The nature, extent and impact of triage provided by community pharmacies in Victoria

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### Abbreviations

<table>
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<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tr>
<td>A&amp;E</td>
<td>Accident and emergency</td>
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<tr>
<td>AMH</td>
<td>Australian Medicines Handbook</td>
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<td>ASMI</td>
<td>Australian Self Medication Industry</td>
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<td>C&amp;MH Nurse</td>
<td>Child and maternal health nurse</td>
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<tr>
<td>CAMs</td>
<td>Complementary and alternative medicines</td>
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<tr>
<td>ENT</td>
<td>Ear, nose and throat</td>
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<td>Flu</td>
<td>Influenza</td>
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<td>GP</td>
<td>General practitioner</td>
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<tr>
<td>HSUS</td>
<td>Health service utilisation studies</td>
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<tr>
<td>MAS</td>
<td>Minor ailment scheme (UK)</td>
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<tr>
<td>NHS</td>
<td>National Health Scheme (UK)</td>
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<tr>
<td>OTC</td>
<td>Over-the-counter</td>
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<tr>
<td>PCA</td>
<td>Pharmacy counter assistant or general staff member</td>
</tr>
<tr>
<td>PCT</td>
<td>Primary care trust (UK)</td>
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<tr>
<td>QCPP</td>
<td>Quality Care Pharmacy Program</td>
</tr>
<tr>
<td>SCERH</td>
<td>Standing Committee on Ethics in Research involving Humans</td>
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<tr>
<td>TCAs</td>
<td>Team care arrangements</td>
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<tr>
<td>TNT</td>
<td>Telephone nurse triage</td>
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<tr>
<td>UK</td>
<td>United Kingdom</td>
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<tr>
<td>USA</td>
<td>United States of America</td>
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<tr>
<td>WiC</td>
<td>Walk-in-centre</td>
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1 Introduction

1.1 Context
This project aimed to fill a gap which exists in research about an important service provided by community pharmacies: the provision of primary health care, and of triage in particular. Triage is defined as the sorting and allocation of treatment to patients and especially battle and disaster victims according to a system of priorities designed to maximize the number of survivors. The definition also extends to include the sorting and prioritising of non-emergency patients for treatment.

Very little has been done to explore how often and how well pharmacists in Australia make decisions to either treat or refer consumers to other health care professionals, and the impact of these decisions, despite this being undertaken regularly in response to enquiries from consumers or during the dispensing processes.

1.2 Aims of the research
Triage is a central activity in every Australian community pharmacy yet it has only been partially documented in a handful of research projects, so the main aim of this research was to explore the nature and extent of triage provided in community pharmacies in Victoria, and to attempt to determine the impact of this ‘service’.

In order to put the research into context, a literature review of triage provision by pharmacists and some other health care professionals was to be undertaken. In addition there was to be an assessment of the need to develop a prototype triage ‘tool’ or decision-support system to assist pharmacists in the provision of primary health care services. Depending on the extent to which triage provided in community pharmacies resulted in referrals to other health care providers, particularly general medical practitioners (GPs) and ambulance services, a survey was to be undertaken to determine their views on the nature and extent of those referrals. Of particular interest was the incidence of “reverse triage” whereby consumers are referred to community pharmacies by GPs, something that has been reported in the United Kingdom (UK).

1.3 Intended outcomes
The main intended outcome of this research was to better understand the nature and impact of primary health care provided by community pharmacies, in Victoria as an indication of the situation which applies across Australia. Since details about the ailments for which pharmacy advice is sought in Australia is largely unknown, this project sought to determine the current situation. It was also intended that ways to improve the role of community pharmacies in the provision of primary health care were identified, along with means for the greater recognition of the current primary health care role of community pharmacies.
2 Literature review

The primary source of literature related to the provision of primary health care by pharmacists and pharmacy staff internationally. With the assumption that this approach would provide an incomplete picture of triage services, a second stream of literature was sought, which related to the provision of triage by nurses and nurse practitioners, and by other health professionals.

A detailed search of the literature was conducted using both sources and took into account peer reviewed literature, Australian and international non-peer reviewed literature, and ‘grey’ literature published between 1975 and 2009. Full searches of the peer reviewed literature were conducted using the following databases: Medline, International Pharmaceutical Abstracts and Cochrane Library.

2.1 Primary health care

In many Western countries, there is an increasing demand for primary health care services. To help meet this demand and provide greater options to the public, new services are emerging and existing services are expanding.

Triage is an important aspect of primary health care involving the assessment of a patient’s presenting health complaint, the selection of the most appropriate means of treatment and the prioritisation of that person’s care amongst the care of others. All health professionals make triage decisions when a patient or the patient’s agent comes to them seeking health assistance. Part of the triage decision is whether the patient is best referred to another health professional, one who can provide more appropriate care.

It is commonly known and accepted, amongst the pharmacy profession at least, that Australian community pharmacies are regularly approached by individuals for advice about how to manage symptoms or other health issues, independently of prescription-filling. This has been a role of community pharmacies for very many years in Australia but it is a role that seems to have gone largely unrecognised in recent times. The provision of advice about how best to manage health issues – whether with a medical product or device or with non-drug measures, whether to seek assistance from a doctor or other health professional, and with what sense of urgency – is a primary health care service commonly provided by community pharmacies, and is essentially a form of ‘triage’.

As new triage services are emerging, in the form of telephone triage, such as Nurse-on-call and 13 Health in Queensland, in the form of retail-based health clinics in the United States of America (USA) and now in Australia (Revive Clinics), and in the form of walk-in-centres (WiCs) in the UK and in Australia, there is a need to recognize and compare the role of the community pharmacy as an established, albeit less recognised and standardised triage service. This is particularly important because almost all of the new triage services are being provided by nurses or nurse practitioners, not pharmacists, and the range of health-related issues being addressed replicates to a very large extent the services traditionally provided through community pharmacies. For example, the 93 WiCs currently in England deal with minor illnesses and injuries, such as:

- infection and rashes
- fractures and lacerations
- emergency contraception and advice
- stomach upsets
- cuts and bruises
- burns and strains

The list of ailments the new WiC being established at the Canberra hospital is expected to deal with is equally broad, despite there being 63 “walk-in community pharmacies” in the Canberra, Queanbeyan and Yass area.

Interestingly, in the UK there is also recognition of the primary health care capabilities of community pharmacies by way of an NHS-supported, community pharmacy minor ailment scheme (MAS). No such scheme exists in Australia.

Recent research in Australia showed that the resources devoted to coughs, colds and other minor ailments could free-up the equivalent of 1,000 full time GPs to treat more serious health problems if these minor ailments were dealt with through community pharmacies. The study was commissioned by the Australian Self Medication Industry (ASMI) and was based on the ten most frequently treated minor ailments which account for 58% of all GP attendances attracting Medicare benefit for minor ailments, and which represented some 15 million GP consultations in 2007-08.
2.2  Incidence and nature of pharmacy advice-seeking

Even prior to the implementation of the MAS in the UK\textsuperscript{19} studies there had determined that an average of 5-10 customers per day present to the community pharmacies with symptoms\textsuperscript{21, 22} while an average of 8 customers per day came with pharmacy-only medicine requests.\textsuperscript{23} In Sweden, a study estimated that 4 million customer visits to community pharmacies per year involved self-care advice.\textsuperscript{24}

In Australia, a national study based on pharmacist-recorded estimates suggested that as many as 80 million customers consulted with community pharmacies for health advice each year.\textsuperscript{3} Indeed, Australian community pharmacists frequently detect symptoms among customers that may indicate potentially serious medical conditions.\textsuperscript{25, 26, 4} A West Australian pilot study\textsuperscript{26} found that a single community pharmacy identified 32 significant medical or medication-related problems in 31 patients over an 85-day period: 12 of these problems were rated of very high clinical significance and 19 of high clinical significance, as judged by the pharmacist. Fifteen required urgent medical attention (within 24 hours) and 12 were moderately urgent, requiring medical attention within one week.

The Australian Bureau of Statistics undertook a National Health Survey in 2004/2005.\textsuperscript{27} Information was collected in the survey about the actions people had taken recently for their health which showed that nearly a quarter (23%) of Australians living in private dwellings consulted a GP in the previous two weeks and 14% had consulted a health professional other than a GP or a dentist. Of those consulting other health professionals, 29% consulted a ‘chemist’.

These data raise questions about why people choose to use community pharmacies for advice or direction about their health issues. Using non-participant observations of community pharmacy interactions in the UK, Hassell et al.\textsuperscript{8} found that patients seek assistance from pharmacies for the treatment of minor ailments, sometimes before going to the general medical practitioner (GP) and sometimes in preference to the GP, depending on their familiarity with the condition and perceived severity. Working people found a visit to the pharmacy more convenient, avoiding GP appointments and waiting times. For minor ailments such as coughs, colds, sore throats, aches and pains, many customers preferred not to “trouble” the doctor.

Some customers were aware that pharmacies could advise them about whether or not it was necessary for them to see a doctor. This ‘filter’ effect is an important aspect of pharmacy triage which can be likened to the ‘gatekeeper effect’ attributed to telephone triage services.\textsuperscript{8}

Some studies suggest that people tend to overestimate the level of care required. For example, studies in inner London suggest that between 2\textsuperscript{28} and 8\textsuperscript{29} of patients triaged by a nurse at hospital accident and emergency departments could have been managed by a pharmacist. In the more recent of these studies,\textsuperscript{28} it was found that 98\% of patients who could have been assisted by a pharmacist attended accident and emergency departments within community pharmacy opening hours.

In another UK study of patients who were interviewed in GP waiting rooms claiming to be there about a minor ailment,\textsuperscript{30} it was determined that in 30\% of cases the GPs subsequently agreed that the patient’s condition was minor and could have been managed alone. More interestingly, in 14\% of cases the GPs agreed that the patient’s condition was minor, but could not have been self-managed for various reasons. Their explanations for this stance were that the most suitable treatment was only available through a GP and/or that there was a psychosocial contributor to the ailment or overestimation of symptoms, and/or that the patient could not have been expected to make their own self-diagnosis. The authors conclude that community pharmacists are a well-placed alternative in many instances where patients need assistance for minor ailments from a health professional but not necessarily a GP.

There is an aspect of triage which is unique to community pharmacy, and that is the ‘proxy consultation’ whereby customers seek pharmacy advice on behalf of a third party, such as a family member, friend or neighbour. Proxy consultations in the UK are known to comprise somewhere from 27\% to 43\% of pharmacy visits for health-related advice.\textsuperscript{15, 31, 32, 33} It is not known if proxy consultations occur to the same extent in Australia.

2.3  Ailments for which pharmacy advice is sought

An Australian study\textsuperscript{34} that determined where people intend to seek advice for particular minor ailments found that over 50\% of respondents would opt to self-manage minor ailments such as headache, nasal congestion, sore throat and gastrointestinal complaints with a product of their own choice. At least 30\% of respondents would
request pharmacy advice to help manage a head cold, chesty cough, nasal problems, sore eyes, diarrhoea, constipation and rashes/bites, whereas only 10 to 15% of respondents to a similar survey in the USA said they would seek advice from a pharmacist for nasal congestion, diarrhoea, constipation, gastrointestinal symptoms and rashes. The USA data goes back several years and the situation is now quite different because there is a rapidly increasing occurrence of retail-based health clinics mostly run by nurse practitioners.

Pharmacy advice-seeking behaviour has been recorded in the UK, Sweden, and the USA. In the Swedish study, staff in community pharmacies recorded the main reasons why customers visited and found it was more common for a customer to visit for self-care (58%) than for prescription dispensing (42%). Of all customers visiting for self-care, 10% received professional advice from pharmacy staff.

Non-participant observations were used in one of the UK studies involving ten community pharmacies over a five-day period. These studies found that an average of eight pharmacy-only medicine request and five symptom presentations were made each day. A subsequent study suggested that the ‘average’ pharmacist in the UK advises around ten customers each day on minor ailments – double the rate found in the earlier studies.

In the USA, research from several years ago revealed that approximately 15% of customers visiting community pharmacies in Cincinnati and California asked medical-related questions. A recent UK study, which explored patients’ use of GPs and community pharmacists in minor illness showed that GPs believed only a small proportion (7%) of visits made by their patients could have been managed by a community pharmacist. The proportion of unnecessary visits to the GPs was significantly higher amongst young adults, those presenting with new medical problems, and those consulting about a child’s health. Skin and musculoskeletal problems were the most common causes of the unnecessary visits.

The relevance of data on advice-seeking behaviour is limited by the currency of the data (the UK studies are more than ten years old) and the region in which it applies, such as in the UK and Sweden where the health systems have many distinctively different components and funding models when compared to Australia’s system. For example, the relative availability of medicines (such as prescription versus over-the-counter) and the financial subsidisation of the medicine or medical consultation will vary, and this will affect the results of advice-seeking studies.

2.4 Triage decision-making in community pharmacy

In community pharmacies a pharmacy counter assistant (PCA), a pharmacist or both will attend to a person who approaches the pharmacy for health-related assistance. Studies in Australia and New Zealand have found that around two-thirds of non-prescription requests are dealt with by PCAs. In the Australian study, the percentage of non-prescription medicine requests handled by pharmacists was 25.1%, with a further 9.5% of non-prescription medicine requests referred by PCAs to pharmacists.

In a recent study in Queensland respiratory medicines and analgesics were the most common purchases, and pharmacists were observed to consult in 14.7% of the monitored purchases. Referral to pharmacists by PCAs accounted for a further 13.0% of cases.

The New Zealand study found that pharmacists were more likely to be involved in first-time purchases of over-the-counter medicines and in cases where the customer did not have a specific product in mind when approaching the pharmacy. Repeat purchases and/or pre-determined purchases were usually handled by PCAs.

It has been reported that, in the UK, whether or not a pharmacist is involved in cases of symptom-presentation depends on the type of symptoms involved: pharmacists were involved in 57% of consultations concerning red eye and in 38% of consultations regarding diarrhoea. The authors suggested that this was due to the PCA’s concern for the potential seriousness of the condition. Pharmacists were less involved in cases of indigestion (25%), vaginal thrush (23%), and head lice (17%), explained by a customer’s product knowledge and prior experience in selecting treatment and/or in the PCA’s higher level of confidence in managing such cases.

