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Pharmacy serving the neighborhood

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Abstract

This article describes the evolution of community pharmacy in the Australian health system, and assesses its current and potential future contribution to health care. A central theme is the unique extent and accessibility of community pharmacy to the public, with a vast and dispersed infrastructure that is funded by private enterprise. The viability of community pharmacy as a retail trade depends on a diversification of its service roles and retention of its product-supply roles. Initiatives by the pharmacy profession, the pharmacy industry and the Australian Government are likely to give community pharmacy an increasingly prominent place in health promotion and primary, secondary and tertiary prevention, especially in relation to the management of chronic diseases.

Introduction

Community pharmacies' roles in health care systems

Community pharmacists are unique in that they make up a large professional body of individuals who are vocationally trained at university level, fully accredited by state and territory registration boards, subject to Australian Government and state and territory government regulations, work in a retail environment handling a multiplicity of health care products, have extensive interactions with other health professionals (especially the medical profession), and balance the delivery of professional services with the supply of a wide range of products and the management of retail business.

Traditionally, pharmacists and pharmacies have been the main suppliers of medicines for the Australian population. Increasingly, however, the pharmacy is becoming an important source of a wide range of health care services in the community. People perceive pharmacists as highly

reliable advisers on many personal health matters, trustworthy independent purveyors of health care products, and steadfast partners of the medical profession. This has been clearly shown in national and international literature on consumers' views and experiences of community pharmacy services (Aslani, Benrimoj & Emerson 1999).

Community pharmacy practice in Australia is highly regulated through state and territory Pharmacy and Pharmacists Acts and through the *National Health Act 1953* (Cwlth). Regulation covers the registration of pharmacists, acceptable courses of study to become a pharmacist, and ownership and location of pharmacies.

Pharmaceutics

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As at 30 June 2002, there were 4926 approved community pharmacies (chemists' shops) in Australia (Pharmacy Guild of Australia 2004). Because of their wide distribution in cities and all major towns, pharmacies have become the most accessible points of contact for individuals with the health care system. People can enter a pharmacy without an appointment, can expect to receive professional attention almost immediately, and retain a high level of control over the extent of their engagement with the pharmacist. In contrast, people who consult a doctor often need to make an appointment in advance, often have to wait, and often surrender personal control in the course of the doctor's history-taking and physical examination. While these two types of professional encounter usually differ in their scope and intent, pharmacy offers a convenient encounter with the health system for many purposes.

The role of community pharmacy is becoming increasingly diversified, with a proliferation of professional services in addition to the traditional supply role of dispensing medications. Six types of community pharmacy services have been identified (Emerson, Whitehead & Benrimoj 1998):

Provision of drug information. Pharmacists provide drug information to patients when medications are dispensed, either in written form (mainly using Consumer Medicines Information) or as spoken advice (Koo, Krass & Aslani 2002). This advice can improve patients' understanding of medications and awareness of adverse effects, and improve adherence to prescriptions, resulting in better health outcomes. Pharmacists can also provide drug information to doctors, which can result in improved prescribing.

- *Provision of 'pharmacist only' and 'pharmacy' medicines.* These are 'over-the-counter', non-prescription medications (for example, bronchodilator sprays to treat asthma and certain stronger pain-killers such as paracetamol combined with codeine). Pharmacists both provide advice on the selection and use of these drugs, and supply them. In doing so, pharmacists make a major contribution to the provision of primary health care (Benrimoj & Gilbert

2002). For 'pharmacist only' medicines, pharmacists must ascertain a therapeutic need. For all intents and purposes, they must dispense these medicines as they would for 'prescription only' medicines, asking appropriate questions and providing advice and information.

