Australian Government
Department of Health

The Pharmacy Guild of Australia

5th Community Pharmacy Agreement

Consumer Needs Full Final Report

Researchers: *John Cannings, OAM, PwC*
Caitlin Francis, PwC
Rebecca Jessop, PwC
Monica Brabant, PwC
Karen Lee, PwC
Sophie Kent, PwC
Jessica Li, PwC
Laurent Billot, The George Institute for Global Health

Research & Development

FULL FINAL REPORT

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Acronyms and abbreviations

Abbreviation	Description
3CPA	Third Community Pharmacy Agreement
4CPA	Fourth Community Pharmacy Agreement
5CPA	Fifth Community Pharmacy Agreement
ABS	Australian Bureau of Statistics
AIHW	Australian Institute of Health and Welfare
AQoL	The Assessment of Quality of Life
BMI	Body Mass Index
BMQ	Brief Medication Questionnaire
CHF	The Consumer Health Forum of Australia
CDE	Certified Diabetes Educator
COPD	Chronic Obstructive Pulmonary Disease
DSM	Disease State Management project
eHealth	Combined use of electronic communication and information technology in health
ePrescriptions	Electronic prescriptions
eRx	eRx Script Exchange
EQ-5D	A standardised measure of health status developed by the EuroQol Group
GP	General Practitioner
The Guild	The Pharmacy Guild of Australia
HbA1c	Glycosylated haemoglobin
HMR	Home Medicines Review
INR	International Normalized Ratio
K-10	Kessler Psychological Distress Scale
ML	Medicare Local
OECD	Organisation for Economic Cooperation and Development
PACP	Pharmacy Asthma Care Program
PBS	The Pharmaceutical Benefits Scheme
PPI	Pharmacy Practice Incentive
PSA	Pharmaceutical Society of Australia
QCPP	Quality Care Pharmacy Program
QUM	Quality Use of Medicines

Abbreviation	Description
RPWP	Rural Pharmacy Workforce Program
SF-36	The Short Form (36) Health Survey is a survey of patient health
TABS	Tool for Adherence Behaviour Screening
UK	United Kingdom
W-BQ12	Wellbeing Questionnaire 12

Definitions

Community pharmacy: refers to pharmacists (including pharmacy owners) and pharmacy assistants working in pharmacies and their provision of primary health care-related goods and services.

Pharmacist: pharmacists are healthcare professionals with specialised education, training and qualifications who perform various roles to ensure optimal health outcomes for their patients through proper medicine use. Pharmacists may also be small business proprietors, owning the pharmacy in which they practice.

Pharmacy staff: refers to others working within the pharmacy (not the pharmacist) including retail assistants, the pharmacy manager and pharmacy assistants.

Community pharmacy services: the Community Pharmacy Roadmap proposed by the Guild[1] reflects present current or anticipated pharmacy services nationally. These include four "quadrants" of services which reflect the structure and physical layout of a pharmacy and its relationships to the individual, broader health sector and community. These four quadrants are:

a) 'Prescribed Medicines Services and Programs' – linked to the function of the dispensary
b) 'Pharmacy Medicines and Health Products – Services and Programs' – linked to the professional services area of the pharmacy
c) 'In-Pharmacy Health Services and Programs' – utilises a private consultation area within the pharmacy
d) 'Outreach Health Services and Programs' – delivered outside the physical pharmacy location

Consumer: health consumers are the users and beneficiaries of health care and – ultimately – those who pay for it. They have a unique and important perspective on health.

Consumer need: needs are 'must' urges which consumers or the community have when seeking products and services. A met need can result in satisfaction and improve overall health, while an unmet need can result in dissatisfaction.

Consumer expectation: "expectations serve as standards with which subsequent experiences are compared resulting in evaluations of satisfaction or quality…they are viewed as predictions made by customers about what is likely to happen (positive or negative) during an impending transaction or exchange".[2] It is linked to what a consumer desires or wants, "… ie, what they feel a service provider should offer, rather than would offer".[3]

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[1] Pharmacy Guild of Australia (2010) The Roadmap – The Strategic Direction for Community Pharmacy. Accessed < http://www.guild.org.au/The_Guild/tab-Pharmacy_Services_and_Programs/The_Roadmap/The+Roadmap.page> On April 16th April 2012

[2] Zeithami, V.A., Berry, L.L. & Parasuraman, A. (1993). The nature and determinants of customer expectation of service, *Journal of the Academy of Marketing Science,* 21(1), 1-12.

[3] Parasuraman et al.,(1988) cited in Teas, K.R. (1993). Consumer expectations and the measurement of perceived service quality, *Journal of Professional Services Marketing,* 8(2), 33-54.

Consumer experience: a consumer's experience, "originates from a set of interactions between a customer and a service, a product, a company, or part of its organisation, which provoke a reaction …which is personal… and its evaluation depends on the comparison between a customer's expectations and the stimuli coming from the interaction with the company and its offering".[4]

Consumer-centred care: a 'consumer-centred' model draws on the values of the World Health Organization definition of 'person-centred health care' (2006). These values include empowerment, participation, access and the central role of family and community. This means that people have the right and duty to participate in making decisions about their health care, not only regarding treatment and management, but also for broader issues of health care planning and implementation. The Department of Health has articulated this as 'a primary health care system which is designed around supporting the individual, their family and carers to be in control and actively supported in their care. It is also about a system which is easy for them to access the care they need and which helps them to manage their health care needs and stay as healthy as possible' (Australian Government Department of Health, 2009).

Carer: a carer is an individual who provides personal care, support and assistance to another individual who needs it because that other individual: (a) has a disability; or (b) has a medical condition (including a terminal or chronic illness); or (c) has a mental illness; or (d) is frail and aged.

Interactions (medicine): when another medicine, food or alcohol changes how strongly a medicine works, or changes its side effects in some way. These interactions may be serious.[5]

Health literacy: health literacy refers to an individual's ability to seek, understand and use health information.

Satisfaction: the term satisfaction used in this document refers to the consumers' self reported satisfaction levels relating to their pharmacy experience. For example, satisfaction may be explored through dimensions such as overall satisfaction, satisfaction with the accessibility of personnel (e.g. pharmacist and/or pharmacy staff) to assist and provide advice, satisfaction with the knowledge and advice provided amongst others.

Self efficacy: self-efficacy refers to a person's belief in their capability to organise and execute the course of action required to deal with prospective situations.

Self management: self-management has been defined as a set of skilled behaviours engaged in to manage one's own illness.[6]

Side effect (medicine): medicine side effects (also called adverse reactions) are the unintended effects of a medicine. Side effects are usually harmful.[7]

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[4] Gentile, C., Spiller, N. & Noci, G. (2007). How to sustain the customer experience: an overview of experience components that co-create value with the customer, *European Management Journal,* 25(5), 395-410.

