong support for such interventions as psychoeducation and cognitive therapy (for the mania episode of the disorder). For the depressive episode of bipolar affective disorder psychoeducation, family focused therapy and interpersonal therapy is preferred. In the psychological treatment of schizophrenia there is moderate to

strong support of social skills training, cognitive behavioural therapy, assertive community treatment, family focused therapy, supported employment, social learning, cognitive remediation and adaptation therapy, and illness management and recovery-based interventions. Although psychological therapies do not have the same potential to cause adverse effects as biological therapies (e.g. the side effects of drugs), they are not universally effective, may not be suitable for more severe forms of mental illness, and can be expensive and difficult to access for **patients/clients**. Various aspects of psychological therapies are addressed elsewhere in this text, in chapters dealing with a range of disorders.

Biological treatment

Biological therapy for mental disorders can take a number of forms, but generally involves the use of some form of physical intervention (such as **pharmacotherapy**). Psychosurgery was once more widely practised than is the case now, and involves surgery to specific parts of the brain with a view to addressing the symptoms of various psychiatric disorders. **Electroconvulsive therapy (ECT)** remains an effective treatment for some mental disorders, in particular **mood disorders** such as major depression. The place in the management of mental illness is less clear for other non-drug biological interventions such as transcranial electromagnetic therapy and bright light therapy.

The bulk of biological therapy for mental disorders is undertaken using medications, which are very often prescribed by clinicians who are not psychiatrists (approximately 80% of all antipsychotics are prescribed in primary care settings by GPs). The medicines most commonly used in the management of mental disorders are often referred to as **psychotropic drugs**, because of their specific abilities to produce effects upon emotion and behaviour. This area of **pharmacology** is also known as psychopharmacology.

A brief history of modern psychotropic drug treatment

The most significant changes in psychotropic drug pharmacoepidemiology in the Australasia/Pacific region and elsewhere have taken place in two waves. The first of these occurred with the introduction of the first truly effective

psychotropic drugs: chlorpromazine as a treatment for **psychosis**, and the tricyclic **antidepressants** (TCAs) and non-selective monoamine oxidase inhibitors (MAOIs) in the early 1950s. The introduction of these drugs heralded truly revolutionary developments in the management of mental illness, in that effective pharmacological treatment options were available to patients/clients who had disorders that were, until that time, refractory to most interventions.

Thereafter followed the exploration of the pharmacological potential of RO 50690, which eventually came to be known as chlordiazepoxide, later to be marketed under the brand name Librium®, a reference used to imply that is was capable of engendering a sense of equilibrium. Then, in 1963 the same company that produced Librium® oversaw the introduction of diazepam into clinical therapeutics. Marketed as Valium® (after the Latin *vale*, denoting 'strong' or 'well'), diazepam would eventually become the most prescribed drug of all time. It is worth noting that although the history of the benzodiazepines (such as diazepam) has been marked by controversy, these drugs are actually much safer than many other agents that are widely used in the community, and it is often overlooked that the benzodiazepines replaced the barbiturates as pharmacological options for the management of **anxiety** and **insomnia**. Although the place of the benzodiazepines relative to safer non-drug alternatives can be debated, the increased safety relative to barbiturates has probably prevented many deaths that would have otherwise been attributable to barbiturate-associated suicides.

A second wave of major change in agents has altered the landscape of psychotropic pharmacoepidemiology profoundly. After a resolution in the US Senate in late 1989 the 1990s came to be known as the 'decade of the brain'. The decade of the brain was an initiative undertaken by the Library of Congress (USA) and the National Institute of Mental Health (USA) to enhance public awareness of the benefits of brain research and was from the period 1990–99. Since 1990, there have been extraordinarily significant changes, arguably major improvements, in the pharmacological treatment options for psychotic disorders, affective disorders (including both major depression and bipolar affective disorder), **anxiety disorders** and substance use disorders. Important developments have included the introduction of the atypical antipsychotics, along with the selective serotonin reuptake inhibitors (SSRIs) and other new generation antidepressants.