- *Clinical interventions.* A clinical intervention occurs where a pharmacist identifies a medication-related problem and intervenes to resolve the problem. Examples of problems managed through clinical interventions are inappropriate prescribing (incorrect agent, dose, dosing schedule, or interactions), adverse reactions, and prescription of drugs which are contra-indicated.
- *Medication management services.* These services include medication reviews, in which a medical practitioner refers a patient to a pharmacist for a review of medication use. The reviews, conducted in patients' homes or in a nursing home, are described below.
- *Preventive care services for patients with chronic conditions.* These services, which are provided in conjunction with patients' own doctors, include screening, health-promotion information, drug information, monitoring of adherence to prescriptions and of factors that affect adherence, and monitoring of intended drug-therapy outcomes and adverse effects.
- *Participating in therapeutic decisions.* Pharmacists may make an active contribution to therapeutic decisions, for example in providing advice on asthma management, weight management, and smoking cessation.

Through these six types of services, community pharmacy makes a major contribution to (a) the care of patients of medical practitioners, (b) the

individuals who present direct to pharmacists to ask for advice, and (c) prevention and public health more broadly. A systematic review of

wellbeing and relief of symptoms for

pharmacist professional services has recently been published and is available through the Pharmacy Guild of Australia (Roughead, Semple & Vitry 2003). The development of these services has been discussed in Australia throughout most of the last decade (Carr & Benrimoj 1996).

Changes in the Workforce of Community Pharmacies

In 2001, the Australian Bureau of Statistics Census of Population and Housing identified 13 902 persons as 'pharmacy workers' (AIHW 2004). This figure is similar to the total number of individuals listed as pharmacists by state and territory registration boards. Census data combined with data on part-time participation in the pharmacy workforce (Health Care Intelligence Pty Ltd 2003) suggest that there were just under 12 000 full-time equivalent pharmacists Australia-wide. The pharmacist workforce is characterised by a high level of female participation (52% of the 'pharmacy workers' enumerated in the 2001 Census were women) and increasing part-time participation. Survey data indicate that just under 80% of registered pharmacists practised in community pharmacy in 2002 (Health Care Intelligence Pty Ltd 2003). Thus there are about 11 000 practising community pharmacists in Australia, or about 9500 full-time equivalents. Two factors have influenced the development of the pharmacy profession. The first is the dichotomy of retailing versus professional activities. Pharmacists in community practice are retailers, at the same time as undertaking a wide range of professional activities in the six types of services described above. The second is the shift from an apprenticeship system to a university-degree-qualified workforce.

Before 1960, the training of pharmacists involved attendance at some university courses on a part-time basis, combined with on-the-job experience in an apprentice role. State and territory pharmacy registration boards issued the qualification 'Pharmaceutical

Chemist' (PhC) to those who fulfilled the requirements for practice. The PhC qualification was apt for the function of pharmacists at the time; they were primarily 'chemists', preparing and dispensing medicinal substances and products, with no other significant clinical responsibilities.

In 1960, the first Bachelor of Pharmacy (BPharm) degree program in Australia was introduced by The University of Sydney. Other universities soon followed with bachelor's degree programs, initially of three years' duration. All pharmacists entering practice in Australia are now required to have at least a four-year Bachelor of Pharmacy (BPharm) degree from a recognised university, and to have satisfactorily completed a period of supervised practice (of one year's duration, or equivalent) in a pharmacy. The BPharm degree and the practicum together confer eligibility for the competency-based registration examinations run by state and territory pharmacy registration boards. Thus a third party, representing the interests of the public, is responsible for registration examinations. Arrangements exist for registration boards to admit overseas-trained pharmacists.

When the BPharm degree was first introduced, the curriculum still concentrated on pharmaceutical chemistry, and pharmacists still saw themselves as 'chemists' rather than as 'pharmacists'. The term 'pharmacist' implies a professional with a range of clinical skills and responsibilities and the training and capacity to interact with patients and others in the community.

Graduates responded in three different ways to the 'chemist' role. Some found it to be a satisfying profession which could be pursued in a fairly conservative manner. Some found it unsatisfying, and left. Others had an entrepreneurial bent, enjoyed business, and developed the retailing side of running a 'chemist's shop'. The development of professional services was constrained by legislation, which prevented

advertising of professional services but allowed pharmacists as retailers to promote their businesses and products.

the supply and distribution of medicines, but inhibited professional services.