Similarly, Bissell et al found that PCAs were more likely to call on pharmacists for input when managing eye and gastrointestinal symptoms than for respiratory or ear, nose and throat symptoms.

Under the UK’s community pharmacy minor ailment scheme (MAS), pharmacists have been formally recognized for their ability to prescribe over-the-counter medicines from a limited National Health Scheme (NHS) formulary free-of-charge for minor ailments, which include head lice, cough, nasal symptoms, hay fever, sore throat, high temperature, earache, headache, constipation, diarrhoea, dyspepsia and vaginal thrush. While pharmacists are
free to make a professional judgment about whether or not to prescribe a medicine, the formulary is limited to only first-line treatment options. Perhaps restrictive in some cases, all treatments are evidence-based and such a scheme may be capable of providing standardised quality care.

Customers in at least one MAS are given a ‘passport’ at the pharmacy when they first access the scheme in which their details are recorded, along with information about the minor ailment(s) treated which is entered by the pharmacist.

A scheme of this sort is unlikely to be implemented in Australia because of the significantly different way in which GPs are remunerated: in the UK most GPs are self-employed and hold contracts, either on their own or as part of a partnership, with their local primary care trust (PCT) to see a fixed number of patients. In Australia there is no equivalent to the PCT, so GPs derive income according to the number patients seen by them, and would be unlikely to allow some of those patients to dealt with solely by community pharmacists.

### 2.5 Triage tools

Many of the new triage services being introduced around the world, most of which are nurse-based, require that service provision is standardised for quality. In the USA, nurses practitioners in retail-based health care clinics are authorized to provide services from a limited ‘menu’ (such as, specific minor ailments and immunisations), following strict protocols.

Telephone triage services are usually delivered by nurses and rely on decision support software containing hundreds of algorithms and guidelines developed by expert GPs and specialists. For example, there are 550 guidelines in the Centramax software used at HealthDirect in Western Australia of which 149 are “activated” (appraised and modified) for local use. The ten most frequently used guidelines are those for abdominal pain, headache, chest pain, vomiting, neurological deficits, back pain, rash, dizziness, skin lesions (abrasions, lacerations, bites and stings) and diarrhoea in adults. For children the list includes fever, cough, colds and head trauma but not chest pain, dizziness, back pain and neurological deficits.

Research into the quality and effectiveness of telephone nurse triage has shown it to be effective and safe but also that there is lower satisfaction amongst patients who received nurse telephone consultations compared to those who contacted GPs. There is no information available about how the quality and effectiveness of health-related advice provided in community pharmacies compares with telephone nurse triage, or other forms of nurse triage, but that information should be obtained now that there is considerable overlap developing between the two sources of assistance for members of the community.

There are many algorithms and guidelines available for use in community pharmacies in the UK and Australia, particularly for emergency contraception and other Pharmacist Only medicines, such as fluconazole and orlistat. There is also a current textbook which has numerous algorithms to guide community pharmacists and PCAs. Further details are provided in Appendix H.

Even in situations where algorithms and guidelines are available for use in community pharmacies they are not always used particularly in situations where customers ask for specific products. Research in the UK indicates that the “culture” of particular pharmacies influences the level to which questions (associated with the protocols) are asked. In addition, protocols were seldom followed when requests for “everyday” medicinal products were made, particularly if those products were also sold through non-pharmacy outlets.

A recent report from a research team in Sweden indicated that use of an information technology-based decision support system provided a valuable source of support but this system was essentially based on clinical guidelines provided electronically rather than a set of algorithms.

Interestingly, medical algorithms for a wide range of common ailments are readily available but it has been reported such diagnostic aids are far more likely to be used by GPs as reference tools rather than in day-to-day use: most rely on their own knowledge and training.

It would seem at this stage that there is not a need to develop a whole set of new algorithms for use in community pharmacies – the many current guidelines and existing algorithms are well-placed to provide any support required – but there is a need to develop processes whereby relevant guidelines and algorithms are used effectively and efficiently.
2.6 Referrals

Irrespective of the diagnostic methods used, pharmacists in many parts of the world often refer customers to other health professionals, most commonly GPs, for a range of ailment types, depending on the severity of the condition and on the availability of the most suitable treatment, such as the perceived need for a Prescription Medicine.

Pharmacists in Australia are expected to accept responsibility for assessing the needs of the individual and identifying an appropriate course of action, including identifying circumstances where the assistance of other health professionals such as medical practitioners is indicated.\(^5\)

A national survey of pharmacists in Australia several years ago estimated that ~4 million referrals from community pharmacies occur each year.\(^5\) In the UK, direct referrals of patients from community pharmacies to medical practitioners have been found to range from 6% to 15% of all customer approaches to community pharmacy for advice or a product,\(^8,31,36,58\) and conditional referrals may be offered more frequently. A Swedish study found that 15% of pharmacy customers seeking advice were recommended to see their doctor, 53% directly and 47% conditionally.\(^37\)

Referral rates appear to vary according to the nature of the health-related issue, with one study finding that no patients with head lice or acne were referred to GPs, whereas patients with cystitis and vaginal thrush were referred more often.\(^31\)

There are many possible reasons why pharmacy staff may make referrals to another health care practitioner, such as symptoms which could potentially mask a more serious condition, the duration and severity of symptoms, if the patient has already tried an over-the-counter (OTC) medicine that has failed to work, and the pharmacy staff believe a prescription-only product is warranted. Referrals are also made when pharmacy staff do not feel they have sufficient information or confidence to deal with the condition,\(^14,32\) and in situations where dispensing records are “data mined” to identify patients with sub-optimal disease control.\(^59\)

Interestingly, Hassell et al\(^8\) identified that one motivation for community pharmacist referrals to medical care was as a means to manage risk in cases of doubt or uncertainty—a ‘play safe’ attitude.

Despite the considerable number of referrals that seem to occur, it has been reported in Australia that the health care professionals to whom the patients were referred do not recognise the extent to which such referrals are occurring, unless the referrals were made in writing.\(^60\) In addition, an examination of the provision of primary health care (“pharmaceutical care”) in Denmark several years ago revealed that there was almost no documentation of referrals.\(^61\)

The Pharmaceutical Society of Australia’s website mentions the use of referral forms, and notes that “use of the forms enhances the service pharmacists provide to consumers, and minimises the possibility of inaccurate or incomplete information being relayed back to the GP. The forms also add continuity of care for those who need to consult more than one health care professional, and instil confidence in the consumer that they are receiving advice from the appropriate health care professional.

2.7 Quality assessment

The outcome measures of triage can include adherence to recommendations (such as following treatment protocols and the take-up of referrals), successful clinical outcomes of the actions taken (which can be self-reported), and patient satisfaction.

In relation to the take-up of referrals, Blenkinsopp et al\(^62\) evaluated the usefulness of a notification card to be handed to patients for pharmacy-to-GP referrals in a pilot study involving six community pharmacies and 15 GPs in two small towns in the West Midlands, UK. Pharmacists issued cards to patients with a range of symptoms, including 14 (12%) with suspected adverse drug reactions. Interestingly, only 9 of those 14 adhered to the recommendation to see their GPs.

It is known that written referrals (compared to just suggestions made during conversations with customers) about results obtained in screening processes for type 2 diabetes resulted in a greater take-up of those referrals.\(^62\) And it is also known that a lack of written referrals can lead to misunderstandings about what customers have been told when these customers subsequently seek further advice from GPs.\(^64\)
Bissell et al.\textsuperscript{65} and Ward et al.\textsuperscript{66} developed criteria to measure the appropriateness of advice and counselling provided in community pharmacies in the UK. Before developing these methods, a review was undertaken that revealed several methods could be used – such as covert techniques (use of ‘mystery shoppers’); adaptation of health services utilisation studies (HSUS); self-audit; and some form of observation (audio recordings, video recordings and non-participant observations) – and decided to develop a new set of appropriateness criteria.

Eight were developed:

1) General communication skills
2) Information gathered by pharmacy staff
3) Process of gathering information
4) Issues considered by pharmacy staff before giving advice
5) Rational content of advice given by pharmacy staff
6) Methods of giving advice
7) Rational product choice made by pharmacy staff
8) Referral

The criteria which were developed follow the logical steps in a consultation undertaken by health professionals and, interestingly, three did not meet pre-defined standards when subjected to reliability testing:\textsuperscript{66} rational content of advice, rational product choice and referral. Further development was recommended to refine these criteria but nothing further was apparently reported, and none measured outcomes.

Giesen et al.\textsuperscript{48} assessed the appropriateness of telephone triage recommendations made in the Netherlands using ‘mystery callers’ or simulated patients with set clinical cases or vignettes, such as diarrhoea. A panel of GP experts formulated the vignettes, along with an ideal urgency categorisation for each: life-threatening; acute; urgent; and routine. Two-thirds of the nurses’ recommendations were in agreement with the experts’ urgency rankings, while 12.5% of the calls the nurses ranked with higher urgency and 19% the triage nurses ranked with lower urgency. The data showed that training lowered the chances that a nurse underestimated the urgency of a case.

Other researchers have evaluated the appropriateness of telephone triage recommendations made during real calls to the service. In Sweden, Marklund et al.\textsuperscript{24} had either two GPs and one primary health care nurse or one GP and an accident and emergency specialist evaluate the nurses’ computer-assisted documentation of 333 calls and found that 98% were adequate, with the remaining 2% of cases recommended to an unnecessarily high level of care.

Telephone consultations between callers for same-day appointments and triage nurses at a large general practice group in the north of England were audio-taped.\textsuperscript{67} Both a GP and an experienced triage nurse assessed the calls, separately for comparison of assessors. Not only was the appropriateness of the triage recommendation judged, but also the nurses’ information gathering and identification of the presenting problem. While there were differences between the nurses’ and GP assessors’ judgements about the quality of information gathering, both assessors judged 91% of triage recommendations as appropriate with about 6% safe but inappropriate (that is, overestimated). Around 3% of triage recommendations were judged as potentially dangerous, mostly due to insufficient questioning (such as to exclude meningitis). The authors concluded that routine quality assessment of 1% of triage calls would identify areas for improvements to training, supervision and clinical guideline review.

### 2.8 Appropriateness of advice

The use of expert panels to judge the appropriateness of triage recommendations has been discussed in the literature. For example, Marklund et al.\textsuperscript{24} have stated: “Any study of the appropriate level of care is problematic due to difference in opinion regarding the best way of handling various medical problems. This results in differing advice for one and the same problem,” and that a “basic requirement for the expert panel judgment idea to work is that there consensus is reached.” The literature suggests that consensus within an expert group can be achieved where the judgment is based on the decision support guidelines employed by the triage personnel, rather than on the individual views of the experts.\textsuperscript{24}

From what has been reported in the literature, few, if any studies have investigated pharmacy triage in relation to the clinical outcomes. Because the primary health care service in community pharmacies in Australia is almost always provided free-of-charge, it is possible that customers find any assistance is “helpful” and this may reflect the positive satisfaction levels that are achieved.

However, Choice in Australia conducted “undercover visits” to community pharmacies during 2004 with three different scenarios\textsuperscript{68} and found that in 58 out of the 87 pharmacies visited the advice given was poor, and that
Speaking to a pharmacist rather than a PCA didn’t guarantee good advice. Choice went on to note that both pharmacists and PCAs did not ask enough questions to ensure medicines chosen by customers were appropriate.

In addition, the Standards Maintenance Assessment program (“mystery shoppers”) of the QCPP program for community pharmacies in Australia has found that there are pharmacies which do not perform well in what are essentially triage cases.

2.9 **Expected primary health care roles of pharmacists**

According to current profession-specific standards, Australian pharmacists are expected to be competent in providing primary health care, which is taken to mean that they will encourage, assist and provide the means for consumers to take responsibility for their own health. Pharmacists are expected to do this by treatment or referral, along with educating and participating in public health campaigns. There is a note in the standards which relates to triage: “It is increasingly common practise, particularly where a direct referral to the GP is made, for pharmacists to provide patients with a written referral form which includes a copy for the GP.”

In some instances interactions with patients to assess their needs are expected to result in a direct referral of the patient to their GP. In others the pharmacist may give a conditional referral such that failure of the recommended treatment to improve the symptoms/condition within a specified time should serve as a signal to the patient to seek the assistance of their GP.

The competency standards for pharmacists in Australia note that pharmacists are often the first health professionals contacted by members of the community who have a health concern. The standards go on to say that pharmacists are “therefore extensively involved in assessment of the primary health care needs of these individuals. In this role pharmacists accept responsibility for assessing the needs of the individual and identifying an appropriate course of action, including identifying circumstances where the assistance of other health professionals such as GPs is indicated.

Every school of pharmacy in Australia is expected to make the patient the main focus of everything in the degree course, and to include in the pharmacy curriculum the following “indicative” components which relate directly to many aspects of primary health care:

- The unique role of the pharmacist in ensuring that the patient benefits from pharmaceutical intervention.
- Principles and methodologies of the social sciences relevant to pharmacy.
- Health and illness: definitions and perceptions.
- Theory and practice of personal and inter-personal skills, including written and verbal communication skills, and study skills.
- The ideas and approaches of compliance or concordance in health care provision, particularly as they apply to medicines-taking.
- The pharmacist’s contribution to the promotion of good health and disease prevention.
- Normal and abnormal bodily function: biochemistry, genetics, microbiology, nutrition, immunology, physiology, pathology, pathophysiology and infective processes.
- Aetiology and epidemiology of major diseases and the principles of their drug treatment.
- Symptoms recognition and management, the principles of differential diagnosis, important diagnostic methods and tests, and medical terminology.
- Disease management and care planning, including application of clinical guidelines, prescribing guidelines and medication review.
- Complementary therapies.
- Drug and substance misuse, and physiological and psychological dependence. Clinical toxicology associated with drug over dosage, drug or substance misuse or accidental exposure.