With the advent of these new treatment options pharmacoepidemiology of psychotropic drug usage in Australia has altered radically, accompanied by important pharmacoeconomic and public health changes. Entirely new concerns regarding different patterns of **adverse drug reactions** and **drug interactions** have arisen, and the role that various clinicians can play in the detection, investigation, management and prevention of medication-related harm in the context of pharmacological treatment of mental illness has been enhanced considerably. Relatively new agents that have achieved significant and rapid uptake in recent times are now widely prescribed, although prescribers of these agents have less familiarity with the safety profiles of these drugs. The proportion of subjects in each cohort using hypnosedatives and tranquilisers is approximately similar, implying that awareness of the disadvantages of these drugs (e.g. potential for tolerance, **dependence** and withdrawal reactions; contribution to falls among the elderly; increased likelihood of motor vehicle accidents) has probably not increased in the decade since 1995. Therefore it is apparent that the principles for the safe and effective use of psychotropic drugs continue to become more complex. With this in mind, the validity of a role for a psychotropic pharmacotherapy expert in the context of multidisciplinary care is emphasised, and this function can logically be performed by specialist psychiatry pharmacists with appropriate training and experience.

Australian Statistics on Medicines (ASM) is published periodically by the Drug Utilisation Sub-Committee of the Pharmaceutical Benefits Advisory Committee. The data presented are estimates of aggregate community use of prescription medicines in Australia, and are drawn from the Health Insurance Commission records of prescriptions submitted for payment of a subsidy under the Pharmaceutical Benefits and Repatriation Pharmaceutical Benefits Schemes (PBS/RPBS), as well as an ongoing survey of a representative sample of community pharmacies (used to estimate non-subsidised use of prescription medicines). It is important to note that complete data on prescription medicines **dispensed** to inpatients in public hospitals are not yet available, but plans are in progress to allow this. The units of measurement for the presentation of the data are the prescription rate and the defined daily dose per 1000 population per day (DDD/1000 population/day). The defined daily dose is established by the World Health Organization Collaborating Centre for Drug Statistics Methodology on the basis of the assumed average dose per day of the medication, used for its main

indication by adults. Although this system is imperfect, particularly in the context of off-label medication usage, it is an internationally recognised comparative system that is widely used for pharmacoepidemiology research purposes. Readers who are interested to more fully understand the evolution of Australian prescribing trends for psychotropic drugs can find great detail of the changes of prescribing patterns that have been observed in recent times by referring to the publicly available information that is disseminated at the ASM website.

Major changes in psychotropic prescribing: the last 20 years

The variety of psychotropic drugs at the disposal of modern clinicians has expanded enormously in recent years from the relatively small range that was available as recently as the early 1990s. Until the 1990s prescribers worked for many years with the tricyclic antidepressants (TCAs), irreversible, non-selective monoamine oxidase inhibitors MAOIs, the conventional antipsychotics (chlorpromazine, haloperidol and related drugs), lithium, benzodiazepines and barbiturates. From this relatively small array of choices prescribers provided drug therapy for a broad array of mental disorders, recognising the limitations arising from the 'broad spectrum' nature of the drugs' clinical pharmacology and the complexity of the agents' pharmacokinetic profiles.

Since the early 1990s the range of drug treatments for mental disorders has expanded enormously, with the introduction of new classes of antidepressants, the development of the atypical **antipsychotic drugs**, and the novel use of drugs not traditionally regarded as psychotropic agents all profoundly influencing the ways in which mental illness is treated. With the introduction of these changes there has been an accompanying change in the dynamics of the ways in which psychotropic drug prescribing is undertaken: clinicians are no longer dealing with a relatively small and circumscribed group of agents with which they are familiar. Instead, doctors treating mental disorders must grapple with a large range of complex drugs that have an evolving profile of adverse effects and drug interactions. The subtle effects of these drugs remain poorly understood, and in the postmarketing surveillance phase (where the drugs are prescribed in vast quantities to enormous numbers of patients worldwide) clinicians continue to encounter difficulties and limitations that may not have been initially

anticipated. The increase in the complexity of choice in prescribing in this field is exemplified in Table 1.1, which illustrates the changes in available drug therapy for the management of major depression.