Several forces changed the balance between the product orientation and the service orientation in community pharmacy. The emergence of the science of pharmacokinetics in the 1960s and 1970s was a major factor. Pharmacokinetics deals with the interaction between pharmaceutical substances and normal or abnormal physiological systems in the body. The introduction of pharmacokinetics led to an increasing engagement between the discipline of pharmacy and human biology, linking pharmacy with life-science fields such as physiology and biochemistry. Pharmacokinetics also came to occupy an increasing amount of curriculum time in pharmacy-degree programs which had previously concentrated on pharmaceutical chemistry. It strengthened the academic base of pharmacy training, linking pharmacy with the cause and mechanisms of disease. Indirectly, it started a process of re-positioning pharmacy practice in health-care systems, enabling the profession to contribute more prominently to clinical aspects of health care.

By 1975, the pharmacy profession in the United States of America had begun to demand changes to training programs that would give graduates the skills and capacity for a broader range of clinical activities in both community practice and hospital practice. US educational institutions responded by adding courses in pharmacy practice to the existing basic sciences, pharmaceutical chemistry and pharmaceuticals content of their programs. Institutions moved to offer higher degrees, such as the Doctor of Pharmacy (PharmD), in recognition of the new programs' scope and duration. Australian universities simply expanded the content of the BPharm, and in 2000 the BPharm was lengthened from a three-year to a four-year full-time program. Indeed, Australian schools (led by Victoria in 1981) were the first outside the USA to introduce psychosocial sciences

This led to the establishment of good systems for

into their curricula, in recognition of the fact that pharmacists spend much of their time interacting with people. More recently, there has been a move for the basic-science content of pharmacy-degree programs to have a stronger clinical orientation, and for more new areas to be added to the pharmacy curriculum. These include herbal medicines, pharmacogenomics, pharmaceutical management, and the delivery of more advanced clinical services such as disease state management and home medication reviews. Vocational education programs are now producing graduates who are much better equipped to deliver the professional and clinical services that pharmacists are expected to be able to provide, including public-health services such as health promotion and services for primary, secondary and tertiary prevention.

The Role of Community Pharmacies in the Federal Medicines Policy

Through both its traditional role in the supply of medicines and its evolving role in the provision of professional services, community pharmacy makes a critical contribution to the implementation of the National Medicines Policy. The Policy has four elements:

- equitable access to necessary medicines;
- medicines of high quality, safety and efficacy;
- quality use of medicines; and
- a viable and responsible local pharmaceutical industry.

The development of a service orientation in community pharmacy is particularly important for the quality use of medicines (QUM), which is defined in the Box .

The National Strategy for the Quality Use of Medicines places an onus on community pharmacists, as health practitioners and educators, to:

- maintain their own knowledge and expertise;

- use objective information as the basis for decisions and advice;
- improve medication use by recognising and taking action to correct problems associated with medicines;
- enhancing understanding of the risks and benefits associated with medication use; and
- assisting people in making informed decisions about their treatment options.

In order to encourage community pharmacy to contribute to the implementation of QUM policies, the Australian Government has introduced three new funded opportunities, as follows.

- Pharmacists can now claim a payment of 10 cents per prescription item from the Health Insurance Commission for ensuring that written drug information is included in medication packaging, or for providing such information separately. This is known as Consumer Medicine Information (CMI). CMI may be given to the patient as a leaflet produced by the manufacturer (either included in medication packaging or handed to the patient separately) or as a computer printout produced by the pharmacist (Koo, Krass & Aslani 2002).
- Pharmacists who supply medications to the patients in a nursing home can claim \$100 per bed per annum for reviewing patients' medications, under the Residential Medication Management program.
- Pharmacists can undertake Home Medicines Reviews (HMRs) for patients who are referred by their doctors. The referring doctor supplies clinical information to the pharmacist with the patient's consent. Each review may include an interview with the patient, an examination of medicines stored by the patient, an assessment