5 http://www.nps.org.au/glossary/interactions - Accessed 13 June 2013.

[6] Ruggiero, L., Glasgow, R.E., Dryfoos, J.M., Rossi, J.S., Prochaska, J.O., Orleans, CT., Prokhorov, A. V., Rossi, S.R., Greene, G.W., Reed, G.R., Kelly, K., Chobanian, L., & Johnson, S. (1997). Diabetes self -management: Self -reported recommendations and patterns in a large population. Diabetes Care, 20(4), 568-576.

[7] http://www.nps.org.au/conditions-and-topics/topics/how-to-be-medicinewise/side-effects-interactions/understanding-side-effects; http://www.nps.org.au/glossary/side-effects - Accessed 13 June 2013.

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- Anne-Marie Feyer – The George Institute for Global Health
- Diana Aspinall – Consumer Representative
- Ingrid Struzina – Department of Health

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The Pharmacy Guild of Australia manages the Fifth Community Pharmacy Agreement Research & Development which supports research and development in the area of pharmacy practice. The funded projects are undertaken by independent researchers and therefore, the views, hypotheses and subsequent findings of the research are not necessarily those of the Pharmacy Guild.

1. Overview of the Consumer Needs project

This section details the key objectives of the Consumer Needs project, an overview of the approach and project governance arrangements.

A key focus for Australia's primary health care reform is to create a stronger primary health care system through the better coordination of care for consumers. Community pharmacy can play a pivotal role in this model as one of the most frequently accessed primary health care services. In order to inform the further development of consumer-focused policy in relation to community pharmacy services, consumer needs, expectations and experiences must be better understood. Also important is better insight into the benefits that community pharmacy services can provide to consumers.

This was the basis for the *Consumer Needs* project which was funded by the Australian Department of Health as part of the Fifth Community Pharmacy Agreement (5CPA) Research and Development program managed by the Pharmacy Guild of Australia ('the Guild').

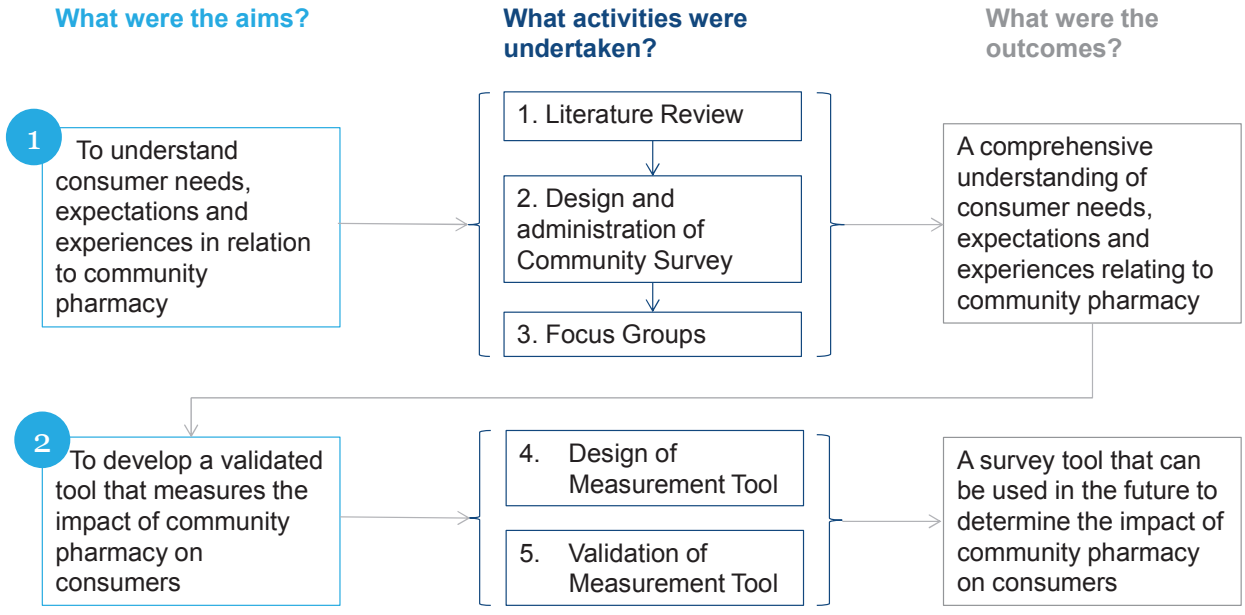
1.1. Project objectives

The objectives of the *Consumer Needs* project were to:

1. develop, implement and pilot an appropriate methodology to inform policy related decisions on a pharmacy services, and
2. develop and validate a tool to measure consumer health impact and outcomes sensitive to the community pharmacy context.

To achieve the first objective, the key activities undertaken were a literature review, a national Community Survey and ten focus groups. The information gathered from each of these activities fed into the next, which then directly informed the second objective to develop and validate a measurement tool. This is depicted in Figure 1.