Table 1.1: Drug therapy for major depression (Australia) – 1990 versus 2012

Treatment options 1990	Treatment options 2012
Tricyclic antidepressants	*Tricyclic antidepressants*
Amitriptyline	Amitriptyline
Clomipramine	Clomipramine
Desipramine	Dothiepin
Dothiepin	Doxepin
Doxepin	Imipramine
Imipramine	Nortriptyline
Nortriptyline	Trimipramine
Protriptyline	
Trimipramine	
Monoamine oxidase inhibitors	*Monoamine oxidase inhibitors*
Phenelzine	Phenelzine
Tranylcypromine	Tranylcypromine
	Moclobemide
	Serotonin reuptake inhibitors
	Citalopram, escitalopram
	Fluoxetine
	Fluvoxamine
	Paroxetine
	Sertraline
	Serotonin/noradrenaline reuptake inhibitors
	Venlafaxine/desvenlafaxine
	Duloxetine
	Noradrenaline reuptake inhibitors
	Reboxetine
	Other antidepressants
	Bupropion
	Mirtazapine
	Agomelatine

In addition to the increased range of psychotropic medications that are now available for use in the management of mental illness, there is a considerably larger range of other medication therapy available and in use for the management of non-psychiatric illness. Given the high frequency of medical comorbidities that exists among patients/clients with mental illness, it is logical that there will be substantial potential for interactions between psychotropic medications and other agents used for the management of general medical conditions. Given the highly specialised nature of psychiatry as a discipline in medicine, it is not necessarily reasonable to expect that psychiatrists will have a full working knowledge of drug therapy used in other areas of medicine, and thus the input of other specialist clinicians (e.g. pharmacists) in this regard could be expected to improve the overall safety of patient management by decreasing the potential for drug interactions or drug-induced exacerbations of coexisting medical illnesses. The increased range of new psychotropic pharmacotherapy options has been accompanied by a wave of promotional activities that is unprecedented in the field of psychiatry. Multinational pharmaceutical companies invest billions of dollars in efforts to influence the prescribing behaviour of psychiatrists and other medical practitioners who are involved in the management of psychotropic medication therapy for patients/clients with mental illness. The quality of the information promulgated, the objectivity of the promotional literature distributed, and the ability of busy clinicians to selectively interpret the materials may all be less than what is required to ensure that prescribing decisions are made in a fashion that is likely to ensure that **Quality Use of Medicines** principles are applied in the decision-making processes.

Australian National Medicinal Drug Policy and Quality Use of Medicines

In 1992 Australian Health Ministers adopted the *National Mental Health Policy and Plan*, and this document in concert with the National Statement of Rights and Responsibilities endorsed earlier forms the National Mental Health Strategy, a commitment by state, territory and Commonwealth governments to improve the lives of people with a mental illness. The stated objective was to provide a blueprint for the future delivery of mental health services in Australia. The fundamental aims of the strategy are: to promote the mental

health of the Australian community, prevent the development of mental health problems and mental disorders where possible, reduce the impact of mental disorders on individuals, families and the community; and to advocate the rights of people with mental disorders. Inherent to the promotion of mental health in Australia is the notion that appropriate treatments should be available, accessible and affordable for those affected by these disorders. This key principle is consistent with the area of focus for Australia's National Medicinal Drug Policy (Department of Health and Ageing, 2010).