The Pharmaceutical Benefits

would pay \$23.70, so the cost to the Australian Government (as the PBS subsidy) is \$50.00 per prescription. Of the total of \$73.70, the dispensing pharmacist receives \$10.94, made up of a standard dispensing

Scheme and Local Pharmacies

The introduction of the funded opportunities to participate in QUM reflects a general trend to engage community pharmacy in the implementation of health policy initiatives by providing financial incentives. They build on a long history of fee-for-service for the dispensing function of community pharmacy under the Pharmaceutical Benefits Scheme (PBS).

The PBS subsidises the cost of some 792 generic medications that are available on prescription or for medical practitioners to carry as doctors' bag supplies. Before any medicine is approved for listing on the PBS, it must be approved for use in Australia by the Therapeutic Goods Administration. Applications for PBS listing are usually made by pharmaceutical manufacturers. The application process is very rigorous. The application is assessed by an expert committee (the Pharmaceutical Benefits Advisory Committee, or PBAC) which examines the clinical effectiveness, safety, and cost-effectiveness of the proposed new listing in relation to other treatments (see Sansom in this issue *page 194*). If the PBAC recommends listing, the medicine is considered by the Pharmaceutical Benefits Pricing Authority, and a price is negotiated between the manufacturer and the Department of Health and Ageing. The listing is then considered by the Australian Government, with final approval coming from the Minister for Health.

For example, the negotiated price plus pharmacists' fees for the drug azathioprine (which in different doses has a wide range of indications, from the treatment of cancer to the treatment of inflammatory bowel disease) is \$73.70 for the standard prescription quantity of 100 tablets, each containing 50 mg of the drug. A patient

fee of \$4.66 for a ready-prepared medicine plus 10% of the net cost of the drug. At present, most patients make a co-payment of \$23.70 for each PBS prescription item, and the remainder of the cost is covered by the PBS subsidy. Patients with low incomes

and patients who receive sickness benefits make a co-payment of \$3.80. The co-payment is higher if a particular brand of a PBS item is specified in the prescription, and if the specified brand has a higher price than other brands of the same drug. A 'safety net' protects both patients and their families from the need for excessive expenditure on PBS medicines. From the beginning of 2005, PBS co-payments will increase by \$4.90 for general patients and 85 cents for concession patients. The Australian Government's expenditure on the PBS has increased markedly. In 2002–03, there were 158.5 million community PBS prescriptions, an increase of 2.6% over the 2001–02 figure of 154.5 million and of 7.4% over the 2000–01 figure of 147.6 million. These figures do not include repatriation PBS prescriptions or doctors' bag prescriptions (15.4 million and 0.5 million respectively in 2002–03). The cost to the Government of PBS prescriptions (excluding repatriation PBS prescriptions) rose from \$4.18 billion in 2000–01 to an estimated \$4.57 billion in 2002–03 (a 9.4% increase). Total patient contributions rose from \$744 million to \$860 million (a 15.6% increase) (AIHW 2004).

Given these increases, it is not surprising that the Australian Government has been developing policies to contain the cost of the PBS. Changes to the PBS inevitably affect pharmacists' incomes, because pharmacists' mark-ups on PBS medications is fixed at a maximum of 10% (the percentage is lower for some high-cost drugs). An instance of a recent change is the introduction of the Therapeutic Group Premium Policy, whereby the PBS provides a subsidy up to the price of the lowest-priced drug in a group of similar drugs which have been shown to be of similar safety and produce similar health outcomes. Examples of such drugs are H₂-receptor antagonists (which suppress gastric acid secretion) and dihydropyridine derivative calcium-channel blockers (used in the treatment of hypertension, among other things) (Health Insurance Commission 2004). Agreement is currently being negotiated; the Third Agreement covers the period from 1 July 2000 to 30 June 2005 (Department of