Clearly, the indicative curriculum envisages a role for pharmacy graduates in the provision of primary health care, and the competency standards unequivocally state that pharmacists in Australia are expected to not only provide primary health care but also to refer patients when considered necessary, and to provide written referrals.
2.10 Triage research in perspective

This project aims to fill the gap which exists in research about an important service provided by community pharmacies: the provision of primary health care, and of triage in particular. Very little has been done to explore how often and how well pharmacists make decisions to either treat or refer customers to other health care professionals, despite this being undertaken regularly in response to enquiries from consumers or during the dispensing, medication review or self-care processes.

Triage as a central activity in every Australian community pharmacy has only been partially documented in a small number of research projects. Furthermore, a recently-completed project which documented the value of professional pharmacist services in Australia did not explore triage. This project, which undertook a cost–benefit analysis of Pharmacy (Schedule 2) and Pharmacist Only (Schedule 3) medicines did not include events where patients asked pharmacy staff for advice and treatment on presenting symptoms; the Medication Profiling Service now underway does not include a triage component; the earlier stages of the PROMISe project only examined interventions in relation to prescribed medications and the current PROMISe project only records “interventions” rather than primary health care “events”; the project which established the “National Pharmacy Database” estimated the numbers of consultations (~80 million) and referrals (~4 million) which occur each year in Australia but not the nature or impact of this activity; and the project which explored community experiences, needs and expectations of community pharmacy only reported the frequency of advice-seeking and “screening” visits, not their nature and impact.
3 Methods

The proprietors of 30 community pharmacies across Victoria, including metropolitan and regional areas, were invited to participate in the project. These pharmacies were selected from within 9 Divisions of General Practice in Victoria in order to provide a geographical spread. The proprietors of 24 pharmacies agreed to participate, and these represented a mix of settings.

A sample size of at least 400 consumers was considered necessary on the basis of long-standing guidance provided by Krejere and Morgan\(^75\) and in accordance with previous research of this sort conducted in Australia.\(^76, 77\)

The observations associated with this project were conducted between January 2009 and April 2009, by pharmacists and senior pharmacy students recruited specifically for the project. These observations took place after the approach to be taken had been subjected to a pilot study involving five community pharmacies in November and December 2008. In both the pilot and full studies two observers were present for up to three days in each participating pharmacy with the intention of recruiting 20 customers who visited for health-related reasons. Each of the observers wore a name badge bearing the Monash University logo and the observer’s name.

Most observations were conducted during week days and between the hours of 9.00 am and 6.00 pm.

At each pharmacy, details were collected about the average number of customers per day, the number and type of staff members present on the study days, the sale/turnover per year, the average number of prescriptions dispensed per day, peak activity times, and the type of services provided by the pharmacy. A sign was placed at the medicines counter during the observation days informing customers that research was being conducted and that participation was optional. Previous research Error! Bookmark not defined. Error! Bookmark not defined. has shown that there is considerable variation in the time taken to recruit consumers in community pharmacies, depending on the socioeconomic status of the communities in which the pharmacies are located and on the volume of activity in participating pharmacies.

A major component of the research undertaken in this project involved observing consultations between customers and staff in community pharmacies, followed by a brief interview with each customer, and then a follow-up phone call two to four weeks later to each of the customers who agreed to further participation. The observers were required to note circumstances which facilitated triage and those which restricted it.

In order to ‘capture’ the primary health care transactions, pharmacy staff members were asked to flag the attention of the observers to any requests from customers for health-related advice or medicines and medical devices. Devices included wound dressings. A pharmacy staff member then introduced an observer to each relevant customer, and asked if the customer would allow observation of their discussions. Counselling on prescription medicines, except where dispensing was associated with discussion about the medical condition(s) being treated, was not included.

Consent was sought from customers for:

- Observation of the pharmacy consultation
- Participation in a short survey at the end of the pharmacy visit, or completion of the survey at home
- Allowing a researcher to conduct a telephone interview about a fortnight later to find out what happened with their health issue

Each observer filled out the “Observer record sheet” (Appendix A) after consent was obtained for the observation of the pharmacy consultation.

A customer survey (Appendix B) was presented to the customer at the end of the pharmacy visit. This survey was filled out in one of three ways: the observer completed the survey by asking the customer each of the questions and then noting the responses on the form; the customer completed the survey without any assistance from the observer before leaving the pharmacy; or the customer took the survey form home and was asked to send it in a reply-paid envelope to Monash University.

A telephone follow-up interview (Appendix C) was conducted by a member of the research team approximately two weeks after the pharmacy visit. During the pilot study the use of a health diary (diary card)\(^78\) was explored. Health diaries provide a way for customers (patients) to self-record symptoms and medication efficacy. However, on closer inspection of the literature it was found that health diaries are essentially only a good means of collecting short-term information, usually only a matter of days,\(^79\) whereas this project was seeking information over a period of
several weeks. Furthermore, it was found during the pilot stage of this project that the follow-up telephone calls to
the customers provided a very effective way of discussing and documenting the progress of the wide range of
health-related conditions. Health diaries were not subsequently used during this project.

In order to classify the ailments for which health-related advice was sought, the categories used in the current
edition of Australian Medicines Handbook (AMH) were used with some modifications: wound care was removed
from “dermatological” and treated as a separate category; and a dental and oral category was created. Categories
for nutrition, weight loss and smoking cessation were also created. The reason for these changes was that a
reasonably high incidence of health-related enquiries associated with the new categories was encountered during
the pilot study.

In a small number of cases a “health aid”, such as a dose administration aid or a tablet cutter was purchased, so a
separate category for these items was created.

There was a “Front of shop transaction sheet” (Appendix D) used to record the total number of primary healthcare
and general transactions which occurred during the periods of observation in each of the community pharmacies
which participated in the project. This was done by placing the form at the sales counters of the pharmacy to be
filled out by pharmacy staff (pharmacists and PCAs) for each sale during the observation period.

If the number of referrals (and the follow-up on those referrals) was found to be sufficient, it was intended that other
health care providers would be surveyed, particularly GPs in locations close to the participating pharmacies, to
determine their perceptions and views in relation to triage being provided by the pharmacies, along with their
estimate of the frequency to which this triage occurs.

Consent to conduct the project was given by the Monash University’s Standing Committee on Ethics in Research
involving Humans (SCERH) on 28 July 2008 (Appendix E). Subsequently, consent to participate in the project was
obtained from each community pharmacy staff member on duty on the days of the observations (Appendix F) and
an explanatory statement or participation information sheet was also provided (Appendix G).
4 Results and discussion

4.1 Pharmacy and customer details

Twenty four of the thirty community pharmacies selected from within 9 Divisions of General Practice in Victoria, agreed to participate in the project. The divisions from which those community pharmacies were selected are shown in Figure 1.

![Figure 1](image1)

**Divisions of General Practice from which the community pharmacies were selected**

A cross-section of community pharmacy ‘types’ was selected during this process such that there was a mix of ‘settings’ (Figure 2): isolated shopping cluster/isolated; neighbourhood shopping centre; strip shopping centre; shopping centre and medical centre. There was also a hospital-located community pharmacy. Some pharmacies were located in Melbourne and some in rural cities and towns.

The twenty four community pharmacies represented nine banner groups (Amcal, Chemist Warehouse, Chemmart, Guardian, My Chemist, Priceline, Pulse, Quality Group and Terry White), and there were seven ‘independent’ community pharmacies. Most were in strip shopping centres.

![Figure 2](image2)

**Pharmacy settings**

Four hundred and twenty four customers were recruited for the project. Most \( n = 280 \) consented to all three parts of the project, some for the observation only, and some for both the observation and survey but did not want to be subsequently contacted by telephone.
Telephone contact with those customers who agreed to participate was achieved in 90% of cases (n=252) and all of the telephone calls were made within two to four weeks of each customer’s visit to a community pharmacy. The times at which customers sought primary health care advice at the participating pharmacies are given in Figure 3. Most visits occurred during the middle of the day.

![Figure 3 Time of visits to community pharmacies](image)

### 4.2 Purposes of community pharmacy visits

The reasons why customers visited the community pharmacies which participated in this project are summarised in Figure 4. For the purposes of this research, the provision of primary health care was taken to be any face-to-face interactions/transactions which centred on the supply of pharmaceutical products or medical devices and/or the provision of advice about medical or medication issues. It also included the dispensing of prescriptions.

Two broad reasons were identified: to pursue health-related issues (primary health care transactions), such as to have prescriptions dispensed, to purchase pharmaceutical products or to enquire about issues concerning their health; and/or to pursue a non-health related activities (general transactions), such as the processing of photographs and the purchase of cosmetics.

![Figure 4 Purpose of the visits to community pharmacies](image)

The majority of visits (63%) were for general transactions and the balance for primary health care transactions across the 24 participating pharmacies, and there was no significant difference between the pharmacies located in Melbourne and those located in rural cities and towns.

An important issue which arose after most of the observations associated with this project had been completed was that enquiries received in the community pharmacies by way of telephone calls, emails or faxes were not being recorded. Anecdotal evidence suggests that all of the community pharmacies received several telephone enquiries each day from customers asking for advice about health conditions. The nature of these calls is unknown but it is to
be expected that they follow a process which is similar in some respects to the telephone nurse triage services which operate in various parts of Australia, such as Nurse-on-Call in Victoria and HealthDirect in some other states. That is, an assessment is made of each of the health issues discussed over the telephone and triage provided.

The focus, therefore, of the research reported here is on the nature of primary health care provided in community pharmacies to people who actually visited those pharmacies. The particular reasons why those people visited community pharmacies for primary health care transactions, which constituted 37% of the reasons for all visits to community pharmacies, are shown in Figure 5.

![Figure 5](image)

**Figure 5** Nature of interactions which constitute the primary health care transactions
(The ‘other’ interactions shown included supply of dose administration aids, and health-related questions such as, availability of baby formulas containing omega 3.)

In many cases, the visits made to community pharmacies involved both health-related and general issues. Such visits were classified as being health-related for the purpose of the research reported here.

It can be seen from Figure 5 that the main reason why customers visited community pharmacies for primary health care transactions was to purchase medicinal products. That is, in excess of 50% of the customers who visited community pharmacies did so with particular medicinal products in mind.

This is in broad agreement with research in the UK and recently in Australia where studies into the nature of advice-giving in community pharmacies revealed that pharmacy staff mostly responded to customer requests for named products.

In relation to enquiring about a health issue, 35% of customers visited community pharmacies with this intention. In a small proportion of these cases, customers came to pharmacies with prescriptions to be dispensed and then enquired about other health issues whilst in those pharmacies (see the entry “I only thought of this whilst I was here” in Figure 14).

A further 9% visited with the primary intention of having prescriptions dispensed. It has been reported that there is an average of 2½ “items” (prescribed medicines) on each prescription and that in the vicinity of 70% of income earned from sales in community pharmacies comes from dispensing prescriptions. This indicates that the current income from non-dispensing activities, such as general transactions, the selling of medicinal products and the provision of health-related services, is associated with many more customers than those who visit pharmacies to have prescriptions dispensed but that sales revenue is far less.

Health checks, mostly blood pressure monitoring, comprised a small proportion (1%) of the pharmacy visits but may have significant outcomes, as illustrated in the following case:
On 22 January 2009 Mrs PS, an elderly and regular customer, visited a pharmacy to ask for a blood pressure check because it was 160/80 mm Hg, at the time she last visited her GP, about two weeks earlier. Mrs PS initially spoke to a PCA who referred her to a pharmacist. When the pharmacist took her BP it was 140/70 mm Hg. The pharmacist recommended she return to the pharmacy for weekly BP checks, and that she let her GP know that BP monitoring was underway. The pharmacist noted the ‘consultation’ in the dispensary computer. Mrs PS was contacted by telephone about a fortnight later by a member of the research team for this project who was told that Mrs PS saw the sign for BP checks in the pharmacy and decided to make use of the free service. Mrs PS did go to see her GP about a week later, as advised by the pharmacist, to let him know that her BP was being monitored at the pharmacy. Her BP at the time of the GP’s visit was 180/85 and she was prescribed Atacand 8mg. She was advised by the GP to return to see him in about 4 weeks. Mrs PS was very satisfied with the assistance she received at the pharmacy, and with the outcome of her health issue. She would certainly go to that pharmacy with this sort of query again in the future.

So, the provision of the triage component of primary health care in community pharmacies accounted for just over a third (35%) of visits made by customers for primary health care transactions (see Figure 5). If visits for health checks (1%) are added to those for health advice/triage, then approximately 13% of all visits to the community pharmacies observed during the course of this project were for situations where customers sought advice about health-related issues, as distinct from obtaining prescribed medicines, or particular (specified) medicinal products which can be obtained without the need for prescriptions, and/or non-health related products and services.

Since there were differences in the nature and location of the 24 participating pharmacies, it was of interest to investigate if there were variations in the extent to which customers sought advice about health issues or came to purchase medicinal products. The results are shown in Figure 6 for the ten different types/styles of community pharmacies which participated in this project: the nine banner groups and the ‘group’ of independent community pharmacies.

The number of community pharmacies in each category, however, was too small to allow analysis of the observed difference between the pharmacies to be identified, so the pharmacy groups have been de-identified in Figure 6 to merely shows that there were differences amongst the 24 participating pharmacies.

![Figure 6 Proportion of enquiries about health issues relative to visits to purchase of medicinal products in the various types of community pharmacies](image-url)

It is not clear why there were such striking differences between some of the community pharmacies, nor whether such differences accurately reflect the nature of the business “offerings” associated with the various pharmacy types and locations. It is possible, for example, that the detected differences reflect the nature and experience of personnel working in particular community pharmacies during the periods of observations associated with this project. That is, it has very little to do with the business offerings at all. The differences may also reflect the small numbers of customers with health-related transactions observed in each pharmacy. Whatever the reasons, differences were detected and it may be necessary for further research to find out why.
4.3 Customers’ health conditions

The customers who agreed to take part in this project were asked about the health conditions for which they sought advice and/or products from community pharmacies.

This stage of the research included customers who visited community pharmacies for all health-related issues, including the purchase of medicinal products and the dispensing of prescriptions, not just those who visited community pharmacies to primarily seek advice about health conditions. It did not include customers who only visited for general (non-health related) transactions.