The four central objectives of the National Medicinal Drug Policy are: the facilitation of timely access to required medicines at a cost that individuals and the community can afford; ensuring that medicines meet appropriate quality, safety and efficacy standards; the maintenance of a responsible and viable medicines industry in Australia; and the achievement of Quality Use of Medicines (QUM). As result, a natural progression has been the development of the Australian National Strategy for QUM, a strategy designed to embrace the use of all medicines, including prescription, non-prescription and complementary therapies. Integral to the national QUM strategy is a range of objectives that include involvement in QUM activities by health care providers and health educators (Department of Health and Ageing, 2002).

Underpinning the national QUM strategy are five key principles that have been developed in consultation with all key stakeholders; and as a consequence these principles are relevant to the work of all stakeholders involved in the provision of psychotropic drug treatment for patients/clients, regardless of the setting in which it is provided.

In summary, these principles include:

- the recognition of the primacy of consumers and their views
- the notion of partnership between key participants (e.g. between providers and patients/clients, between providers)
- the need for consultation and collaboration in the design, implementation and evaluation of QUM initiatives
- support for existing QUM activities and initiatives
- the need to adopt and embrace system-based approaches that foster an environment and behaviours that support QUM.

Overall, the national QUM strategy is based on the premise that to achieve Quality Use of Medicines, it is necessary to address a range of objectives, both in a policy sense (at a local and national level), as well as in the interaction between health care providers and the individual patient. In terms of the latter, it is evident that there are many aspects of the work of multidisciplinary teams involved in mental health care that can address key the issues outlined in the definition of QUM that is provided in the national strategy document. These include:

- judicious selection of management options (considering the place of medicines in treating illness and maintaining health, and recognising the possibility that no treatment, or a non-drug treatment, may be appropriate to manage a particular situation)
- appropriate selection of a suitable medication, if a medicine is considered necessary – this will involve consideration of the characteristics of the individual patient, the clinical condition, risks and benefits associated with treatment options, the dosage and duration of treatment, coexisting conditions, other therapies, monitoring considerations, and costs for the individual, the community and the health system as a whole
- safe and effective use of medications to achieve optimal health outcomes through monitoring, minimising misuse, overuse and underuse of medications; and ensuring that the patient or their carer has the knowledge and skills to use medicines and solve problems related to the use of medications.

The existence of the National Medicinal Drug Policy has guided initiatives at research, policy and practice levels in Australia. For example, research addressing medication-related problems in the community and in aged-care facilities, and funded through the QUM policy area in the federal Department of Health and Ageing, led to federal funding for medical and pharmacy practitioners to conduct collaborative medication management services for people at risk of medication misadventure. Funding from the same source enabled research that addressed the high prevalence of medication-related problems along the continuum of care from hospital to community settings. The Council of Australian Health Ministers, through their Pharmaceutical Reforms agenda, has made the adoption of models arising from the research a condition of health care reform funds being made available to the states.

These models involve collaborative processes aimed at improving the relaying of medicines and patient care information between hospital and community-based health workers.

Federal government policy initiatives have also funded key building blocks of QUM, such as sources of independent medicines information for health care providers. National therapeutic guidelines covering a range of major therapeutic areas are available and regularly updated. The *Australian Medicines Handbook* (Rossi, 2012) is funded as an independent, regularly updated medicines formulary and *Australian Prescriber* is funded as an independent quarterly medicines bulletin. Independent medicines information for consumers is available through Consumer Medicines Information leaflets, which are produced for all prescription medicines available in Australia and provided to consumers free of charge at the point of consultation with their doctor and pharmacist. The federal government also funds and provides support for major national service delivery initiatives such as the National Prescribing Service. These initiatives use evidence-based strategies such as academic detailing, and audit and feedback, to deliver independent information on medicines and health care to health professionals and consumers. In addition, best practice has been supported through other means, such as the development of practice guidelines and standards. Federally endorsed guidelines, for example, have been prepared in the areas of medication management along the continuum of care and in aged care.