things) (Health Insurance Commission 2004). If a drug other than the lowest-priced drug is pre-scribed, the patient bears the additional cost. The pharmacist's 10% markup is based on the lowest-priced drug in the group. Another instance is the Brand Premium Policy. This applies where manufacturers develop generic equivalents of drugs for which original patent restrictions have expired. Manufacturers can apply to have generic equivalents listed on the PBS, and these are usually cheaper than the originator drugs. The PBS provides a subsidy up to the price of the lowest-priced brand, so the price is then set by a generic rather than the originator brand (Health Insurance Commission 2004).

Alongside the changes in the PBS, pharmacists in community pharmacies face competition from internet marketing of medicines. For some consumers, internet marketing can be an effective medium both for supply of and the provision of information about medicines. However, its role in the Australian medicines market has not yet been evaluated. As far as we are aware, no data are available on the volume or value of internet sales or trends.

Proposed Community Pharmacy Directions

Future directions for community pharmacy are influenced by economic factors such as changes in the PBS and the introduction of new incentives, and by professional factors. Every five years, an agreement is negotiated between the Australian Government and the Pharmacy Guild covering the directions for the forthcoming five years. The agreement is a blueprint for the development of professional services and other activities of community pharmacy. It sets out the remunerated roles for community pharmacy, and thus becomes the determinant of sustainable practice for the profession. The Fourth Community Pharmacy

Health and
Ageing 2003).

Circumstances of the Economy

Pharmacy sales can be grouped as follows:

- Sales of prescribed medications
- Sales of non-prescription products which are sold only by pharmacists. These include Schedule 2 (S2) medicines (such as large packs of simple analgesics such as paracetamol — small packs are available from other retailers, such as supermarkets) and Schedule 3 (S3) medicines, ie, products which cannot be obtained from other outlets in any form or quantity (eg, salbutamol inhalers for asthma). For the latter, the sale must be supervised directly by a pharmacist. Regulations for the sale of S2 and S3 medicines vary slightly among states and territories.
- Sales of other goods in pharmacies, ranging from wound dressings to photography goods. Most of these are obtainable from other types of retailers.

Sales of prescription drugs involve acting on the instructions of a medical practitioner. Sales of non-prescription (S2 and S3) drugs involve the pharmacist in primary care, or involve the patient in self care, or both. For over a decade there has been an international trend to for products to shift from prescription to non-prescription status (Blenkinsopp 2004).

Despite this trend, the proportion of revenue from sales of prescription drugs is going up relative to revenue from non-prescription drugs and other goods. Sales of non-prescription drugs are fairly constant, while sales of other goods are declining.

However, profits from prescription-drug sales are declining mainly because margins from the dispensing of medicines on the PBS are declining. Only the large volume of sales prevents overall prescription-drugs profits from declining further. Profits from sales of non-prescription drugs are growing marginally (Pharmacy Guild of Australia 2003).

The reliance on the Australian Government as the single payer for PBS prescription medicines (apart from patient co-payments) is a major threat to pharmacy incomes. In the 1960s, the pharmacist's

markup on a PBS prescription was 50% of the net medication cost. This decreased to 33%, and (as described above) it is now 10%, or less for high-cost drugs (Health Insurance Commission 2004).

These trends have caused the pharmacy industry to examine opportunities for a broader remuneration base that is less reliant on the volume generated by the supply of PBS medicines. The industry has a strong interest in an expansion of remunerated service roles, but wishes to retain the product-supply role because the product and service roles are mutually reinforcing. A combination of product-supply and service roles is therefore likely to continue.

The owners of community pharmacies are represented by the Pharmacy Guild of Australia, and the pharmacy industry negotiates with the Australian Government through the Guild. The strength of the Guild depends, in turn, on the strength of the network of community pharmacy owners. At insistence of the Guild, payments for services are made to pharmacy owners. The pharmacists who supply the services that attract the remuneration may be employees or contractors of owners. Government policy is therefore effected through pharmacy owners, rather than the profession as a whole. The only exception to this arrangement is payment for Residential Medication Reviews, which is made direct to the pharmacists who provide the services.