The outcome (Figure 7) was that customers who visited community pharmacies had health-related issues which covered a wide spectrum. Four broad health conditions stood out: dermatological conditions were common (including “rashes” and “itches”), as were ear, nose and throat (ENT) conditions (particularly coughs and colds), along with musculoskeletal conditions (including sports injuries) and gastrointestinal conditions (particularly diarrhoea and vomiting). The dominance of conditions affecting the skin and ENT, and to a lesser extent the musculoskeletal system, seems not to have been reported before in Australia but does agree with data from observations conducted in community pharmacies in Sweden several years ago.

The following case study provides a typical example of the circumstances when customers visit community pharmacies to seek advice and/or products for health related reasons:

Mrs MR visited a pharmacy on 22 January 2009 to purchase a cream containing both hydrocortisone and clotrimazole for personal use. She had used it before and knew it was available over-the-counter (OTC). The symptoms of redness and itch in the groin area had recurred about 7 days ago. Mrs MR did not think the health condition was at all serious. Her first point of contact in the pharmacy was a PCA who directed her to a pharmacist who recommended she also use a cream containing just clotrimazole, and explained that she should use the combined hydrocortisone and clotrimazole cream for one week and then use the plain clotrimazole for a further two weeks. The pharmacist explained possible side-effects (such as flare-up after ceasing the combined hydrocortisone/clotrimazole cream) and that she may need to see her GP if symptoms persisted. Lifestyle suggestions were also offered and the differences between fungal infections and dermatitis explained. When Mrs MR was contacted about two weeks later by telephone by a member of the research team for this project, she said that the instructions had been followed, that the rash had resolved in 2-3 days, and that she continued to use clotrimazole cream to prevent a recurrence. She was very satisfied with the assistance received at the community pharmacy and was very satisfied with the outcome of the health issue. She would go to the pharmacy with this sort of query again in the future.
4.4 Purchase of medicinal products

Since a very large proportion of customers who visited community pharmacies for health-related reasons did so to purchase specific medicinal products (Figure 5) it was of interest to determine the intended use of those products. The results obtained are shown in Figure 8.

Not surprisingly, there are very strong similarities between the health conditions of customers who visited community pharmacies for all health related reasons (Figure 7) and Figure 8,

This information shows that the range of health issues for which medicinal products was sought is wide, and that the dominant health conditions were those affecting the skin (mostly rashes, pruritus and tinea) and those causing ear, nose and throat symptoms (mostly “colds and influenza [flu]”). Less common were conditions affecting the musculoskeletal system (mostly back and knee pain), gynaecological conditions (particularly vaginal thrush) and gastrointestinal conditions (mostly vomiting and diarrhoea).

The following case study provides an example of a customer visiting a community pharmacy to purchase a medicinal product:

Mr BB visited a pharmacy at about 1.00 pm on 3 March 2009 to purchase Mersyndol Night tablets for migraine headache treatment. He had used this medication before but hadn’t had to use it for some time now. He regarded his health condition as “a little serious”. He spoke briefly to a pharmacist on this visit who recorded the supply of Mersyndol Night tablets and warned Mr BB that the medication could make him drowsy. A follow-up phone call was made about 3 weeks later by a member of the research team. Mr BB said that the migraine took about three days to clear, and that he did not seek further assistance for his GP but planned to mention the recurrence of migraines when he visited his GP soon for another medical issue. Mr BB was very satisfied with the assistance received at the pharmacy, and was very satisfied with the outcome of his health issue. He would visit the pharmacy with this sort of query again in the future.

One of the inferences to be drawn from these data is that, by some means or other, some customers arrive at a diagnosis of their health conditions and then decide to purchase specific medicinal products. This implies that, to an extent not explored in the research reported here, customers are self-diagnosing their health conditions before entering community pharmacies.

At least one report from the UK clearly indicates that customers who request products by name are less likely to receive advice about the supplied medicine and less likely to be referred to a GP. The same situation has also been reported in Australia.

In other words, the observed ‘consultations’ which took place at the time of the purchase of medicinal products revealed that many questions which could have explored the relevance or suitability of the products selected and/or
the nature of the health issues being addressed, and/or the intended users of the medicinal products were often not asked by PCAs or pharmacists. The products were simply just sold.

A particular sale of a medicinal product noted by one of the observers in a community pharmacy during this project provides a snapshot of what could lie behind sales of many medicinal products for which the consultation process could be considered inadequate or incomplete:

A woman asked a PCA for a box of 24 tablets which each contained paracetamol and codeine. No questions were asked about the intended use of the tablets. The sale was duly completed and the woman was about to leave the pharmacy when the pharmacist working there at the time politely asked why the medication was being used, and whether paracetamol and codeine tablets were proving successful for the condition being treated. It turned out that the tablets were for the woman’s mother, and were necessary because each time her mother had a wound dressing on her leg ulcer changed by a visiting nurse the subsequent pain was so severe that strong “pain tablets” were necessary for the next couple of days. The ‘hidden’ issue was wound healing and the proper use of wound dressings, for which the pharmacist was able to give highly relevant advice.

The point of the case study is that there was a “missed opportunity” for staff in that community pharmacy to play a much more active and, arguably, a much more constructive role in the provision of primary health care, including triage.

If this situation is an accurate indication of what could be happening with many of the simple “supply only” transactions involving medicinal products, including complementary and alternative medicines (CAMs) through community pharmacies, then there may be a very important and distinctive role for staff in community pharmacies to play in the future by being more ‘interventionist’ when specific medicinal products are sought by customers.

4.5 Health-related enquiries

Thirty-five percent of customers who visited community pharmacies for health-related issues sought advice about how to deal with those conditions. Advice was sought about a broad range of health conditions (Figure 9).

![Figure 9 Health conditions for which advice was sought (n=166)](image)

The main reasons customers sought that advice related to skin conditions (including wound care) and conditions affecting the ear, nose and throat. The next most common conditions were those affecting the gastrointestinal tract, the musculoskeletal system, dental and oral tissues and structures (mostly ulcers, toothache and “teething”), and the eyes (mostly dry eyes and conjunctivitis).

As with direct purchase of medicinal products (Figure 8) there is a large range of health conditions for which advice is sought in community pharmacies.

Interestingly, the patterns shown in relation to the health conditions of customers who visited the participating pharmacies (Figure 7), in relation to the health conditions for which specific medicinal products were sought (Figure
8), and in relation to the health conditions for which advice was sought (Figure 9) are similar but not identical: dermatological and ear, nose and throat conditions dominate all three situations but when it comes to health conditions for which advice was sought, the conditions affecting the mouth (including dental conditions) and the eyes were more numerous than conditions affecting the musculoskeletal, genitourinary and gastrointestinal systems.

The significance of these differences, particularly in relation to customers seeking medicinal products compared to when they seek advice is not known, but it does raise the interesting question about what customers expect in the way of services in community pharmacies. A review of research published between 1991 and 2002 showed that consumer usage of community pharmacies for general health advice is low and that pharmacists are perceived as drug experts rather than experts on health and illness.

Further research in Australia revealed relatively recently that consumers have the following needs and expectations of community pharmacies:

- To receive advice that the non-prescription health products were right for them
- To speak with the pharmacist about how to use the medicine
- To receive printed information about the health issue related to the product
- To receive written instructions on how to use the medicine

When asked specifically about health needs, the same group of consumers only expressed strong interest in health screening and monitoring but even then the level of expected use was low: only 29% would expect use this service biannually or quarterly.

If community pharmacists are to be used to their full extent, such that the primary health care role seen by the profession as being one of its core activities is to be realised, then actions to extend the public’s awareness and acceptance of the pharmacist’s role in health advice giving will be crucial, a sentiment recently echoed by others.

4.6 Profiles of customers seeking health-related advice

A large number of customers who sought products and/or assistance for health-related issues did so on behalf of someone else (Figure 10). That is, approximately a third of health-related activities were for people who either did not come in person to the community pharmacies or were represented by someone else who was with them at the time such as parents of young children.

Seston et al referred to these situations as “proxy consultations” whereby a third party presents in a community pharmacy on behalf of another individual, who could be a partner, family member or a friend. In their study in the UK, the overall rate for proxy consultations in community pharmacies was 33%, and analysis of this figure by minor ailments revealed a wide variation in proxy rates for the nine conditions examined, ranging from just 15% for cold sore to 96% for head lice.

Others have found the rate of proxy consultations in community pharmacies in the UK to be in the vicinity of 27% to 43%, and in Australia to be 30% for non-prescription medicine purchases.

Figure 10 Customers seeking health-related advice in community pharmacies
Proxy consultations have been identified in a number of studies as a potential problem for pharmacy staff because they can limit their ability to ask questions, reducing their ability to make informed decisions regarding appropriate management. In addition, a proxy might be asked by the “sufferer” to ask for a specific named product which makes it difficult for pharmacy staff to explore this decision should they feel that the product being requested is inappropriate.

The following case studies provide examples of situations where proxy ‘consultations’ occurred in the participating community pharmacies:

A man was sent into a pharmacy by his wife to purchase Canesten cream. When asked by a PCA he was unable to tell her what condition was being treated. The request was redirected to the pharmacist. As the man was unable to answer any of the questions in regards to the health issue, the pharmacist explained that there was not enough information on the patient’s condition, and that he was unable to supply the requested item. The pharmacist recommended that the man return with more information before being able to proceed with the sale and accompanying advice.

A man came into a pharmacy on behalf of his teenage son, requesting sports tape. He had sought assistance at another pharmacy for the same condition in the past. His son had a blister on his foot due to his cricket shoes and wanted sports tape to protect the area. A PCA showed the man a range of sports tape available. Elastoplast sports tape was purchased because this was similar to a product used previously. However, in this situation, a bit of padding on the tape, or even a hydrocolloid dressing, may have been more appropriate and direct discussions with the man’s son could have resolved this. As it turned out, the man was determined to get what had been used before by his son.

An interesting aspect of proxy consultations is that community pharmacies seem to offer one of the only primary care and triage services that extends its convenience to a third party, and this poses a challenge not encountered to any extent by other health care professionals.

4.7 The extent of proxy consultations

Children constituted the biggest group for whom proxy consultations occurred in this project (Figure 10): they made up just under half of all proxy consultations detected. Approximately 25% were for partners/spouses, and approximately 15% for parents. Those included in the “other” group included grandparents, friends, neighbours and sisters/brothers.

In not all proxy consultations involving children were those children present at the time. The numbers of situations when this occurred was not recorded during this project, so further research is required to determine the extent to which pharmacists and PCAs are required to deal with enquiries without having the actual child present to examine, if necessary.

4.8 The nature of proxy conditions

As was the situation in relation to customers visiting community pharmacies to obtain medicinal products (Figure 8) or to seek advice about a health issue (Figure 9), the most common medical conditions for which the proxy consultations occurred were those affecting the skin and ear, nose and throat (Figure 11), and the range of conditions was similar.
Proxy consultations for children followed the pattern which seems to occur for health-related consultations of any sort at community pharmacies in that the most common conditions were those associated with skin conditions (such as eczema and warts) and those affecting ear, nose and throat (mostly "head colds" and sore throats) (Figure 12).

Not far behind in occurrence were conditions affecting the mouth, mostly dental and oral conditions such as toothache, "teething" and mouth ulcers, and allergic conditions, such as hay fever, atopic rashes and reactions to insect bites.
musculoskeletal system were much less whereas those associated with various aspects of nutrition were more common.

Studies in the UK\textsuperscript{92} showed a wide variation in proxy rates for nine common ailments, ranging from just 15 per cent for cold sore to 45\% for diarrhoea to 96\% for head lice. In the case of diarrhoea, the relatively high proxy rate was thought due to the fact that the symptoms of diarrhoea may make it difficult for the sufferer to visit the pharmacy in person, whereas the low rate of proxy consultations for cold sore might be explained by the fact that the symptoms are visible and the customer may want the pharmacist or PCA to see it in order to confirm the diagnosis.

4.10 \textbf{Prior consultations}

Customers were asked if assistance in any form had been sought previously for the health issue that was associated with the visits they were observed to make to community pharmacies during this project.

The results (Figure 13) indicate that for a substantial proportion of customers (38\%) their observed visits were the first for the health issues concerning them. There was also a substantial proportion (54\%) who had sought assistance previously from GPs and community pharmacies. The “other” group (7\%) included situations where advice was sought from nurses, family members and friends.

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{prior_consultations.png}
\caption{Prior consultations}
\end{figure}

There are two interesting aspects associated with the use of community pharmacies as first ports of call by customers managing their own health-related issues:

- A very broad range of health issues is being addressed in this way, with skin conditions and conditions affecting the ear, nose and throat being the most common (Figure 9).
- Most customers had no intention of visiting GPs about these health-related issues (Figure 14 and Figure 15), probably because they rated these issues as being either “not serious” or only a “little serious” (Figure 16).

The following quotes indicate why some customers use community pharmacies as a source of primary health care:

“I was not too sick and didn’t think I needed to see a GP.”

“It was for a basic issue, but if I thought it was serious I would go to the GP.”

“I ask the advice of the pharmacist about minor ailments.”

“It would depend on the seriousness of the condition.”

“I go to the pharmacy for small problems.”

The following case study also gives insight to the advice-seeking sequence used by some customers:

\textit{Mr RG had a runny nose and dry cough which started earlier that day. It was determined that he currently took antihypertensive medication (candesartan) and paracetamol, and that he chose to seek health-related...}
assistance in the pharmacy rather going to his GP for two reasons: he didn't have to make an appointment; and he said that the issue was only a “little serious”. Initial contact in the pharmacy was with a PCA who directed Mr RG to a pharmacist. Capsules containing dextromethorphan, doxylamine and paracetamol were recommended because this medication does not contain pseudoephedrine – sometimes considered inappropriate if a customer has hypertension. Thorough advice was given on how to use the product, including advice that no additional paracetamol was required. When contacted about a fortnight later by a member of the research team it was discovered that, even though Mr RG took the capsules as directed, his symptoms got progressively worse so he consulted his GP who prescribed a course of antibiotics.