Figure 1: Achieving the project objectives



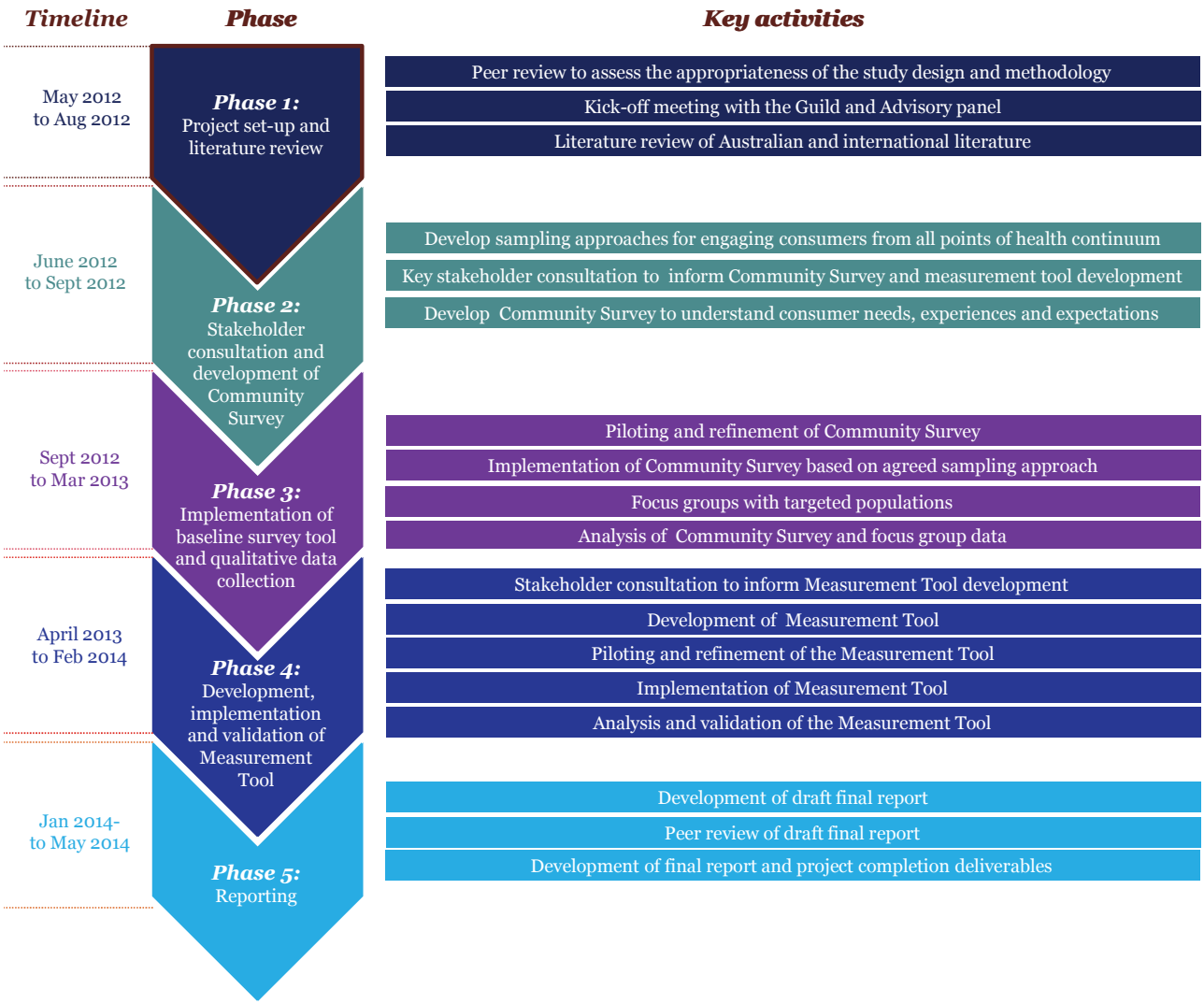
In terms of examining consumer needs, expectations and experiences, and also in developing a tool that measures consumer health outcomes, a holistic view of community pharmacy was taken for this research. This encompassed the following four key components:

1. **The pharmacist:** looking at consumers' interactions with the pharmacist and the knowledge and expertise of the pharmacist.
2. **The pharmacy staff:** examining the role other staff members play in the community pharmacy, the interactions they have with consumers and their level of expertise.
3. **The pharmacy itself:** examining the layout including the amount of privacy available for consultation, and the type of pharmacy (e.g. discount/national brand).
4. **The products and services:** looking at what types of medicines, health services and other retail products are available within the pharmacy.

1.2. Project methodology

Based on the objectives of the project, a five-phased approach to the project was developed and undertaken. The project commenced in May 2012 and was completed in May 2014. The key activities in each of these phases, as well as the timing of these, are detailed in Figure 2.

Figure 2: Project Approach



1.3. Project governance

As part of the rigorous project governance approach to the Consumer Needs project, the project was overseen by the Advisory Panel which included representatives from the Department of Health, the Guild, Pharmaceutical Society of Australia, the Consumers Health Forum of Australia and a research specialist. Their role was to provide expert input into and oversight to the research and project deliverables. The Research Team met with the Advisory Panel on six occasions prior to the submission of the final draft report, either via face-to-face meetings or teleconference.

Throughout the course of the project, Diana Aspinall (member of the Consumer Health Forum) and Tricia Greenway (one of the three project advisors) represented the Australian consumer – providing valuable insights into the consumer experience and perspective as it related to community pharmacy.

2. Background and context

This section provides the background to the Consumer Needs project, including the context in which it was undertaken, the role of community pharmacy in light of recent primary health care reform and the shift towards a consumer-centred primary health care model.

2.1. The Fifth Community Pharmacy Agreement

The *Consumer Needs* project forms part of the 5CPA, the most recent agreement (which commenced 1 July 2010) between the Australian Government and the Pharmacy Guild of Australia. The 5CPA recognises community pharmacy's contribution to primary health care in Australia and provides $15.4 billion over the five year duration of the agreement, distributed between approximately 5250 community pharmacies. This funding is directed towards the delivery of the Pharmaceutical Benefits Scheme (PBS), the dispensing of medicines and the provision of other programs and services which impact the health of Australians.

Research and development forms a key priority under the 5CPA. The Research and Development (R&D) program specifically aims to identify research and development priorities in the provision of community pharmacy services, allowing funding to be allocated to those programs showing the greatest potential in terms of improving consumer health outcomes.

The *Consumer Needs* project was one of six projects funded under the R&D Program. It is closely aligned to a project undertaken by the University of South Australia in 2005, funded as part of the Third Community Pharmacy Agreement R&D Program which also looked at Consumer needs, expectations and experiences. Consumer needs, expectations and experiences are by no means static, and vary frequently in response to both personal and situational factors. The current *Consumer Needs* project builds upon the previous project by providing an updated view of consumer needs, expectations and experiences, as well as including the development of a tool which aims to measure the impact of community pharmacy on consumers.

2.2. Primary health care reform in Australia in 2013-14

2.2.1. Overview of primary health care reform

Primary health care – i.e. care delivered in the community, outside of hospitals, is the part of the health system that Australians use most frequently. Primary care covers a wide range of providers, such as GPs, practice nurses, psychologists, physiotherapists, community health workers and community pharmacists. Over four out of five Australians will see a GP or other primary health care professional at least once a year.

A strong primary health care system is critical to the sustainability of the Australian health system overall, particularly for individuals and communities to receive the health care they need, and when and where they need it. It helps consumers better manage their health conditions in the community and prevent illness and disease, resulting in less demand on hospital and emergency departments.[8]

The Australian health system currently faces the challenges of a growing ageing population, the increasing prevalence of chronic disease, inequities in health outcomes and access to services, concerns about safety and quality, and workforce shortages and inefficiencies. The Department of

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8 Commonwealth of Australia Department of Health and Ageing. (2011). *Improving Primary Health Care for All Australians*. <Retrieved from http://www.yourhealth.gov.au/internet/yourHealth/publishing.nsf/Content/improving-primary-health-care-for-all-australians-toc/$FILE/Improving%20Primary%20Health%20Care%20for%20all%20Australians.pdf>

Health, in partnership with State and Territory governments and other key stakeholders, is overseeing an intense period of reform to Australia's primary health care system to respond to these challenges.

The key areas of focus of primary health care reform in Australia are summarised below.