The fundamental elements of the **Australian National Medicinal Drug Policy** are:

* timely access to required medicines at a cost affordable to individuals and the community
* medicines of appropriate quality, safety and efficacy
* a responsible and viable medicines industry in Australia
* achievement of Quality Use of Medicines (QUM):
  - judicious selection of treatment options
  - appropriate selection of a suitable medication regimen, if considered necessary

- safe and effective use of medications through monitoring, minimising misuse
- ensuring that patients/carers have knowledge and skills to use medicines safely.

Although much of the responsibility for establishment and maintenance of a National Medicinal Drug Policy and attaining Quality Use of Medicines can rest with funding agencies, governments and the health administration sector (at national, regional and local levels), there are many others with significant roles to play. For example, consumer agencies, professional organisations and health advocacy bodies can all contribute. The combined efforts of all of those involved have great potential to improve the lives of people affected by mental illness and requiring psychotropic drug therapy.

New Zealand Drug Policy

In common with Australia, the government of New Zealand has invested in developing extensive infrastructure that is targeted at optimising the safe and effective use of medicines in the community. PHARMAC, the Pharmaceutical Management Agency of New Zealand, determines the range of medicines and related products that are subsidised for use in the community and in public hospitals. The roles undertaken by PHARMAC include management of the schedule of government-subsidised community pharmaceuticals, and promoting optimal use of medicines. The work of PHARMAC includes the development and implementation of public information campaigns, monitoring expenditure and usage patterns of drugs, and facilitating access to drugs with limited availability of clinical trials.

Ask yourself!

1 What professional groups have key responsibilities in clinical teams that can allow QUM principles to be used to optimise treatment outcomes for those with mental illness?

2 What tools might be used to help optimise psychotropic pharmacotherapy by facilitating QUM?

3 What are the positive and negative roles played by the pharmaceutical industry in the QUM effort?

Medication-related problems

In Australia and around the world, considerable and justifiable attention has been directed to medical and psychiatric problems associated with the use of tobacco, alcohol and illicit drugs. Adverse outcomes arising from the use of **medicinal drugs** have not necessarily been highlighted to the same extent. An understanding of medication-related harm that focuses exclusively on adverse drug reactions and drug–drug interactions cannot provide a comprehensive description of the nature and scope of the various problems encountered with the use of pharmacotherapy. It has become clear that health care professionals, including those involved with the care of people with significant mental illness, have needed a framework that can help to develop a much more complete picture of the scope of the problems associated with medicinal drugs. This is even more critical when dealing with vulnerable populations such as older people and children. The most widely adopted system for categorisation of **medication-related problems** is that developed by Strand et al., who proposed eight categories of medication-related problems to define circumstances where people may be exposed to actual or potential medication-related harm. This system defines a medication-related problem as 'any undesirable event experienced by the patient that involves or is suspected to involve drug therapy and that actually or potentially interferes with a desired patient outcome' (Strand et al., 1990, p. 1094). The eight categories of drug-related problems used in this system are outlined in Table 1.2, accompanied by illustrative example.

Table 1.2: Categorisation of medication-related problems

Indication without medication therapy
There is an indication for medication use but patient/client is not receiving a drug for the indication.
Example: Heavy alcohol drinker is not prescribed thiamine to prevent Wernicke's encephalopathy.
Medication use without indication
Patient is taking a medication for which there is no medically valid indication.
Example: Patient/client with acute agitation in hospital (that has resolved) continues antipsychotics after discharge.