On only a very few occasions did the observers associated with this research project identify cases where customers were actually referred by their GPs to community pharmacies. These occurred when purchase of an OTC medicine was recommended by the GP or when a customer was directed to seek advice about the use of medical devices, such as a respiratory inhaler. This is in stark contrast to the situation in the UK where a minor ailment scheme effectively directs patients from GPs to pharmacists for specified health issues.

Under the UK scheme there is a “formulary” for medicines which are available free of charge to customers in community pharmacies. The medicines which are listed in the formulary are agreed upon by local medical and pharmaceutical committees, along with a national prescribing group, and only provide first-line treatment options, such as clotrimazole for athlete’s foot. Generally, medicines that would conventionally be purchased OTC for minor ailments, such as cough expectorants, are not included.

A survey of patient’s views about the UK’s minor ailment scheme found that patients thought the formulary was too limited and half of the respondents wanted additional minor conditions to be included in the scheme.

There is certainly nothing like it in place in Australia which encourages community pharmacies and GPs to share in the provision of primary health care. There is, therefore, scope to explore how a greater sharing of the primary health care ‘load’ can be shared in Australia along the lines of what happens in the UK, particularly in light of Government-commissioned reports proposing health reform and more appropriate and effective use of existing resources, and industry-sponsored reports also advocating a greater role for pharmacists in the provision of primary health care.

4.11 Reasons for choosing community pharmacies for health-related issues

When customers visiting community pharmacies for health-related issues were asked why it was they visited those pharmacies instead of visiting GPs, the most common reason for doing so (57%) was because all the customers were seeking to do was to purchase medicinal products - to buy something OTC (Figure 14).

The second most common reason (18%) was because the community pharmacies were close by and/or convenient, and a further 6% of customers said they did so only because they thought of asking about health-related issues whilst in the community pharmacies for other purposes, such as having prescriptions dispensed.

All other possible reasons, including either not being able to get appointments with GPs or not wanting to “bother” the GPs were small in number, with less than 2% of customers indicating such reasons were important.

This information was mostly obtained during normal "working hours" by the observers associated with this project (Figure 3) so it is possible that community pharmacies play a more significant role as possible alternatives when GPs are unavailable outside those normal working hours.
Figure 14 Reasons for choosing community pharmacies for health-related issues (n=395)

Some observations in this project were however, made outside normal working hours (n=20) and there was no evidence found that customers used community pharmacies as alternatives to consulting GPs during those times. Since the number of observations out-of-hours was very small in number there is certainly scope to explore this issue much more comprehensively.

A further way to examine why customers visited pharmacies instead of attending GP clinics is to compare the numbers of customers who had no intention of visiting GPs with those who either could not secure appointments with GPs and/or visited community pharmacies to seek advice about whether visits to GPs were required (Figure 15). Again there was little evidence that community pharmacies were seen as substitutes for GP visits for the majority of customers.

Figure 15 Reasons why customers visited community pharmacies rather than GPs for health-related issues (n=395)

When telephone calls were made to customers two to four weeks after they visited community pharmacies, the research team made a point of exploring why those customers chose to visit community pharmacies rather than GPs. The following comments are broadly indicative of what was said:

“Sometimes the pharmacist knows more than the doctor.”

“Doctors don’t give you an option whereas pharmacists give you options or choices.”

“Chemists know more about drugs than doctors.”

“You don’t need to pay for advice at the pharmacy, as you do if you went to a doctor.”
“Pharmacy staff are more knowledgeable than doctors these days.”

“No appointment is required and time is saved.”

“I usually go to the doctor first then the pharmacy because you usually need a prescription.”

“I only go to the pharmacy if I know what I want otherwise the doctor is better as they can tell you what to buy. If the pharmacist tells you the wrong thing to buy, money is wasted.”

4.12 Seriousness of the health-related issues

Customers who answered the question about how they rated the seriousness of health-related issues which were associated with their visits to the participating pharmacies considered those issues to be “a little serious” (42%) or “not at all” serious (34%) (Figure 16). A further 20% rated the issues as “quite serious” or “very serious”. Approximately 3% didn’t know how serious their health-related issues were.

![Figure 16: Seriousness of health-related issues](image)

Examples of issues which were rated by the customers as very serious were back pain, neck pain and vomiting, whereas “not at all serious” were symptoms of “thrush”, skin itchiness and the common cold.

Research in the UK has shown that the action individuals choose to take to manage new symptoms of illness depends on various factors, many common to both doctor advice-seeking behaviour and pharmacy advice-seeking behaviour. These factors include the perceived seriousness and severity of the symptoms, as well as the perceived and actual availability of treatments and care, and costs.

It was of interest, therefore, to explore the seriousness of health-related issues dealt with by community pharmacies who participated in the research reported here and, when taken in conjunction with the earlier observation that many customers who visited community pharmacies had little or no intention of visiting GPs for their current health conditions (Figure 14 and Figure 15), it seems that most customers see community pharmacies as places where relatively minor ailments can be dealt with.

4.13 First point of contact

The first point of contact for customers visiting community pharmacies with health-related issues was usually a PCA (general staff) (50% of the time) (Figure 17). Pharmacists were less frequently the first point of contact, at 35% of the time. Recent research in Australia has also shown that, for observed OTC purchases, a PCA is usually the first point of contact (59.2%), whereas pharmacists were the first point of contact in 14.8% of cases.
If further assistance was deemed by PCAs to be necessary, the next point of contact was almost always a pharmacist (Figure 18).

When customers were asked if they would have preferred to have talked to a member of staff in the community pharmacy other than the person who first dealt with their health issues, 98% said they were satisfied with the sequence of events they encountered.

Furthermore, it will be shown later in this report (Figure 26 and Figure 27) that customers were very satisfied with the advice and assistance given in the community pharmacies.

**4.14 Appropriateness of advice giving**

Several components of the consultations conducted in the participating community pharmacies were recorded.

For the purposes of this aspect of the research, consultations can be broken into three components: establishing rapport; a diagnostic phase (for which there are eight components); and a management phase. In this project, the establishment of rapport was not recorded but the next two phases were.

Results obtained when eight components of the diagnostic phase were recorded are shown in Figure 19.
There were 424 health-related ‘consultations’ observed in the participating community pharmacies, ranging from the sale of medicinal products through to the provision of advice about health-related issues and the dispensing of prescriptions. More than half (53%) of these health-related events or transactions were associated with the relatively straightforward supply of medicinal products (Figure 5). A further 35% involved discussions about health issues, and 9% were health-related issues associated with the dispensing of medicines.

It was also established that the first point of contact for many customers in community pharmacies with health-related issues was PCAs (50%), although pharmacists were also seen to take on this role to a significant extent (Figure 17). Pharmacists were certainly involved in almost all situations where further discussions occurred about health-related issues (Figure 18).

In most of the diverse range of consultations which were recorded by the observers it was found that the main clinical symptoms associated with each customer’s health-related issue were established during discussions (Figure 19). Far less often during those consultations were the duration (40%), spread or worsening of the condition (25%), exacerbating factors (30%), other health-related issues (26%) and the taking of other medications (32%) established during the consultation process (Figure 19).

It was evident that most elements of the diagnostic phase of the observed consultations only occurred when customers with health-related issues sought advice. That is, when the sale of medicinal products and devices took place there was very little discussion associated with the basis of selection of those products/devices by the customers. This is in broad agreement with a recent study in the UK which showed that customers who request products by name are less likely to receive advice about the supplied medicine.

The third phase of a consultation is a management phase, a central component of which is deciding whether to treat or refer customers to other health care providers, usually GPs.

Five aspects were recorded (Figure 20), including direct referrals, conditional referrals and arrangements for follow-up visits to the community pharmacy.
Management phase of consultations with customers in community pharmacies

A component of the management phase not shown on Figure 20 is the number of consultations which were recorded on dispensary computers, in notebooks or by other means in the pharmacies. For only 17 of the 424 (4%) health-related events in the community pharmacies were records made by the pharmacists or PCAs of the event. The health-related events which were recorded included the supply of Mersyndol, Ventolin/Asmol, Diflucan and products containing pseudoephedrine, all of which are currently expected to be recorded by pharmacists by some means or other. The most common recordings, however, were those associated with customers enrolling in weight loss programs, and there was a single occasion when a blood pressure reading was recorded in a patient’s profile on the dispensary computer.

The most common action taken in the community pharmacies in response to customers seeking assistance with health-related issues was to give advice on how to manage those issues (Figure 20). There were several ways this was done: advice alone was given without there being the sale of any medicines or medical devices; advice was given about the use of medicines the customers already had in their homes; and (in the majority of cases) medicines or medical devices were sold and advice given about their use to treat the health issues being addressed.

In relation to follow-up, only a relatively small proportion (9%) of customers was asked to return to the community pharmacies to discuss progress with the recommendations made during their visits. This was determined during telephone calls made to customers who agreed to participate and, given that the telephone calls were made only two to four weeks after their visits to community pharmacies, poor customer recall was not an issue.

The proportion of direct and conditional referrals made represented approximately 14% of all health-related consultations observed in the participating community pharmacies.

When asked in the subsequent telephone calls whether additional health-related assistance was sought, either in response to recommendations made when they visited community pharmacies two to four weeks earlier or in response to persistence and/or worsening of their symptoms, 19% said they did, and most went to their GPs (Figure 21).
Figure 21  Providers of further health-related assistance (n=53)

The numbers of referrals from the community pharmacies varied according to whether the referrals were for the person who actually visited or if it was associated with a proxy consultation. That is, when it was for the person who actually visited the pharmacy there were 12 direct and 16 conditional referrals from amongst the 286 customers (4.2% and 5.6% respectively). When referrals were associated with proxy consultations there were 4 (3%) direct and 11 (8.3%) conditional referrals from amongst the 133 customers associated with this process. There was, however, no statistical difference between the two groups. None of the referrals were made in written or electronic form.

Follow-up telephone calls made to those customers who were given direct or conditional referrals by PCAs or pharmacists to see their GPs revealed that most did not act on this advice. The very poor take-up of the recommendations to consult other health care practitioners, mostly GPs, either directly or conditionally should be of major concern. The reasons were not fully explored during the research but it is possible, however, that one reason was the lack of a structured process, such as the complete lack of use of written referral forms observed in the research reported here, despite such forms being readily available to community pharmacists in Australia. At no stage during the project was it observed that written referrals to other health care providers were provided by staff in the community pharmacies, nor were there referrals made by other means, such as by telephone calls or emails to other health care practitioners.

It has been reported that written referrals compared with simple suggestions made during conversations with customers about results obtained in trials of screening processes for type 2 diabetes resulted in a greater take-up of those referrals. It has also been reported that a lack of written referrals can lead to misunderstandings about what customers have been told should they indeed go to seek further advice from GPs when instructed to do so, particularly in relation to the possible need for antibiotic treatment.

Given the poor take-up rate of referrals, the incomplete knowledge of why this occurs, and the largely anecdotal nature of possible consequences of the lack of a structured referral process, there is certainly room for additional research into this aspect of shared health care.

Research in the UK found that direct referrals from community pharmacies to GPs range from 7 to 12% of all customer approaches to community pharmacy for advice or a product, and that referral rates appear to vary according to the ailment concerned. It was of interest, therefore, to examine how referral rate varied according to ailments during the course of the research reported here. The findings are shown in Figure 22 and Figure 23.
Whilst only a relatively small number of direct and conditional referrals were made to other health care practitioners, it is interesting to note that they covered a broad range of health issues.

For direct referrals (Figure 22), the biggest health area was genitourinary (mostly urinary tract infections), followed by dermatological and ENT health issues, and also oral and dental issues (such as toothache). Perhaps unexpectedly, a reasonably large number of direct referrals for health-related issues were associated with the musculoskeletal and central nervous systems (such as back pain and sleep-related problems).

In the case of conditional referrals (Figure 23), the distribution was reasonably similar to those observed for direct referrals, except that conditions affecting the ENT were much less numerous, and that gastrointestinal and gynaecological health issues were more common.
The following case studies provide examples of direct and conditional referrals made in the participating pharmacies:

Mr. TB presented to the pharmacy with a red ulcer on the inside of his mouth. The ulcer had increased in size over the last few days and TB believed it to be infected. A PCA redirected TB to a pharmacist, who then recommended that he see a GP, although not urgently. The pharmacist agreed that the ulcer may now be infected. It was later determined during the telephone follow-up, that TB had been punched in the mouth one and a half weeks prior to the pharmacy visit. He had been using benzocaine plus cetylpyridium (Cepacaine) solution which TB believed burnt his mouth and worsened the mouth injury. TB however, did not go to the GP as suggested by the pharmacist, but endured the discomfort in the mouth. It still had not fully resolved at the time of the follow-up telephone call.

MN was a 70 year old female who went to her local pharmacy concerned about a fungal infection between her toes. This first occurred 3-4 months ago and had since spread. MN wanted to know if a visit to a GP was required or whether an OTC product would help her condition. A PCA attended to MN and advised her to see a GP. (There was no mention of being directed to the pharmacist). At the time of the follow-up telephone call it was revealed that MN treated her fungal infection with miconazole (Daktarin) tincture, which she already had at home, and that infection between her toes had not improved. MN had tried to see a podiatrist but the waiting time was to be three months.

KU wanted ibuprofen (Nurofen) Infant drops for his child, who had a temperature that day. The PCA counselled KU on the use of the drops and advised that a GP be seen if the child’s condition did not improve in 24 hours. At the time of the follow-up telephone call it was determined that the child’s condition did improve and no further assistance was required or sought.

The data obtained in the research reported here broadly matches with research in the UK where, for example, no customers with enquires about head lice or acne were referred to medical care, whereas the percentage of cystitis and vaginal thrush cases that were referred were 6% and 8%, respectively.

In Australia, direct and conditional referrals to other health care providers, mostly GPs, have been estimated to be approximately four million each year but no estimation was made of the nature of those referrals.

In addition to referrals, observers in the community pharmacies also noted the extent to which staff in those pharmacies explained why the various recommendations were made in response to requests for products and/or advice about health-related issues. The results are shown in Figure 24.