Key areas of focus of primary health care reform:

- Better integration and coordination of services through improving access and reducing inequality
- Better management of chronic disease
- An increased focus on health promotion and prevention
- Improving quality, safety, performance and accountability

2.2.2. Recent changes to governance structures

The Australian Government is committed to building a stronger primary health care system that is more efficient, with lower rates of avoidable hospital admissions, reduced health inequalities and improved health outcomes. In line with this commitment, two key primary health care reforms at the national level include the establishment of Medicare Locals and GP Super Clinics. More detail around each of these is provided below.

Medicare Locals

Medicare Locals (MLs) are a central component of the Australian Government's primary health care reform. They comprise a national network of primary health care organisations and were created in response to an identified need for better coordination across the primary health system.[9] There are 61 MLs established across Australia, their key role being to integrate and coordinate primary health care delivery in their geographical area. MLs are fostering new working partnerships between community pharmacies and general practices, with the common aim to deliver better quality health care for patients.

In December 2013, a review of MLs was announced to ensure that Commonwealth funding is being used as productively as possible. This review is currently underway and includes the role of MLs and their performance against stated objectives, the performance of MLs in administering existing programmes and interactions between MLs and Local Hospital Networks and other health services. It is being overseen by Australia's former Chief Medical Officer, Professor John Horvath, with a report made to government in March 2014.[10]

GP Super Clinics

GP Super Clinics are newly constructed or significantly extended facilities that support the delivery of integrated, multidisciplinary primary care services and the training and education of the future primary care workforce.[11] They are critical to building a stronger national primary health care system including a greater focus on health promotion and disease prevention, and better coordination between GPs and allied health services, community health and other state and territory funded services. The Australian Government committed around $650 million to build more than 60 GP Super Clinics around the country and for Primary Care Infrastructure grants to upgrade and extend around 425 existing general practices, primary care and community health services, and Aboriginal Medical Services.[12]

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9 Australian Government Department of Health and Ageing (2010). *Medicare Locals – Discussion Paper on Governance and Functions.* Retrieved from http://www6.health.gov.au/internet/yourhealth/publishing.nsf/content/MedicareLocalsDiscussionPaper

10 Department of Health, 2013, retrieved from: http://www.health.gov.au/internet/ministers/publishing.nsf/Content/health-mediarel-yr2013-dutton025.htm

11 Australian Government Department of Health and Ageing (2010) *GP Super Clinics National Program Guide 2010.* Retrieved from http://www.health.gov.au/internet/main/publishing.nsf/Content/EDFE1424D5527519CA25793A0010024C/$File/National%20Program%20Guide%202010.pdf

12 Department of Health http://www.health.gov.au/internet/main/publishing.nsf/Content/pacd-gpsuperclinic-about

The evaluation of the GP Super Clinics Program conducted in 2011 showed that patients had increased access to primary health care in a multidisciplinary setting, and reported positive experiences about access to and the quality of care. The Program was also found to support retention and recruitment of GPs. Given the evaluation was conducted in the Program's early stages of maturation; the real return on investment in primary health care was not able to be adequately assessed.[13]

There have also been recent changes to the health governance structures at a state/territory level. These include the establishment of Local Health Districts (LHDs) which oversee public hospitals and health services in the area. While Medicare Locals are funded at the national level, LHDs are funded at the jurisdictional level. It is important for MLs in each jurisdiction to work collaboratively with LHDs to achieve an integrated and coordinated health system.

2.2.3. A consumer-centred model of health care

An important focus of recent primary health care reform is designing a health care system with the consumer at the centre – aligning to the National Health and Hospitals Reform Commission's principles to shape the Australian health system. A 'consumer-centred' model draws on the values of the World Health Organisations definition of 'person-centred health care' (2005) - empowerment, participation, the central role of family and community and access - whereby people have the right and duty to participate in making decisions about their health care, and not only in issues of treatment and management, but for broader issues of health care planning and implementation.

This shift towards a consumer-centred model is supported by pharmacists:

"To grow as a profession and be a part of the primary healthcare team, we must develop a patient-orientated attitude. If pharmacists are to be integrated health professionals, we must focus on the patient and must be prepared to deliver a service that exceeds simply providing a product. Pharmacists should be integrated into health systems at the point of decision-making in collaboration with the prescriber. Optimising patient self-management, especially of chronic diseases, is essential to achieving patient-centred care." [14]

This shift towards a consumer-centred model of care will improve health literacy as a means to empower consumers, allowing them to successfully access, understand and participate in their health care and further acknowledge the benefits of self management.

2.2.4. The introduction of eHealth

Personally Controlled eHealth Record System

The Personally Controlled eHealth Record System was rolled out in Australia in July 2012, with an investment of $466.7 million over a two year period. The development of the eHealth Record System has been a key Australian health reform which aims to increase consumer safety, improve health care delivery and cut duplication of services. It is a secure summary of an individual's health information, controlled by the consumer which allows them to make more informed choices about their health care.

The eHealth Record is currently 'opt-in' for both consumers and health professionals, which has contributed to the slow uptake of the system. Further, the complexity of the registration process has been a major barrier to uptake.[15]

In September 2013, there were over 900,000 consumer registrations, over 5,400 provider organisation registrations and more than 7,800 individual provider registrations.[16] The system becomes more valuable

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[13] Department of Health, retrieved from: http://www.health.gov.au/internet/publications/publishing.nsf/Content/GPSuperClinicsEvaluation-toc~executivesummary~summary

[14] Rigby, D. (2009). Future Role of Professional Pharmacy Services. *The Australian Journal of Pharmacy*, Vol 90 December, 11–15

[15] Reeve, J, Hosking, R, Allinson, Y, 2013, Personal electronic health records: the start of a journey, Australian Prescriber.

[16] Australian Primary Health Care Nurses Association, retrieved from: http://www.apna.asn.au/scripts/cgiip.exe/WService=APNA/ccms.r?Pageid=11740

and useful as more healthcare organisations, including pharmacies register. Over time, the introduction of the eHealth Record System has the potential to significantly impact pharmacy in terms of providing pharmacists quick access to an individual's health information. Benefits of the system include:[17]

1. Improved safety and reduced adverse drug reactions from more medicine information being available
2. Helping people, especially those with chronic and complex conditions to better manage their medicines
3. Reduced likelihood of human error, for example misreading information on prescriptions
4. Improved continuity of care
5. Enabling individuals to take a more pro-active approach in managing their health
6. Through the information accessible through the eHealth Record System, pharmacists will be better placed to check the appropriateness of medicines.