Improper medication selection
The patient/client has a medication indication but is taking the wrong drug.
Example: Patient/client with history of prostatic hypertrophy and urinary retention is prescribed highly anticholinergic tricyclic antidepressant.
Subtherapeutic dosage
The patient/client has a medical problem that is being treated with too little of the correct medication.
Example: A diabetic inpatient treated with an antipsychotic develops serious hyperglycaemia but the insulin dosage is not adjusted to accommodate this.
Over-dosage
The patient/client has a medical problem that is being treated with too much of the correct medication.
Example: Patient/client is prescribed a very large dose of an antidepressant drug; the magnitude of the dosage does not create additional antipsychotic benefit but generates severe adverse effects.
Adverse drug reaction (ADR)
The patient/client has a medical problem that is the result of an ADR or adverse effect.
Example: The patient/client develops sexual dysfunction as a result of treatment with an antidepressant.
Drug interaction
Medication–medication, medication–laboratory, or medication–food interaction.
Example: Elevated serum theophylline concentration with toxicity secondary to fluvoxamine treatment.
Failure to receive a medication
Medical problem resulting from not receiving medication intended as part of designed treatment.
Example: The patient/client is prescribed expensive, non-subsidised drug therapy but does not have the prescription filled and does not adhere to the established treatment plan.

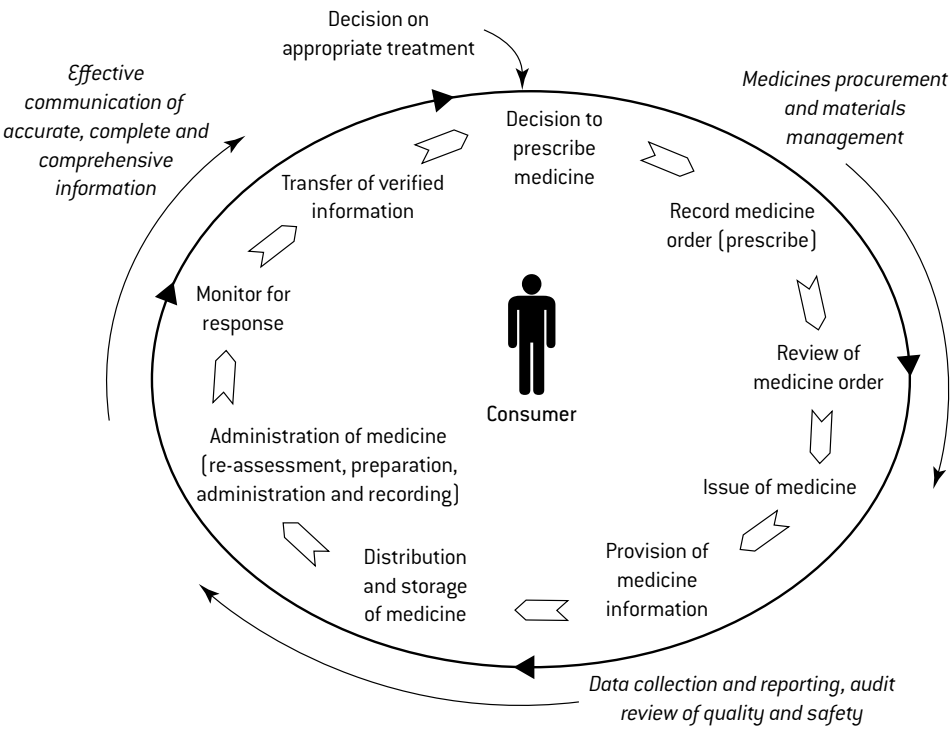
Adapted from: Strand et al. (1990)

The use of this framework by teams involved in the management of pharmacotherapy for people with mental illness allows a structured and systematic approach to preventing **iatrogenic illness** and facilitating optimal treatment outcomes.

Multidisciplinary care and psychotropic pharmacotherapy

Given the complexity of the processes surrounding psychotropic drug therapy, it is not surprising that all of the essential elements that need to be addressed to achieve optimal outcomes and the prevention of drug-related harm (iatrogenic illness) cannot necessarily be addressed completely by any one professional group working in isolation. The complexity of the medication management process is represented in Figure 1.2.