Figure 24 Explanation of recommendations

A key part of the management phase of health-related consultations is an explanation to customers/patients of why particular courses of action have been chosen. It should be of concern that in only a little over half of the observed consultations in this project were such explanations given.

It is unlikely that the return visits to the same community pharmacies from where assistance had been sought previously (18% - see Figure 13) were associated with instructions given by staff in those pharmacies to do so because suggestions regarding follow-up are seldom issued (Figure 20) and, even if such suggestions were made,
it seems they are seldom acted upon. In the research reported here, only 9% of customers were told to return to their community pharmacies for follow-up, and all failed to do so.

Results of observations involving the other components of the management phase of consultations are shown in Figure 25.

Figure 25 Advice given to customers during the management phase of consultations

In most cases, but not all, advice was given on how to use the products which the customers were sold in community pharmacies. The overall figure was 44%, with advice on some products being given on just about every occasion for those products sold (such as oral rehydration salts and solutions, decongestant nasal sprays, anti-inflammatory medications, and cold and flu preparations), whereas for some other products advice was seldom given (mostly on throat lozenges, heat pillows, heat (wheat) bags and lip balms).

Any other forms of advice were only given occasionally, including advice on how to seek further assistance, such as advice to make follow-up visits to community pharmacies only being given in 11% of cases.

4.15 Impact of the triage process

The impact of advice and/or products associated with the triage processes conducted in the community pharmacies which took part in the project was assessed in two ways: firstly, customers were asked if they agreed with the advice given (Figure 26) and were satisfied with all other aspects of the process (Figure 27); secondly, the customers received a telephone call two to four weeks after their visits to community pharmacies to discuss, amongst other things, the outcomes of advice given (Figure 28).
Figure 26  Agreement with advice given

Figure 27  Satisfaction with all aspects of the medical products obtained and/or advice given in community pharmacies for health-related issues (asked at time of pharmacy visit)
There was overwhelming satisfaction with the way assistance was given by the participating pharmacies (Figure 26 and Figure 27). The following quotes from customers given on the day of their visits to participating pharmacies provide example of what was said:

“I am very happy with his advice on what my options were. The pharmacist is fantastic. I have sought his advice many times and found him to be helpful and also very honest. He doesn’t sell products he feels are inappropriate or that will not have any benefit. He is one of the best I have found and would always seek his advice and also recommend him.”

“It was good to have a pharmacist to help me.”

The outcomes explored by follow-up telephone interview two to four weeks later confirmed customer satisfaction on the day of the pharmacy visit (Figure 28).

From the range of comments made it was deemed necessary to reflect on two other pieces of information gleaned from the customers following their pharmacy visits. The first is their level of satisfaction that the health-related issues had resolved following the provision of medicinal products and/or advice in community pharmacies (Figure 29). The second is whether they would be prepared to visit community pharmacies again with similar health-related issues (Figure 30).
The level of satisfaction associated with successful resolution of the health-related issues was good (Figure 29) but it is clear there are some customers who were ambivalent or dissatisfied. During follow-up telephone calls it was established that most of these customers were dealing with long-term health issues for which no simple treatment solutions currently exist. The following quotes give examples of what was said by customers in relation to long-term health issues:

“I would not go back to the pharmacy for further advice about a mouth ulcer because what else could be done?”

“I was somewhat unsatisfied with my ongoing skin condition because I would like to know the cause of it. I would not go to the pharmacy for advice because I do not trust the pharmacy staff to know what the problem is. I only go to the pharmacy if I know what my condition is and know what I want for it.”

A further measure of the impact of advice and/or products associated with the triage processes is the extent to which the recommendations made in the community pharmacies were actually carried out. As has already been noted, most customers did not act on advice to see a GP or to make a return visit to the community pharmacies, so it has to be said that the impact when measured in this way is low.

### 4.16 Barriers and facilitators associated with the triage process

The provision of the triage service in community pharmacies accounted for approximately 13% of all visits (see Section 4.2), and provided for a wide range of health-related conditions (Figure 9).

It was found, however, that community pharmacies were not being used by customers as substitutes for GP visits (Figure 15) and most customers (76%) rated the seriousness of the health-related issues which were associated with their visits to community pharmacies to obtain medicinal products and/or advice as being “a little serious” or “not at all serious” (Figure 16).

It seems, therefore, that community pharmacies provide an extensive range of primary health care services, including triage, but that these services are centred on minor ailments, and that community pharmacies are not seen as alternative health care providers to GPs. So, whilst there is an expectation within the profession that primary health care, including triage, is a central activity in community pharmacies, as specified in the current statement of competencies, it is not fully matched by the reality of the situation. That is, community pharmacies stand ready to provide a significant level of triage but are not being used to anything like the extent which is possible.

One of the barriers to a more significant role in triage appears to be that customers are self-diagnosing their own health-related conditions and then using community pharmacies merely for the purchase of specific medicinal products (Figure 8). If community pharmacies are to be used to their full extent such that the primary health care
role seen by the profession as being one of its core activities, then the public’s awareness and acceptance of this role will be crucial.

A further barrier identified is the appropriateness of advice giving (see Section 4.14) because there are aspects of the consultation process which are incompletely conducted in community pharmacies, particularly in relation to recording, referral and return (follow-up) visits (Figures 19 to 25).

And yet a further barrier identified was the extent to which proxy consultations occur in community pharmacies: almost a third of customers (31%) who sought products and/or assistance for health-related issues did so on behalf of someone else (Figure 10).

Although not explored during this research project, there is ample evidence from research involving community pharmacies in Australia indicating that lack of time to undertake triage and lack of remuneration for provision of this service will also be significant barriers.

An issue to be explored is the extent to which the triage process is being served by having PCAs as the first point of contact for customers visiting community pharmacies with health-related issues (Figure 17). If the PCAs are either very capable of dealing with health-related issues by virtue of appropriate tertiary education or are very capable of referring customers to pharmacists whenever appropriate, then the process should not be a significant barrier to the triage process.

It follows that facilitators for the provision of triage in community pharmacies include:

- Engaging health consumers in a dialogue with the aim of raising their expectations of the health-related services they can expect from community pharmacies
- Developing ways to better engage with customers during the self-selection process for medicinal products in community pharmacies
- Improving the consultation processes undertaken in community pharmacies, with a particular focus on the recording, referral and return (follow-up) components. This may include better training of PCAs to deal with health-related enquiries from customers and greater involvement of pharmacists as first points of contact for the customers.
- Developing ways to ensure proxy consultations are effectively and efficiently managed in community pharmacies
- Exploring ways to allow pharmacists and PCAs more time to conduct primary health care activities, particularly triage activities,
- Developing proposals for the adequate remuneration of community pharmacies for the provision of primary health care activities, particularly triage activities.

5 Limitations
The research reported here has the following limitations:

- The community pharmacies which took part in the project were only in Victoria so the findings cannot be considered representative of community pharmacies in Australia without further research. However, data relating to consultations that resulted in purchase of OTC medicines were largely consistent with Queensland-based research reporting observation and interview of non-prescription medicine customers.
- Any differences detected in relation to the nature and extent of triage provided by community pharmacies which have different locations and/or structures and/or methods of operation were not statistically significant because too few community pharmacies of each particular ‘type’ took part in the project. Further research is needed to determine if there are significantly differences.
- Most of the non-participant observations took place in the community pharmacies during the hours of 9.00 am and 6.00 pm during the working week. Only a few observations were at weekends or in the evenings. Even though preliminary data from the research reported here indicates that the patterns of primary health care (and triage) are consistent regardless of the day or time of day, further research may be necessary to determine if any significant differences occur.
- Non-participant observations can increase the possibility of the Hawthorne effect – the phenomenon of subjects performing better when under study observation – but all such observations were contacted over a period of approximately three days, usually in succession, and data from both the pilot study and the full
study showed that the quantitative and qualitative aspects of primary health care provision varied little over those three days, and that there was remarkable consistency across all pharmacies which participated in the project.

• A triage tool was not developed because a comprehensive review of the literature indicated that several satisfactory tools already exist, that there is little use of currently-available decision support systems in community pharmacies, and that there is evidence that many health care professionals use triage tools (such as algorithms) sparingly – except for nurses involved in TNT.

• A health diary was not used in the main study because during the pilot study it was shown that follow-up telephone calls made to customers in the weeks after their visits to community pharmacies provided a very effective way of discussing and documenting the progress of the wide range of health-related conditions.

• Other health care providers, particularly GPs, were not surveyed to get their views of referrals made to them by PCAs and pharmacists because few such referrals actually occurred, and many referrals actually made were not acted upon by the customers.

• The reasons why customers failed to act upon advice to consult a GP were not explored.

• There was not full documentation of the where the health care related consultations conducted took place in the participating pharmacies. It is possible that a perceived lack of privacy in a pharmacy might have abbreviated the consultation, contributed to less favourable reports of the ‘pharmacy experience’ and/or deterred the customer from seeking further medical attention.

• No true measure of the impact of the consultations was possible using this research protocol. Ideally, periodic follow-up of consumers, and measurement of their utilisation of health resources following the pharmacy visit would be analysed, with economic estimates assigned to the outcomes. This was beyond the scope of the current research.

• Details about each pharmacy were collected in relation to such things as the average number of customers per day, the number and type of staff members on the study days, the sale/turnover per year, the average number of prescriptions dispensed per day, peak activity times, and the type of services provided by the pharmacy. There were too few participating pharmacies associated with this project to be able to provide details and comments about how any observed differences in the provision of primary health care related to each pharmacy’s characteristics.

6 Major issues identified

Triage, which is essentially the decision to either treat or to refer to other health care providers, is an integral component of primary health care provided by community pharmacies, and was a central issue addressed in this research.

The research reported here provides a snapshot of consultations in community pharmacies in Victoria in relation to the provision of primary health care. For the purposes of this research, the provision of primary health care was taken to be any face-to-face interactions which centred on the supply of pharmaceutical products or devices and/or the provision of advice about medical or medication issues. It did not include the dispensing of prescriptions except when this involved more than just the ‘routine’ provision of those medicines, such as when there was a discussion about the medical condition(s) being treated.

A distinctive feature of this research was that follow-up telephone calls were made (n=280) to customers who were first observed in community pharmacies. This allowed a more detailed exploration of the nature, extent and impact of primary health care provided by the participating community pharmacies than would have been possible by just relying on what non-participant observers were able to see and record, and more than could be achieved by asking customers to fill in questionnaires whilst still in the pharmacies.

There are some important features and issues relating to the provision of primary health care by community pharmacies in Victoria which were identified. For example, primary health care visits (or transactions) by customers are a major daily activity in community pharmacies but not the dominant activity: that honour goes to “general transactions” which are not associated with health care issues.

Most customers entering community pharmacies for health-related issues did so to purchase medicinal products, including medical devices. A smaller but still important group of customers visited community pharmacies to obtain advice about health-related issues. In some cases the visits were for both products and advice. It is estimated that the provision of the triage in community pharmacies accounted for approximately 13% of all visits.
A wide range of health issues is addressed when customers visit community pharmacies, with skin disorders and ENT conditions dominating.

Many of the visits are made by customers on behalf of others, the so-called “proxy consultations”, which are a very distinctive feature of primary health care provided in community pharmacies compared to any other of the health care providers.

Community pharmacies did not appear to be seen to be an alternative to GPs to any extent as most customers do not expect more than just minor ailments to be dealt with through the pharmacies, and even then many customers visited with particular products in mind. This implies that a high degree of self-care is at the heart of the visits.

From comments received, and from research reported by others, there appears to be scope for a more ‘interventionist’ role by pharmacists and PCAs in relation to the self-selection of medicinal products by customers, and that it may be necessary far more often than is now the case. Furthermore, from comments received in the subsequent telephone calls made during this project, such an interventionist role was more evident “some years ago” and that the place of community pharmacies in the provision of primary health care seems to have diminished over the past two or three decades.

A negative finding of this research was the poor take-up of pharmacy-initiated referrals to GPs. In circumstances where customers are either referred to other health care practitioners or are requested to return to community pharmacies for follow-up it was alarming to find that most customers did not do so. These observations, coupled with observations and with comments from customers that indicate the consultation processes in most community pharmacies is incomplete, and particularly lacks adequate history taking, recording or referral procedures, indicates there is certainly room for improvement in the way primary health care is provided through community pharmacies.

A second negative finding was that formal referrals from GPs to the participating pharmacies were non-existent, although there may have been a small number of circumstances where GPs suggested that patients visit pharmacies to obtain specified medicinal products and/or devices. It seems that despite the apparently appropriate use of pharmacies reported in this study, it is likely that a proportion of customers are still consulting GPs about minor ailments, either as a stand-alone consultation or secondary to another reason for the GP visit. Regardless, this could be an inappropriate use of medical resources, particularly when a wealth of data supports the positioning of community pharmacies and expertise of pharmacists in management of minor ailments. Our finding that, out of 424 documented consultations, none had resulted from a GP referral indicates that further research should be undertaken into the ‘dynamics’ of both pharmacist-to-GP referrals and GP-to-pharmacist referrals.

The impact of triage provided by community pharmacies is always going to be difficult to measure but two indictors used in this research provide some guidance: the first is that referrals of customers to other health care professionals certainly occurs and, from observations made, seem entirely appropriate and timely. However, the process by which referrals are made lacks the formality which could be expected and it seems that the take-up rate of any referrals made in community pharmacies is very low. The second indication is that customers were satisfied with the primary health care services currently provided by community pharmacies, albeit a process dominated by the self-selection of medicinal products. When asked, or when they elect to adopt comprehensive consultation techniques, community pharmacies provided a wide range of products and advice which appeared to be both appropriate and useful, certainly according to the telephone calls made to customers two to four weeks after they had visited community pharmacies.

It should be borne in mind however that when expectations are low, they are more easily met.

Even though the level of satisfaction associated with successful resolution of the health-related issues was good not all customers were satisfied, largely, it seems, because some were dealing with long-term health issues for which no simple treatment solutions currently exist.

The overall impression gained from this research is that community pharmacies provide an extensive range of primary health care services, including triage, that these services are centred on minor ailments, that community pharmacies are not seen as alternative health care providers to GPs, that there is a modest impact of the services, and that there is plenty of scope for community pharmacies to play a much more extensive role in primary health care.