The key to the long term success of the eHealth Record System will be a common understanding of the purpose and potential of the system – i.e. communicating realistic expectations of what the system can achieve now and in the future to health professionals and consumers.[18]

Electronic prescriptions

Electronic prescriptions (ePrescriptions) are a fundamental step towards improving patient care by contributing to the safe and effective prescribing and dispensing of medicines. Under the 5CPA, $75.5m was allocated for electronic prescription fees aiming to offset costs that pharmacies have incurred through providers' charges for downloading electronic prescriptions.[19]

Overseas studies that have evaluated e-prescribing systems have shown that they can enhance the safety and quality of prescribing by ensuring complete and legible prescription orders, improving the detection of drug allergies and by reducing medicine errors and adverse reactions (Ammenwerth et al, 2008; Mahoney et al, 2007; Shamliyan et al, 2008). A 2012 Australian study by Westbrook et al showed that implementation of commercial e-prescribing systems resulted in statistically significant reductions in prescribing error rates at two Australian teaching hospitals.

The electronic transfer of prescriptions is the foundation for other key eHealth initiatives such as the eHealth record system described above. A key component of the eHealth record system is a prescription and dispense function. As the system continues to be taken up by health professionals, this function is expected to better connect pharmacists to consumers and prescribers, enabling a more streamlined approach to the prescribing and dispensing of medicines. Pharmacists will be able to view a consumer's detailed medicine history through the Prescription and Dispense View in the eHealth record system which will facilitate the cross checking of prescriptions and identification of potential contradictions.[20]

2.2.5. An increased role for community pharmacy

One of the key developments under the national health reforms is the Australian Government's aim to shift the centre of gravity of the health system from hospitals to primary care. Community pharmacy can play an important role in the context of recent primary health care reforms. Whilst often overlooked in the realm of primary health care providers, pharmacies play a critical role in the provision of health promotion, early intervention, prevention, assessment and general management of peoples' health. The fact that pharmacies are often the first point of contact between consumers and the health care system only goes to reaffirm the increased role they can play in the context of Australian primary health care

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[17] eHealth and pharmacists: http://www.ehealth.gov.au/internet/ehealth/publishing.nsf/content/brochure-pharmacists

[18] Reeve, J, Hosking, R, Allinson, Y, 2013, Personal electronic health records: the start of a journey, Australian Prescriber.

[19] Retrieved from http://www.health.gov.au/internet/ministers/publishing.nsf/Content/4519DE726AB6CFCBCA25794F007B0D3D/$File/cksp211111.pdf

[20] eHealth and pharmacists: http://www.ehealth.gov.au/internet/ehealth/publishing.nsf/content/brochure-pharmacists

reform. This is especially relevant for people living in rural and remote areas and Aboriginal and Torres Strait Islander people, with these groups more likely to rely on their community pharmacy for health care advice and information in absence of easy and/or affordable access to a GP or other health care providers. A recent example of an increased role for community pharmacy in primary health care is the Queensland Immunisation Pilot Program – further detail on this is provided below.

Queensland Immunisation Pilot Program

An example of where pharmacists have recently increased their role is the launch of a pharmacist immunisation research pilot program to be conducted across several community pharmacies in Queensland. The Queensland Immunisation Pilot Program is due to begin in the 2014 influenza season, targeting consumers not currently covered by the National Immunisation Program. It represents a key example of where community pharmacy can play a larger role in the delivery of primary health care. Queensland President of the Pharmacy Guild, Tim Logan commented that:

> *"Community pharmacies are the most accessible healthcare professionals and so we are a natural destination for the delivery of immunisation services"*[21]

The following sections of the report provide an overview of the findings from each of the key activities undertaken as part of the research.

[21] PSA and PGA Joint Media Release, PSA and Pharmacy Guild in QLD Immunisation Trial, January 13 2014

3. The Literature Review

This section details the purpose and key findings of the Literature Review that was undertaken as part of the first phase of the Consumer Needs project. The key findings relate to community pharmacy in Australia, consumer needs, expectations and experiences in relation to community pharmacy services, and how to measure the impact of community pharmacy on consumer health outcomes.

3.1. Purpose

The purpose of the Literature Review was to build an evidence base to establish:

1. an understanding of current health reforms in primary health care and the policy context in which community pharmacy services are delivered in Australia
2. definitions and an understanding of consumers of community pharmacy and their needs, expectations and experiences as well as trends and patterns of community pharmacy service usage, and
3. an understanding of the relationship between community pharmacy services and consumer health impacts and outcomes.

For the detailed approach taken for the literature review, including the databases and search terms used, refer to Appendix B.

Refer to the Consumer Needs Literature Review Report for further detail on the information presented in this chapter, including key findings.

3.2. Key findings

3.2.1. Community pharmacy in Australia in 2013-14

Overview of community pharmacy in Australia

It has been estimated that each community pharmacy in Australia serves a community of 4,000 people and that, on average, a person will visit a community pharmacy around 14 times a year.[22] In addition, a recent Roy Morgan survey of Australians (2012) ranked pharmacists as the as the second most honest and ethical profession after nurses and showed that the community's trust and confidence in pharmacists had increased over the previous twelve months.[23]

There has traditionally been a view of community pharmacists as 'shopkeepers' and dispensers of medicines, however there has been a recent shift towards extending the role of community pharmacists in health care. This is supported by various advocates, including the Guild and the PSA, who have both released position papers highlighting the broader role that community pharmacy can play in primary health care.[24] This role includes:

1. assisting consumers with chronic disease to manage medicine-related issues
2. assisting consumers in medicine compliance and adherence

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22 Pharmaceutical Society of Australia. (2010). Focussed on the future: A progress report on the new PSA. Retrieved from http://www.pharmacyconference.com.au/library//Focussed_%20on_%20the_future.pdf

23 Roy Morgan (2012) Image of Professions Survey 2012. Retrieved from http://www.roymorgan.com/news/polls/2012/4777/

24 Pharmacy Guild of Australia. *Powering the better use of medicines*. Retrieved from http://www.guild.org.au/iwov-resources/documents/The_Guild/tab-Pharmacy_Services_and_Programs/GuildCare/GuildCare%20programs%20Brochure%20New%20Version%202%20Final.pdf

3. assisting other health professionals to make appropriate clinical decisions based on complete medicine profiles
4. assisting consumers with lifestyle and preventative health issues
5. being a focal point for health screening programs, and
6. being the referral point for government awareness campaigns.

The community pharmacy industry itself is changing, with a challenge forecasted to impact the traditional model of care delivery being significant consolidation through growth in banner and buying groups. Membership of such groups affords an individual pharmacy collective buying power and access to guarantee arrangements.[25] In order for community pharmacies to adapt to maintain consumer loyalty, they require a better understanding of consumers' health needs and need to focus on providing quality and affordable services to meet these needs.

Governance

The two peak bodies representing community pharmacy and pharmacists are the Guild and the Pharmaceutical Society of Australia (PSA). The role of each of these organisations is described below:

- **Pharmacy Guild of Australia (the Guild):** The Guild is the national peak body representing the approximate 5,250 community pharmacies across Australia. It represents the interests of the majority of community pharmacy owners.
- **Pharmaceutical Society of Australia (PSA):** The PSA is the peak national professional pharmacy organisation representing Australia's 25,000 pharmacists working in all sectors and across all locations. The core business of the PSA is practice improvement in pharmacy through the provision of continuing professional development and practice support.