On behalf of its members, the Guild is seeking opportunities to extend the range of services that community pharmacy can supply in implementing QUM policy. The Guild has linked recent initiatives to the quality-improvement aspects of QUM policy. To this end, it has supported the introduction of the Quality Care Pharmacy Program (QCPP). The QCPP is a mechanism for assuring Government and the public that individual pharmacies provide high-quality services. As negotiated between the Guild and the

Australian Government, pharma-

cies that register and attain accreditation with the QCPP attract incentive payments totalling about \$15 000. The QCPP makes use of competency standards and professional practice standards developed by the Pharmaceutical Society of Australia (PSA 2004a; PSA 2004b).

In addition to drug information, Residential Medication Reviews, Home Medication Reviews, and QCPP, the Guild is exploring other possible avenues for strengthening the role and service-remuneration base of pharmacy in the healthsystem. These include increasing involvement in chronic-disease management, through more active participation in the management of conditions such as asthma and diabetes mellitus; more active participation in preventive services, such as weight reduction and smoking cessation; assessments of concordance with treatment recommendations; case conferencing with other health-care professionals; and quality-improvement activities. Overall, economic influences on community pharmacy are likely to promote integration of normal professional practice into a business orientation that is appropriate for a retail setting. They are also likely to cement an interdependence that has grown in the last 10–20 years between a product orientation and a service orientation.

Factors relevant to one's career

Two major professional service factors are likely to influence future directions for community pharmacy.

The first is an increase in cognitive pharmacy services, that is, professional services such as medication management and clinical interventions. Pharmacists' capacity to deliver these services is likely to be strengthened as cohorts of new graduates who have received appropriate vocational training gradually replace older practitioners who were educated as 'chemists'. Fulfillment of accreditation requirements will entitle practitioners to claim remuneration. This provides an incentive to assure the quality of cognitive services.

The second is an increasing emphasis on quality-assurance systems. As part of the overall tightening of quality and safety in health systems,

there is likely to be increasing pressure for pharmacy to have a formal service-quality framework. This will build on the pharmacy industry's substantial experience of competency standards and professional practice standards (PSA 2004a; PSA 2004b), with incentives and support through the QCPP and other programs. A recent National Competition Policy Review of Pharmacy has already recommended that state and territory pharmacy registration boards "should implement competency-based mechanisms as part of re-registration processes for all registered pharmacists" (Wilkinson 2000).

The development and uptake of quality-assurance systems is at the core of a debate about the deregulation of pharmacy, which has been continuing for at least two decades. The stimulus for the debate was an attempt by the British pharmacy chain, Boots the Chemist, to enter the Australian market with multiple retail outlets and non-pharmacist ownership. The Boots attempt was unsuccessful, but it prompted Australian supermarket chains to pursue the same perceived market opportunity. The pharmacy profession has repeatedly won the deregulation argument on public benefit grounds (Wilkinson 2000), with strong government and non-government support in the media (see, for example, Brooker 2004). The purported public benefit of independent professional ownership is the assurance of safety and quality; the Pharmacy Guild of Australia is encouraging community pharmacists to work together as a network of independent professionals who have a capacity to implement and sustain safety and quality standards (PSA 2004a; PSA 2004b).

Conclusion

Pharmacy education in Australia has already responded to changes in the health

system, and has led changes in the pharmacy profession to equip graduates for new professional roles. These changes are likely to be consolidated in the near future

Future agreements between the Pharmacy Guild of Australia and the Australian Government will provide both a policy framework and a remuneration framework for community pharmacy, anticipating an increasing recognition of the potential of community pharmacy to make a major contribution to the implementation of health policy through health promotion and primary, secondary and tertiary prevention.

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