There is certainly an expectation within the profession that primary health care is a central activity in community pharmacies, as specified in the current statement of competencies, and by what is taught in the schools of pharmacy in Australia.
7 Key findings

The key findings from this research are the following:

a) Community pharmacies are regularly used by customers for advice about health issues but this is not the dominant health-related activity: most health-related visits are to simply purchase medicinal products.
b) A wide range of health issues is addressed when customers seek advice, dominated by skin disorders and ear, nose and throat conditions.
c) Many visits are made by customers on behalf of others, which can complicate the diagnostic and management phases of health care related consultations.
d) Most primary health care transactions are initially handled by PCAs.
e) Community pharmacies did not appear to be used as an alternative to GPs for health issues perceived by customers to be potentially serious.
f) Most customers only expect minor ailments to be dealt with through community pharmacies.
g) Most pharmacists are capable of providing primary health care, including triage, for a wide range of common ailments, not just minor ones.
h) The pharmacy profession and the schools of pharmacy in Australia expect pharmacists to play a central role in the provision of primary health care, including triage.
i) Most customers were very satisfied with the current level of primary health care provided in community pharmacies.
j) Community pharmacies appear to be missing opportunities to play a much more central role providing primary health care.
k) The place of community pharmacies in the provision of primary health care has, in the opinion of some customers, diminished in recent times.
l) The consultation processes in most community pharmacies is incomplete, particularly in relation to recording, referral and return (follow-up) visits.
8 Conclusions and recommendations

There is certainly scope for community pharmacies to play a much more extensive role in the provision of primary health care in the future but one of the key issues to be addressed is how this provision can be enhanced.

It is particularly important that this issue is addressed immediately because, if it is accepted that pharmacists have a central role to play in the provision of primary health care (which is certainly what the profession believes), then pharmacists are in the process of being by-passed as new triage services emerge in Australia with little or no direct involvement of community pharmacists as providers of the primary health care. These new triage services include Revive Clinics in WA and NSW and the WiC at the Canberra Hospital. In the case of the Canberra’s new WiC there are currently 57 community pharmacies in Canberra, each one of which should be capable of providing triage, yet have been overlooked when planning the new $10million facility at the Canberra Hospital.

The provision of primary health care, including triage, is one of several “cognitive pharmacy services” provided by community pharmacies, where such services are broadly defined as professional services provided by pharmacists, using their skills and knowledge to take an active role in contributing to patient health through effective interaction with both patients and other health professionals.

Research has already been undertaken in Australia to identify the key components needed for the development of a practice change model for community pharmacies — to identify and quantify the ‘facilitators’ of practice change — and two broad facilitators need to be addressed when considering ways to enhance the provision of triage by community pharmacies: supply of the service and demand for the service.

In terms of provision of a triage service, the major issue identified in the research reported here is the quality of service currently provided. There certainly appears no lack of ability to provide the service (although this was not fully explored) but that there is essentially a lack of process: very few community pharmacists exhibit the expected competencies in relation to the recording and following-up of primary health care activities. Further, very few exhibited competence when it came to the “increasingly common practise, particularly where a direct referral to the doctor is made, for pharmacists to provide patients with a written referral form which includes a copy for the doctor.”

Since recording, referral and ‘return’ (follow-up) – the “3 Rs” – are central elements of a well structured and effective consultation process for primary health care, one issue which should be addressed by leaders in the pharmacy profession is an insistence that community pharmacists are fully competent (and compliant) when it comes to these aspects of primary health.

The following recommendations are made:

a) Performance criteria relevant to best-practice consultation processes should be incorporated into the next edition of the Competency Standards for Pharmacists in Australia

b) Compliance with a well structured and effective health care consultation process should be a central plank in Quality Care Pharmacy Program (QCPP) accreditation. This does not simply imply the use of flowcharts, decision tees, algorithms and the like but, instead, adherence to best-practice techniques when undertaking such consultations.

c) Best-practice consultation processes must be taught, understood and assessed in all schools of pharmacy.

d) Ensure there is a set of algorithms or equivalent which includes all common ailments encountered during the provision of primary health care in community pharmacies. This could be achieved by adapting current text books or by extending the current professional practice standards in Australia.

e) Use of existing recording capacity of dispensary software in community pharmacies (without adversely affecting point-of-sale linkages) should be encouraged, and moves made towards developing more effective ways of recording primary health care/triage transactions.

f) Utilisation of existing referral forms should be encouraged, and a move made towards developing forms which can either be printed from existing dispensary software or transmitted electronically (with appropriate encryption) to other health care professionals.
g) Best practice in the provision of primary health care through community pharmacies should be recognised and acknowledged.

It has been shown recently that when the public expects community pharmacies to offer certain services, the expectation also acts as a facilitator for those services. Therefore, in relation to the other broad aspect which needs to be addressed when considering ways to enhance the provision of triage – demand for the service – the following steps could be taken:

h) Health consumers should be engaged in a dialogue which will raise their expectations of the services they require from community pharmacies – something that has been suggested following recent research into the consumer experiences, needs and expectations of community pharmacies. Strengthened consumer engagement and voice is also a central component of the recently-released report entitled “A healthier future for all Australians”.

i) Long-standing slogans such “Ask your pharmacist” should be revised so that they are more explicit about primary health care and triage. One possibility is “Ask your pharmacists about health care issues” – keeping in mind that it appears from the research reported here and by others that most customers perceive community pharmacies as a source of medicines and information about those medicines, rather than as a source of broadly-based primary health care advice and guidance.

j) A campaign which could be entitled “Ask your customer” could be trialled whereby a concerted effort was made to encourage pharmacists (and PCAs) to play a more pro-active role when customers self-select medicinal products and devices in community pharmacies – keeping in mind that it appears many customers enter community pharmacies to purchase specific medicinal products. Since it has been argued that customers are often not capable of reliably making their own self-diagnoses, there appears to be an opportunity for community pharmacists to play a far more active role in helping customers select medicinal products and devices. Not to do so would amount to “lost opportunities” to play a much more important role in the provision of primary health care.
9. References

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APPENDICES

A  Triage observer record sheet
B  Customer survey form
C  Telephone follow-up interview form
D  Front of shop transaction count sheet
E  Ethics approval
F  Consent form – pharmacy staff
G  Explanatory statement – community pharmacy
H  Triage tools for community pharmacies
# APPENDIX A  Triage observer record sheet

**MONASH University**  
Pharmacy and Pharmaceutical Sciences

## Triage in Victorian Community Pharmacies

**Observer record sheet**

1. During the pharmacy visit, did the customer discuss a health issue other than that related to a prescription?  
   - Yes □ (Include)  
   - No □ (Exclude from study)

2. Are there any other reasons why this customer should be excluded?  
   - Signs of mental impairment (e.g., dementia, intellectual or mental impairment, drug or alcohol intoxication, confusion) □  
   - Communication barrier (e.g., language barrier, disability) □  
   - Aged 15 years or under □

3. Who is the patient in relation to the customer with the health issue?  
   - Self □  
   - Parent □  
   - Child □  
   - Partner/Spouse □  
   - Other □

4. What did the customer ask for?  
   - To buy a medicinal product □ Specify  
   - Used before? Yes □ No □  
   - To ask about a health issue □ Specify  
   - For a health check (e.g., B.P./blood sugar/lipids) □ Specify  
   - Other health-related query □ Specify

5. Did the pharmacy staff member ask the customer whether he/she had sought help from someone else about this health issue before?  
   - No □  
   - Yes □

   - When? within 24h □ 2-3 days □ 4-7 days □ 1-2 weeks □ >2 weeks □

   - Where? This pharmacy □ Another pharmacy □ A doctor □ Other □

   - In relation to the patient, what information was given (or obviously known by pharmacy staff) in this discussion?  
   - Patient’s age? No □ Yes □ (specify) □

   - Patient’s gender? Not known □ male □ female □

   - Body region affected? No □ Yes □ (specify) □

   - Main symptoms or signs? No □ Yes □ (specify) □

   - When signs & symptoms first occur? No □ Yes □ (specify) □

   - Spreading/worsening/etc.? No □ Yes □ (specify) □

   - Contributing factors/lifestyle issues? No □ Yes □ (specify) □

   - Any other health issues? No □ Yes □ (specify) □

   - Other medication? No □ Yes □ (specify) □

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<tr>
<th>Participant Code</th>
<th>Date</th>
<th>Time start</th>
<th>Time completed</th>
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<tbody>
<tr>
<td>Pharmacy:</td>
<td></td>
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<td>Observer:</td>
</tr>
</tbody>
</table>
15. Who assisted the customer with his/her health issue?

First assisted
- Pharmacist
- Trainee/student
- Dispensary assistant
- General staff
- Someone else
- Not sure who assisted

Later directed to

16. What overall recommendation was given? (Tick as many as apply)

A. To see a doctor within 24 hours
B. To see a doctor or other professional within a week if the condition did not get better
C. To use a product that:
   - was purchased at the pharmacy
   - was already at home
   - Specify product(s); also package size if possible
D. Advice was given about how to manage the problem
   - Please specify
E. Report back to the pharmacy for follow up

17. Was anything about the discussion documented?

No
Yes
Specify

18. Did the pharmacy staff member explain to the customer why that recommendation was made? (Includes explaining any product request refusal)

No
Yes
Specify

19. Did the pharmacy staff member appear to force the sale or recommendation?

No
Yes
Comment

20. What advice was the customer given?

How to use the product
Notes:

How to manage the symptoms
Notes:

Complications/side effects to look out for
Notes:

Lifestyle suggestions
Notes:

How to seek further assistance/Follow up
Notes:

Other
Notes:

For researchers' use only – This form contains confidential research information
### Part A  Purpose of your visit

1. Why did you visit this pharmacy today?
   - [ ] About a prescription
   - [ ] To buy a medicinal product
   - [ ] To ask about a health issue
   - [ ] For a health check
     (e.g. blood pressure/sugar/cholesterol)
   - [ ] To buy a product that is non-medical
     (e.g. toiletries, nappies, gift)
   - [ ] Other (e.g. to browse, insurance claim)
     Please specify ____________________________

2. Did you visit to get assistance for yourself?
   - [ ] Myself
   - [ ] Someone else
     (e.g. Parent, child, friend)
     Please specify ____________________________

3. Have you sought assistance before?
   - [ ] No
   - [ ] Yes
     When? ____________________________
     Where? This pharmacy
     □ Another pharmacy
     □ A doctor
     □ Other ____________________________

4. Why visit this pharmacy rather than a doctor?
   - [ ] I went elsewhere, but didn't get what I wanted
   - [ ] I wanted something over the counter
   - [ ] I only thought of this while I was here
   - [ ] I don't have to pay for this service
   - [ ] I don't have to make an appointment
   - [ ] I can't get to the Doctor
   - [ ] The pharmacy is close by or convenient
   - [ ] I wanted to know if a doctor's visit is needed
   - [ ] I didn't want to bother the doctor
   - [ ] Other (specify) ____________________________

### Part B  Patient history

These questions are about the patient's age, gender, and health issues. This could be you, or it could be someone else you are helping.

5. What age is the patient?  
   - [ ] 0-4  - [ ] 5-11  - [ ] 12-17  - [ ] 18-59  - [ ] 60-69  - [ ] 70+

6. Patient's gender?  
   - [ ] Male
   - [ ] Female

7. Which part of the patient's body is affected?  

8. What are the main symptoms or signs?  

9. When did the symptoms or signs first occur?  

10. Have the symptoms:
    - [ ] Cleared up, but then come back again?
    - [ ] Got worse?
    - [ ] Spread to other areas?
    - [ ] Gone, but you are still worried?
    - [ ] Other (specify) ____________________________

11. Is there anything else that has happened in the patient's life that might have contributed to this health issue?  

12. How serious do you think the health issue is?
    - Don't know  - Not at all  - A little serious  - Quite serious  - Very serious

13. Does the patient have any other health issues?  
    (Please specify) ____________________________

14. Is the patient taking any other medications?  
    (Please specify) ____________________________
Part C  Consultation

15. Who was the main person who helped you in the pharmacy today, and have you met them before?
   - Who assisted? □
   - Yes, met before □
   - Pharmacist □
   - Trainee/student □
   - Dispensary assistant □
   - General staff □
   - Someone else (e.g., naturopath, child health nurse) □
   - Not sure who assisted □

16. Would you have preferred to have seen a different member of staff?
   - No □
   - Yes □
   - Who? □
   - Pharmacist □
   - Different pharmacist □
   - Someone else (specify) □

   Why? ____________________________

Part D  Satisfaction

17. What overall recommendation did you receive? (Tick as many as apply)
   - To see a doctor within 24 hours □
   - To see a doctor or other professional within a week if they condition did not get better □
   - To use a product that was already at home □
   - To use a product that you bought at the pharmacy today (specify product(s)) □
   - E. Advice was given about how to manage the problem (Please specify) □

18. The person who assisted me was helpful.
   - Very unhelpful □
   - Somewhat unhelpful □
   - Neither helpful nor unhelpful □
   - Somewhat helpful □
   - Very helpful □

19. The person who assisted me understood my needs.
   - Strongly disagree □
   - Somewhat disagree □
   - Neither agree nor disagree □
   - Somewhat agree □
   - Strongly agree □

20. The recommendations I was given were easy to understand.
   - Strongly disagree □
   - Somewhat disagree □
   - Neither agree nor disagree □
   - Somewhat agree □
   - Strongly agree □

21. In general, I agree with the recommendations I was given.
   - Strongly disagree □
   - Somewhat disagree □
   - Neither agree nor disagree □
   - Somewhat agree □
   - Strongly agree □

22. I know how to follow through with the recommendation I was given.
   - Strongly disagree □
   - Somewhat disagree □
   - Neither agree nor disagree □
   - Somewhat agree □
   - Strongly agree □

23. Overall, I was satisfied with my pharmacy visit.
   - Very unsatisfied □
   - Somewhat unsatisfied □
   - Neither satisfied nor unsatisfied □
   - Somewhat satisfied □
   - Very satisfied □

Please use this space for any extra comments you would like to add or to finish answers to any of the questions. ____________________________________________________________

Thank you for your assistance.