Funding

Funding of the community pharmacy services (5CPA)

The 5CPA provides $15.4 billion in funding over the duration of the five year agreement (beginning 1 July 2010) which is distributed across approximately 5,250 community pharmacies for the dispensing of PBS medicines, the provision of pharmacy programs and services, and for community services obligation arrangements with pharmaceutical wholesalers.

The Pharmaceutical Benefits Scheme (PBS)

The PBS, part of the National Medicines Policy, provides timely, reliable and affordable access to necessary medicines for Australians. Under the PBS, the government subsidises the cost of medicines for most medical conditions. A major reform of the PBS began in 2007 comprising a package of measures designed to achieve better value for money from drugs that are subject to price competition.

Policies and programs

Community pharmacy in Australia operates with reference to a range of policies – outlined in Table 1 below. Each of these policies influence the way in which consumers receive services.

[25] NAB (2009) The changing face of the healthcare industry: a special report on the pharmacy sector.

Table 1: Policies impacting community pharmacy services

Policy	Detail
National Medicines Policy	The National Medicines Policy (1999/2000) is an established and endorsed framework, based on partnerships, for health-related stakeholders at both national and state levels to promote the objectives of the policy: 'to meet medication and related service needs, so that both optimal health outcomes and economic objectives are achieved.'[26]
The National Strategy for the Quality Use of Medicines (QUM)	The National Strategy for the QUM (2002) updated and replaced a 1992 policy document to make a significant contribution to the National Medicines Policy. It's objectives include improving QUM by health care consumers, health practitioners, providers and health educators; gaining the commitment of the medicines industry and governments to QUM; and improving the commitment of health care consumers, practitioners, educators, medicines industries, the media, facilities, funders and purchasers, and governments to work in partnerships to achieve QUM.
Community Pharmacy Service Charter	This is a recent development as part of the 5CPA, based on the Australian Charter of Healthcare Rights. It has been adapted to community pharmacy and aims to inform patients and consumers of their rights, as well as the quality of health services they can expect to receive from their community pharmacy. [27]
Quality Care Pharmacy Program qualification (QCPP)	The Guild's QCPP[28] is a quality assurance program for community pharmacy, and provides support and guidance on professional health services and pharmacy business operations.
Pharmacy Practice Incentives (PPI)	Funding of $344 million is provided under the 5CPA for the PPI program which started on 1 July 2011. The program provides incentive payments to accredited community pharmacies that deliver high quality services, information and advice to help improve patient health outcomes.[29]

Medication Management Review programs

On12th February 2014, changes were announced to the Home Medicines Review (HMR), Residential Medication Management Review (RMMR) and other Community Pharmacy Agreement programs, reducing consumers' access to medication management review services. These changes were made to ensure that these services continue to be available for patients who need them most, and so that these services are put to the best possible use for patients.[30]

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26 Commonwealth of Australia Department of Health and Ageing. (1999). *National Medicines Policy*. Canberra: Publications Production Unit.

27 The Pharmacy Guild of Australia. *Community Pharmacy Service Charter*. Retrieved from http://www.5cpa.com.au/iwov-resources/documents/5CPA/Initiatives/The_Charter/The%20Charter.pdf

28 Quality Care Pharmacy Program. Retrieved from http://www.qcpp.com/QCPP/About_QCPP/What+is+QCPP/What+is+QCPP.page

29 Australian Government Department of Human Services. Retrieved from http://www.medicareaustralia.gov.au/provider/pbs/fifth-agreement/pharmacy-practice-incentives.jsp

30 Pharmacy Guild of Australia, Retrieved from: http://www.guild.org.au/nsw_branch/nsw-news/2014/02/12/changes-to-community-pharmacy-agreement-programs

Community pharmacy workforce

In February 2014, there were approximately 5250 community pharmacies across Australia.[31] Pharmacy ownership is governed by state and territory legislation which largely restricts community pharmacy ownership to registered pharmacists. In June 2012, there were 26,434 pharmacists registered in Australia.[32] The 2006 Population Census data showed that there were 46,539 in the Australian pharmacy workforce broken down into pharmacists (33%), pharmacy dispensary technicians (8%) and pharmacy assistants (59%). Using the International Pharmaceutical Federation's estimates that 94.4% of 2009's 5286 pharmacies were community pharmacies, about 43,932 persons were working in community pharmacies in that year.

Priority populations

Priority populations for community pharmacy services, as defined in the 4CPA and the 5CPA include:

- **People aged 65 and over**: this group represents 14% of the total population but accounts for 80% of pharmaceutical consumption. With the ageing population trend, demand from this age group is forecasted to continue to grow.[33]
- **Aboriginal and Torres Strait Islander people**: this community is disadvantaged across a range of health indicators, for example life expectancy, prevalence of diabetes and risk factors for ill health. A number of programs exist under the 5CPA to improve access to medicines for Aboriginal and Torres Strait Islander people including the S100 Remote Aboriginal Health Services Program and the Closing the Gap PBS Co-payment Measure.
- **Rural and regional populations**: people living in rural and regional areas tend to have shorter lives and higher levels of illness and disease risk factors than those in major cities. The 5CPA prioritises funding for rural support programs including the Rural Pharmacy Maintenance Allowance and the Rural Pharmacy Workforce Program.
- **People living with chronic diseases**: Research and development projects through the 3CPA, 4CPA and 5CPA have focused on the involvement of community pharmacy in chronic disease management. Examples of projects include the Pharmacy Asthma Care Program and the Pharmacy Diabetes Care Program.

Refer to the Consumer Needs Literature Review for more detail on characteristics of these priority populations, including how the 4CPA and 5CPA address these groups.

3.2.2. Overview of community pharmacy services

Agreements between the Australian Government and the Guild describe various services offered by community pharmacies. These services have developed and expanded over the course of Community Pharmacy Agreements. Part of the agreement has been to continually identify priority areas for community pharmacy service provision through research and development.

In May 2010, the Guild released The Roadmap – The Strategic Direction for Community Pharmacy.[34] This document was a 'status report' of Australian community pharmacy, as well as a practical plan for its future direction. It defines community pharmacy services under the following four areas:

- Promotion and prevention

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31 IBISWorld Market Research, Retrieved from: http://clients1.ibisworld.com.au/reports/au/industry/ataglance.aspx?entid=1878

32 Australian Health Practitioners Regulation Agency - Pharmacy Board of Australia, June 2012, Retrieved from http://www.pharmacyboard.gov.au/News/Newsletters/June-2012.aspx

33 KordaMentha (2011) Retail pharmacy – ready to take its medicine? Retrieved from: http://www.kordamentha.com/docs/publications/publication-11-03-retail-pharmacy.pdf?Status=Master

34 The Pharmacy Guild of Australia. Retrieved from http://www.guild.org.au/The_Guild/tab-Pharmacy_Services_and_Programs/The_Roadmap/The+Roadmap.page

- Screening and diagnosis
- Management, treatment and rehabilitation
- Palliative care

Table 2 lists specific services that fall under these areas. Some services may overlap categories.