Figure 1.2: The medicines management pathway cycle



The key professional groups that are potentially involved in the use of psychotropic drugs in the treatment of people with mental illness are medical, nursing and pharmacy staff, supported by other professional groups including social workers, psychologists and occupational therapists. Each of these professions has key parts to play, but it is also clear that there is considerable overlap between professional roles, necessitating effective interprofessional communication in the interest of patient care. Examples of these roles are outlined in Table 1.3, although the extent of the roles and responsibilities outlined is not intended to be comprehensive.

Table 1.3: Professional roles in medicines management and psychotropic pharmacotherapy

Medical staff:
Recognise/identify need for pharmacotherapy: prescribe safely and in accordance with legislation.
Monitor for adverse effects and efficacy.
Communicate and discuss with consumers and carers regarding benefits and risks of therapy.
Combine drug therapy with non-pharmacological approaches.
Understand and manage comorbid general medical/surgical and substance use issues.
Participate in audit/research and investigations to advance knowledge.
Nurses:
Recognise/identify need for pharmacotherapy. Where within scope of practice and qualifications, prescribe safely and in accordance with legislation.
Administer treatment to patients/clients, safely and in accordance with legislation.
Monitor for adverse effects and efficacy.
Communicate and discuss with consumers and carers regarding benefits and risks of therapy.
Combine drug therapy with non-pharmacological approaches.
Contribute to management of comorbid general medical/surgical and substance use issues.
Participate in audit/research and investigations to advance knowledge.

(Continued)

Table 1.3: Professional roles in medicines management and psychotropic pharmacotherapy *(Continued)*

Pharmacists:
Recognise/identify need for pharmacotherapy. Advocate and facilitate safe prescribing in accordance with legislation.
Oversee procurement, storage and distribution of treatments to points of care.
Act as authoritative resource for other team members needing information about drugs.
Monitor for adverse effects and efficacy.
Communicate and discuss with consumers and carers regarding benefits and risks of therapy.
Contribute to management of comorbid general medical/surgical and substance use issues.
Participate in audit/research and investigations to advance knowledge.
Other staff:
Provide information to other team members that will assist in processes that allow recognition of the need for pharmacotherapy, and the design of an appropriate treatment approach.
Monitor for adverse effects and efficacy.
Combine drug therapy with non-pharmacological approaches.
Contribute to management of comorbid general medical/surgical and substance use issues.
Participate in audit/research and investigations to advance knowledge.
Overall, it is evident that cooperation between professional groups and open communication between the treating team and the patient/client and/or carers is paramount to achieving high quality outcomes for people with mental illness where pharmacotherapy is to be considered.

Recovery framework for mental health service provision

The **recovery framework** is central to all mental health services and the interventions that mental health workers utilise when working with people who experience mental illness. Mental health promotion is an important part of

recovery since mental health promotion incorporates aspects such as prevention and early intervention and in this context is relevant to all consumers of mental health services. Recovery-orientated practice can be viewed as incorporating early intervention, self-care management strategies, **relapse** prevention and rehabilitation (also known as disability support). These types of interventions ensure routine practice is flexible, hopeful, respectful and meaningful and should underpin such activities as developing care plans with consumers and other stakeholders, therapeutic interventions and organisational policies and procedures. The guiding principles of the recovery framework include:

- working within a recovery framework
- facilitation of recovery and wellness
- working within a philosophy of hope and partnership with consumers and their carers
- understanding consumers in the context of their whole self and not just their illness/disorder
- protecting people's rights and working with people in the context of respect and equity
- ensuring consumers set their own goals and are enabled through the clinical contact to measure their own success
- focusing on strengths rather than symptoms
- facilitation of timely treatment and timely discharge from services
- working in a culturally and gender sensitive manner.

MARY'S STORY

Mary is an 81-year-old woman with a history of ischaemic heart disease and severe osteoarthritis. She was admitted to hospital after a high lethality suicide attempt involving a medication overdose. She takes various medications for her heart (including perhexiline and metoprolol) and has frequent episodes of angina which are partially relieved with sublingual nitrate spray. She undergoes a course of ECT and at a multidisciplinary meeting plans for her subsequent drug therapy are discussed.