Please mail this form back to us in the prepaid self-addressed envelop.

For Researcher's use only
Code number: ____________________________
Date: ____________________________
APPENDIX C  Telephone follow-up interview form

TELEPHONE FOLLOW-UP INTERVIEW

Introduction
“My name is [ ] and I’m calling from the Department of Pharmacy Practice at Monash University. If you remember, [I / one of our researchers] met you at ______________ [INSERT PHARMACY NAME] about two week’s ago?”

“I’m calling now to find out about how well the pharmacy recommendations worked for you. Is this a good time to talk to you about this?”

Questions
1) Firstly, I need to make sure that I’m clear that you are the person who came into the pharmacy on ______________ [INSERT DATE], so can you please tell me again, briefly, what the health issue was that you came to enquire about on that day so that I can match it up with the details I have here?

2) So now I’m going to ask some questions about what happened for you after that visit.
A. What action did you take?

B. Is this the action that the pharmacy recommended?
Yes □  No □  What made you decide to take a different action instead?

C. Did you seek any advice from someone else after your pharmacy visit?
No □  Yes □  When?

Who did you seek advice from? [TICK ALL THAT APPLY]
GP □  Specialist □  Physiotherapist □
Chiropractor □  Naturopath □  C&MH Nurse □
Other (specify) ________________________________
3) How is your [health/rash/foot/etc.] now?


4) Looking back at everything that has happened since your pharmacy visit, how satisfied are you with the pharmacy assistance you received?

Very unsatisfied □  Somewhat unsatisfied □  Neither satisfied nor unsatisfied □  Somewhat satisfied □  Very satisfied □

5) And how satisfied are you with how your health issue has resolved?

Very unsatisfied □  Somewhat unsatisfied □  Neither satisfied nor unsatisfied □  Somewhat satisfied □  Very satisfied □

6) Would you go to the pharmacy with this sort of query again in the future?
Yes □  No □

Thank you very much for taking the time to help us with our research.
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<th>Pharmacy Code:</th>
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<td>Primary Healthcare transactions</td>
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Human Ethics Certificate of Approval

Date: 28 July 2008
Project Number: CF08/1573 - 2008000802
Project Title: The nature, extent and impact of triage provided by community pharmacies in Victoria
Chief Investigator: Prof Colin Chapman
Approved: From: 28 July 2008 to 28 July 2013

Terms of approval
1. The Chief Investigator is responsible for ensuring that permission letters are obtained and a copy forwarded to SCERH before any data collection can occur at the specified organisation. Failure to provide permission letters to SCERH before data collection commences is in breach of the National Statement on Ethical Conduct in Human Research and the Australian Code for the Responsible Conduct of Research.
2. Approval is only valid whilst you hold a position at Monash University.
3. It is the responsibility of the Chief Investigator to ensure that all investigators are aware of the terms of approval and to ensure the project is conducted as approved by SCERH.
4. You should notify SCERH immediately of any serious or unexpected adverse effects on participants or unforeseen events affecting the ethical acceptability of the project.
5. The Explanatory Statement must be on Monash University letterhead and the Monash University complaints clause must contain your project number.
6. Amendments to the approved project: Requires the submission of a Request for Amendment form to SCERH and must not begin without written approval from SCERH. Substantial variations may require a new application.
7. Future correspondence: Please quote the project number and project title above in any further correspondence.
8. Annual reports: Continued approval of this project is dependent on the submission of an Annual Report. This is determined by the date of your letter of approval.
9. Final report: A Final Report should be provided at the conclusion of the project. SCERH should be notified if the project is discontinued before the expected date of completion.
10. Monitoring: Projects may be subject to an audit or any other form of monitoring by SCERH at any time.
11. Retention and storage of data: The Chief Investigator is responsible for the storage and retention of original data pertaining to a project for a minimum period of five years.

[Signature]
Professor Ben Cann
Chair, SCERH

Cc: Ms Jennifer Lillian Marriott; Dr Elizabeth Leanne White
APPENDIX F  Consent form – pharmacy staff

MONASH University

Consent Form – Pharmacy Staff

Title: The nature, extent and impact of triage provided by community pharmacy in Victoria

NOTE: This consent form will remain with the Monash University researcher for their records

I agree to take part in the Monash University research project specified above. I have had the project explained to me, and I have read the Explanatory Statement, which I keep for my records. I understand that agreeing to take part means that:

I agree to allow Monash University researchers to:

- observe customer interactions with pharmacy staff that are health-related (non-prescription)
- survey these pharmacy customers about their visit to the pharmacy
- ask these customers for their name and phone numbers for telephone follow-up.

and

I agree to introduce customers with health-related requests to the Monash University researchers present in the pharmacy.

and

I understand that the participation of my pharmacy is voluntary and that I can withdraw from the project at any stage prior to visit, without being penalised or disadvantaged in any way.

and

I understand that any information the pharmacy staff or customers provide will be treated confidentially, and that no individual or pharmacy will be identified in any reports on the project or published findings.

and

I understand that anonymous data from this research may be passed onto other Monash University researchers for use in relevant research under strict University conditions.

and

I understand that the pharmacy and customer data collected in this research will be kept in a secure storage and accessible to the research team. I also understand that the data will be destroyed after a 5 year period unless I consent to it being used in future research.

Pharmacy:

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<th>Signature</th>
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APPENDIX G  Explanatory statement – community pharmacy

12 November 2008

Explanatory Statement – Community Pharmacies

Project Title: The nature, extent and impact of triage provided by community pharmacy in Victoria

Principal Researchers: Professor Colin Chapman  
Dr Jennifer Marriott, Dr Elizabeth White, Mr Bill Suen  
Department of Pharmacy Practice, Monash University, Parkville

This information sheet is for you to keep.

This Explanatory Statement will explain the research project that we are conducting in Victorian community pharmacies with the support of the Australian Government Department of Health and Ageing as part of the Fourth Community Pharmacy Agreement. Your pharmacy has been selected to be invited to participate in this research project and this Statement is intended to help you decide whether or not you would like to be involved. Should you have further questions please feel free to contact the principal researcher, Professor Colin Chapman (see page over for contact details).

The aim of this research
This project will provide evidence about a basic primary health care service that we know community pharmacies have provided as part of their day-to-day activities for decades, but is not well documented or examined. That service we refer to here as 'triage'. By 'triage', we mean the specific ways that people are assisted when they visit the pharmacy seeking a health-related product or advice. For example, people may be given simple advice about how to manage their health issue and/or they may be sold an over-the-counter product and/or it may be recommended that they see their doctor or another health professional in a given time frame.

Some of the questions about triage that we want to answer are:
• What happens as part of this service?
• What sort of customers use this service and why?
• How often is triage provided?
• How satisfied is the patient with this service?
• What is the outcome for the patient?
• What are the facilitators of and barriers to triage provision?

Possible benefits
Once the provision of triage in Victorian community pharmacies is understood, this preliminary research can be extended to other Australian states. The ultimate goal is to have triage services both formally recognised and quality-assured, such that remuneration for the provision of triage services becomes possible. As an interim measure, the pharmacy profession and pharmacy educators can use the results of this research to consolidate and improve the service.

If you are interested, an individualised report of the results obtained from your own pharmacy can be produced and issued to you at the end of the study.

What does the research involve?
Two researchers will be present in each pharmacy for up to three days or as long as it takes for 20 health-related pharmacy visits from members of the community to be observed and examined. While prescription dispensing is not of specific interest to this study and will not be observed, additional health queries raised from people who visit about a prescription will be included in this research.
Researchers are qualified pharmacists who have been specially trained to conduct this research. They will wear name badges, bearing the Monash University logo and the researcher’s name.

The process is as follows:

**Step 1**  **Observation of the health-related visit**
On the days that the study is conducted, we require pharmacy staff members to flag the attention of our researchers to any requests from a customer for health-related advice or a health-related (non-prescription) product. The pharmacy staff member then introduces the researcher and asks that if the customer will allow the researcher to observe their discussion. For this, the pharmacy staff member may use an introduction such as:

“We have researchers from Monash University here today to look at how people use pharmacies to help look after their health. This is [observer’s name] and [he/she] is a pharmacist. Do you mind if [he/she] observes our conversation?”

**Step 2**  **Customer survey**
Once the interaction between the pharmacy staff member and the customer has ended, the observing researcher will ask the customer if he or she has a few minutes to answer some survey questions about the pharmacy visit.

Customers who do not have time to answer survey questions right then and there will be asked if they might complete the survey at home and return it in the reply paid envelope provided. The customer will also be asked to agree to have a researcher telephone them in two week’s time to follow up on the outcome of the pharmacy visit. If the customer agrees, the customer will be asked to sign an Informed Consent Form.

**Step 3**  **Follow-up telephone call**
In two week’s time, a researcher will telephone the customer to find out what happened after their pharmacy visit. The telephone call will take about 10 minutes to complete.

**Inconvenience/discomfort**
As qualified pharmacists, the researchers understand that some people find it very personal to talk about their health conditions. The researchers are also aware that some health conditions are more difficult to talk about than others. Please be assured that, in their specific training for this research, the researchers are reminded to treat discussions with your customers with sensitivity, respect and confidentiality. They are not permitted to pressure a customer into participating in the research. Customers can choose not to participate in the research or not to answer questions they are uncomfortable about. The intention is that the presence of researchers in the pharmacy is as non-threatening as possible.

For pharmacy staff, we recognise that having to introduce the researchers to customers with health-related queries at the beginning of an interaction will take additional time and effort. We also appreciate that some staff members might feel that they are being ‘watched over’. To reduce any inhibitions, we have employed approachable, easy-going pharmacists as researchers. We will also organise for the researchers to attend the pharmacy on one or two occasions prior to the study to give the researchers a chance to introduce themselves to staff, build rapport and reassure staff that they are not there as ‘watchdogs’.

Researchers have been instructed not to interfere in the normal proceedings of the pharmacy. If a customer asks the researcher for health advice in the pharmacy, the researchers are instructed to introduce themselves as a visiting researcher from Monash University and direct the customer to the nearest pharmacy staff member. If a customer asks the researcher for health advice outside of the
Can I withdraw from the research?
Being in this study is voluntary and you are under no obligation to consent to participation. If you do consent to participate, you can withdraw at any time up until the researchers leave the pharmacy on the final day of observation. Any data collected up until that point will be used in the research.

Confidentiality
Information collected from the pharmacy, the observations and from the pharmacy’s customers will be kept confidential. Customers’ names and contact details will be collected only so that the researcher can make the follow-up telephone call. These details will be kept separate from the customer’s data and after phone contact has been made these personal details will be destroyed. To identify data sets, codes will be used rather than customers’ personal details. A report of the study may be submitted for publication, but individual participants will not be identified in the report.

Storage of data
Storage of the data collected will adhere to the University regulations and kept on University premises in a locked cupboard/filing cabinet for 8 years.

Use of data for other purposes
To extend the value of this study, anonymous customer data may be used for other research purposes. No person will be named or identified in any way. In some cases, pharmacies may be identifiable by demographic information, but only to the other researchers concerned. Identifying information will not be published.

Results
If you would like to be informed of the aggregate research finding, please contact Bill Suen by email (bill.suen@pharm.monash.edu.au) or phone 03-9903 9054. The findings are anticipated for July 2009.

<table>
<thead>
<tr>
<th>If you would like to contact the researchers about any aspect of this study, please contact the Chief Investigator:</th>
<th>If you have a complaint concerning the manner in which this research CF08/1573 –2008000802 is being conducted, please contact:</th>
</tr>
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Thank you.

Professor Colin Chapman
APPENDIX H  Triage tools for community pharmacies

On some occasions, pharmacists and PCAs may require assistance when making decisions about whether to treat or refer customers as part of the primary health care process in community pharmacies.

For many minor and/or common ailments, such as cold sores, head lice, tinea, hay fever and arthritic pain, it should not be necessary to have “triage tools” available on a routine basis because pharmacists are expected to deal with these without the need for guidelines or decision support systems.

For some presenting signs, however, assistance may be required, such as might occur when deciding if clinical depression is likely and referral required.

Medical algorithms are a common decision support system used to a varying extent by health care professionals in the diagnosis and treatment of diseases, and usually require the user to have diagnostic and other clinical skills to be fully effective.

There are many algorithms and guidelines available for use in community pharmacies in the UK, and Australia, particularly for emergency contraception and other Pharmacist Only medicines, such as fluconazole and orlistat.

There is also a current textbook which has numerous algorithms to guide community pharmacists and PCAs with the diagnosis of common ailments.

Diagnostic and treatment algorithms have also been developed for use in medical practice, and for the numerous telephone triage services. For example, there are 550 guidelines in the Centramax software used at HealthDirect in Western Australia of which 149 are “activated” for local use. The ten most frequently used guidelines are those for abdominal pain, headache, chest pain, vomiting, neurological deficits, back pain, rash, dizziness, skin lesions (abrasions, lacerations, bites and stings) and diarrhoea in adults. For children the list includes fever, cough, colds and head trauma but not chest pain, dizziness, back pain and neurological deficits.

It appears, therefore, that it is not the development of a new set of medical algorithms for use in community pharmacies to assist with triage activities which is required at present.

Instead, there is probably more to be gained by finding better ways to use existing algorithms, such as:

- Ensuring there is a set which includes all common ailments encountered during the provision of primary health care in community pharmacies.  
  o This could be achieved by adapting current text books or by extending the current professional practice standards in Australia.
- Improving the standard of consultation undertaken in community pharmacies such that the diagnostic phase makes greater use of decision support tools, such as algorithms.  
  o This could include the development of computer-based algorithms linked to existing pharmacy software.
  o It is worth considering incorporating the use of algorithms in the QCCP standards, probably as a component of a possible new section on the provision of primary health care.

References
2. The term “algorithm” comes from the name of a 9th century mathematician, Muhammad ibn Musa al Khwarizmi who in Baghdad developed rules for performing arithmetic calculations using Arabic numerals