Table 2: Community Pharmacy Matrix of Services

Promotion and prevention	Vaccination Administration Health Literacy Promotion Public Health Promotion Healthy Lifestyle Support Mother and Infant Services	Travel Health Social Support Networks Pandemic Support – Pandemic Influenza Planning
Screening and diagnosis	Health Checks – Screening and Monitoring Sexual Health Services Pharmacogenomics	
Management, treatment and rehabilitation	Basic dispensing protocols Medicine Continuance Medicine Adherence Protocol Driven Pharmacist Prescribing Medicines Use Reviews Controlled Drugs Real Time Monitoring Opioid Dependence Treatment Dose Administration Aids Clinical Interventions Staged Supply Electronic Prescriptions Electronic Health Records for Prescribed Supply and Services Quality Use of Medicines and Continuity of Care Compounding Service Pharmacist Only Medicine Notifiable Complementary Medicines	Smoking Cessation First Aid and Wound Management Minor Ailments Scheme Electronic Health Records for Over The Counter supply Health Supplies Chronic Disease Management Mental Illness Services Needle and Syringe Program Medicine Disposal Service Sleep Apnoea Clinics Home Medicines Review Residential Medicine Management Review Liaison Pharmacy (including with Allied Health Professionals) Pharmacy Depots Aboriginal and Torres Strait Islander Quality Use of Medicines Service
Palliation	Palliative Care Services	

3.2.3. Defining consumer needs, expectations and experiences

The changing landscape and role of consumers in primary health care sets the foundation of Australia's primary health care reform and also shifts service-led care to needs-led care in community pharmacy. Consumers today are more empowered, seek more information, and are also more likely to challenge the authority of health professionals. The community pharmacist needs to be able to validate and give advice to consumers who may originally have sourced their health care information online or elsewhere. This underlines the importance of the *Consumer Needs* project in gaining an understanding of consumer needs, expectations and experiences in relation to community pharmacy services. Before consumer needs, expectations and experiences are analysed in detail, it is essential to define each of these terms.

Consumer

The traditional concept of a 'patient' who seeks care and advice from health care professionals has transformed into a 'consumer' of health services who exercises buying power to choose medicines and has access to medical information that is no longer held only by health professionals but in the public domain (Hibber et al., 2002).

***Consumers** in health care are the users and the beneficiaries of health care and, ultimately, those that pay for it'. This definition includes both the immediate user of health care and carers who access health care on the behalf on another individual.*

Needs

There is limited consensus on the meaning of 'needs' in health. The definition below has been formed by combining elements of other definitions in the literature (Twigg and Atkin, 1994; Raiklin and Uyar, 1996).

***Consumer need:** "a consumer need is a type of product or service which is required based on factors difficult or impossible to change e.g. prescribed medicine. Needs are the desires which takes the form of a "must" urgency in acquiring goods and services in order to achieve satisfaction. Needs are a basic organic part of wants and can be met or unmet" (Raikin et al, 1996).*

Expectations

Consumer 'expectations' in health is another commonly referenced concept. Definitions of expectation highlight concepts like desires and the action of an individual in conceptualising a 'baseline' or standard scenario then undertaking an experience, and making an assessment between the two.

The following definition of consumer expectation has been developed based on other definitions of expectations in health care from the literature (Parasuraman et al, 1988; Zeithaml et al, 1993; Cadotte et al,1988).

***Consumer expectation:** a consumer expectation serves as a standard with which subsequent experiences are compared resulting in evaluations of satisfaction or quality…they are viewed as predictions made by customers about what is likely to happen (positive or negative) during an impending transaction or exchange" (Zeithami et al, 1993). It is linked to what a consumer desires or wants e.g. what they feel a service provider should offer, rather than would offer (Parasuraman et al, 1998).*

Experiences

The importance of creating a better consumer 'experience' is widely recognised for all service providers and is often referred to outside of health as 'customer experience'. Researchers often measure experience using consumer satisfaction and service quality as indicators. The definition below has been formed by combining elements of other definitions of consumer experience in the literature (LaSalle and Britton, 2003; Meyer and Schwager, 2007).

Consumer experience: *a consumer experience originates from a set of interactions between a customer and a service, a product, a company, or part of its organisation, which provoke a reaction …which is personal… and its evaluation depends on the comparison between a customer's expectations and the stimuli coming from the interaction with the company and its offering (Gentille et al, 2007)".*

3.2.4. Measuring consumer needs, expectations, experiences and impact

A principal component of the *Consumer Needs* project was the development of a Measurement Tool (the tool) which measures the impact of community pharmacy on consumer health outcomes. As an initial step, the literature was reviewed with a focus on the impact of 'community pharmacist delivered care' on consumer health outcomes, and indicators that can be used to measure this impact.

In relation to community pharmacist delivered care, three types of indicators were identified in the literature: clinical, humanistic and behavioural. These can be defined as follows:

1. **Clinical indicators** - measures of elements of clinical care which may, when assessed over time, provide a method of assessing the quality and safety of care at a system level. Examples include blood pressure and adherence to treatment advice.
2. **Humanistic indicators** - measures of health-related quality of life or functional status, for example health literacy.
3. **Behavioural indicators** - measures associated with physical changes in behaviour. Examples include smoking cessation rates and physical activity levels.

More detail is provided in the following chapters on clinical, humanistic and behavioural indicators as they relate to the four service categories identified in the Guild's Roadmap (refer to Table 2): promotion and prevention; screening and diagnosis; management, treatment and rehabilitation; and palliation.

The literature was limited in terms of documenting specific consumer needs in relation to community pharmacy and these four service categories. Therefore the subsequent chapters focus specifically on consumer expectations and experiences as they relate to the four service categories.

3.2.5. Health promotion and prevention – exploring consumer expectations and experiences and how to measure impact

Community pharmacy has the capacity to play a significant role in health promotion and prevention. In this area, the literature lends itself primarily to those behaviours that are associated with the development of cardiovascular disease, currently the leading cause of death in Australia, with 45,000 deaths attributed to cardiovascular disease in 2011.[35] Support and care advice on risk factors such as smoking, overweight and obesity, hypertension, physical inactivity, high cholesterol, poor nutrition and diabetes are all central ways in which community pharmacists can contribute to the prevention of chronic disease.