During the case conference:

- Her doctor enquires about neurovegetative features and the quality of her interpersonal interactions on the inpatient unit. There is a subsequent decision to prescribe an antidepressant.
- The nurses involved with caring for Mary identify significant sleep disturbance and loss of weight. At handover it is reported that she has significant bradycardia and hypotension that appears to have developed after the introduction of an SSRI.
- A pharmacist contacts nursing and medical staff to report concerns about a drug interaction resulting in beta blocker toxicity – the antidepressant is subsequently changed.
- The unit occupational therapist visits Mary after discharge and find that she is unable to manage her medications at home – the arthritis in her hands is so severe that she cannot even open the packaging. The report from a neuropsychologist indicates that she has significant cognitive impairment, in keeping with the clinical observations of nursing and medical staff. The pharmacist makes arrangements for her medicines to be packed in a dosage administration aid.

Ask yourself!

In relation to Mary's case:

1 Could effective pharmacotherapy be designed and delivered by one discipline alone?

2 What systems can be used to summarise clinical information and facilitate interprofessional care?

3 What aspects of Mary's circumstances mean that multidisciplinary care is likely to assist?

From the consumer's perspective – *How does this feel for me?*

Hospital admissions can be a confusing time – although many people speak to a consumer, it is not always clear to the consumer who undertakes what role.

Although many processes of professional care may be running in the background, to a consumer these may not always be visible and it may seem that there is little progress.

'Why are all of these people asking me all of these questions?'

Summary

Psychotropic drug therapy is clearly among the most important of the treatment modalities available for the management of serious mental illness. A review of the history of psychotropic drug development indicates that the evolution of

new treatment strategies in psychiatry has been rapid in recent times, possibly outpacing the rate at which understanding and knowledge about treatment options is developing. All of this underscores the importance of a truly multidisciplinary approach to drug treatment for mental illness, where a range of practitioners contribute the skills and experience of their disciplines as a part of a comprehensive approach to management. To achieve this, a broad view of the issues relating to the safety and efficacy of drug treatment is required, incorporating attention to all aspects of care where drug-related problems can be observed.

Discussion questions

1 What is meant by the term 'drug-related problem?'

2 Discuss examples whereby various health professionals may contribute specific expertise in designing and implementing pharmacotherapy for those with mental illness.

Test yourself (answers at the back of the book)

1 The first effective antipsychotic drug to be introduced into widespread clinical practice was:
   A clozapine
   B chlorpromazine
   C clomipramine
   D cetirazine

2 Which of the following statements is true with respect to psychological treatments for mental disorders?
   A They are frequently associated with significant biological side effects.
   B They are usually inexpensive and easy to access.
   C There is evidence to support use in a range of clinical settings.
   D They are always less effective than biological treatments.

3 Which of the following is an example of a non-drug form of biological treatment for mental disorders?
   A Cognitive behavioural therapy
   B Psychoeducation
   C Lithium augmentation
   D Transcranial electromagnetic therapy

4 **An initiative by the Library of Congress (USA) and the National Institute of Mental Health (USA) to enhance public awareness of the benefits of brain research, the 'decade of the brain' spanned the period:**

A 1950–59

B 1960–69

C 1900–99

D 2000–09

5 **Established in collaboration with the World Health Organization, a unit of measurement of drug usage used in pharmacoepidemiology is:**

A defined daily dose/1000 population/day

B drug mass/prescription

C mg/kg/day

D mg/month/1 000 000 people

Useful websites

Australian Statistics on Medicine (2009) available at <www.health.gov.au/internet/main/publishing.nsf/content/nmp-quality.htm>

Quality and Medicines Mapping (2007) available at <www.qummap.net.au/>

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