[35] Heart Foundation, accessed at: http://www.heartfoundation.org.au/information-for-professionals/data-and-statistics/Pages/default.aspx

Expectations and experiences – health promotion and prevention

Key findings in the literature around consumer expectations and experiences relating to health promotion and prevention services provided by community pharmacists are detailed in Table 3.

Table 3: Expectations and experiences – health promotion and prevention

Consumer expectations and experiences in the provision of health prevention and promotion	
Expectations	• Consumers lack awareness around what community pharmacy services are available. • Consumers don't expect to be offered health and promotion services – which is linked to low awareness • Perception of pharmacists being "too busy" and biased in recommending products • Lack of privacy in the pharmacy creates a barrier to uptake of these services • The majority of consumers do think pharmacists are capable of providing these services.
Experience	• Majority of consumers do not actively seek health promotion and prevention services in the community pharmacy • Consumers also are not often offered these services by their community pharmacist • Where consumers have experienced health promotion and prevention services, they are largely satisfied

Measurement – health promotion and prevention

The identified clinical indicators were largely the same across studies documenting the impact of pharmacy prevention activities, being blood pressure and blood glucose levels and weight. The literature acknowledged the growing role community pharmacists can have in promoting good health and chronic disease prevention. Specific activities included smoking cessation, weight management and the prevention of osteoporosis.

For more detail on specific indicators that could be used to monitor the impact of community pharmacy on health outcomes relating to health promotion and prevention, refer to Appendix C.

3.2.6. Screening and diagnosis – exploring consumer expectations and experiences and how to measure impact

Community pharmacy has many roles to play in terms of the screening and diagnosis of consumers, which can include: triaging consumers to other health care professionals based on reported symptoms; screening for those at risk of chronic disease; prescribing selected medicines and providing over-the-counter medicines; and managing consumers' use of complementary and alternative medicines (CAMs).

Key findings in the literature around consumer expectations and experiences relating to screening and diagnosis services provided by community pharmacists are detailed in Table 4 below.

Table 4: Expectations and experiences –screening and diagnosis

Consumer expectations and experiences in the provision of screening and diagnostic services	
Expectations	• Negative view of community pharmacists as an alternative for GPs for serious health issues – with GPs remaining the preferred health professional in the diagnosis of cardiovascular disease, screening for risk factors and advice on lifestyle change • Mixed opinions around whether or not community pharmacists are capable of providing screening or testing for raised blood pressure and diabetes • Consumers want the community pharmacist to engage more in complementary medicines e.g. providing safety information, routinely checking for medicine interactions, recommending effective complementary medicines and recording use in the consumer's records. • Some consumers support pharmacists being able to prescribe in emergency situations e.g. when a person had run out of a medicine and when renewing prescriptions for chronic disease medicines that had not been changed recently. The majority of consumers don't support pharmacists being able to prescribe for more complex conditions.
Experience	• Highly satisfied with community pharmacist signposting to other health professionals • Positive experiences with cardiovascular, alcohol and bone density sensitive screening • Perceived lack of privacy in community pharmacies • Positive experiences with chlamydia testing

Measurement – screening and diagnosis

Community pharmacists are often the first point of contact in the triage and diagnosis process given they frequently decide whether or not to treat or refer consumers to other health care providers (Chapman et al, n.d.). The literature showed the important role community pharmacists and staff can play in screening and diagnosis for the following conditions: type 2 diabetes; Chronic Obstructive Pulmonary Disease, Chlamydia and sleep disorders. Indicators reflecting the impact of community pharmacy delivered care in the realm of diagnostics were observed to be largely consistent across disease specific studies. The two key clinical indicators were adherence to treatment advice, which can be measured by monitoring the uptake of referrals, and the number of positive diagnoses that result from uptake. In order for the latter to be monitored and measured effectively, there is a need for collaboration between pharmacists, GPs and other health practitioners.

For more detail on specific indicators that could be used to monitor the impact of community pharmacy on health outcomes relating to screening and diagnosis, refer to Appendix C.

3.2.7. Management, treatment and rehabilitation – exploring consumer expectations and experiences and how to measure impact

In the context of community pharmacy services, management, treatment and rehabilitation refers to a broad range of activities including individual consultations, medicines reviews and management and chronic disease management. Chronic conditions pose a considerable burden in terms of high morbidity, mortality and health care costs. Furthermore, the majority of chronic diseases do not resolve quickly, with many never completely cured, which emphasises the importance of disease management. In recent years, community pharmacists' participation in managing chronic diseases such as diabetes, asthma and cardiovascular diseases has increased.

Expectations and experiences – management, treatment and rehabilitation

Key findings in the literature around consumer expectations and experiences relating to management, treatment and rehabilitation provided by community pharmacists are detailed in Table 5.

Table 5: Expectations and experiences – management, treatment and rehabilitation

Consumer expectations and experiences in management, treatment and rehabilitation services in community pharmacy	
Expectations	• There is a low level of awareness around medicine management services being offered by community pharmacists. This is seen to translate to low expectations and demand for these programs (e.g. HMR) • Consumers are confident in pharmacists' knowledge of medicines and believe it appropriate that they give information to consumers about their medicines to help avoid adverse drug reactions. • Low consumer awareness of the pharmacists' ability to provide chronic disease management, e.g. unaware that pharmacists can become Certified Diabetes Educators (CDEs) • Lack of consumer confidence in positive patient outcomes from community pharmacist managed chronic disease management programs, decreasing consumer willingness to use the programs • Perception that GPs are better qualified to provide advice on management of health conditions • Consumers had a greater preference for pharmacists to increase their role in asthma management
Experience	• Consumers who had received individual consultations around their health were satisfied. • Lack of privacy for consultations to discuss management of health conditions and medicines • Consumers are satisfied with medicines management services – they feel reassured having their community pharmacist review and confirm dosages prescribed and more confident around their use of medicines. • High satisfaction with asthma management services provided in community pharmacy • Perceived lack of time for community pharmacists to provide services

Measurement - management, treatment and rehabilitation

Chronic disease management

The Literature Review indicated that there are three key chronic conditions in which community pharmacy can play an active management role; Diabetes, Asthma and Depression.

A key humanistic indicator relating to health outcomes is improvement in consumer quality of life. There are a number of tools that measure quality of life, these described in more detail in Figure 3.

For more detail on specific clinical, behavioural and humanistic indicators that could be used to monitor the impact of community pharmacy on health outcomes relating to chronic disease management, refer to Appendix C.

Figure 3: A sample of Quality of Life measurement tools

Measuring Quality of Life

EQ-5D- this measurement instrument is self-reported, and provides a descriptive profile and a single index value for health status that can be used in the clinical and economic evaluation of health.

W-BQ12- this instrument is a generic measure of psychological well-being and comprises three 4-item subscales: Negative Well Being, Energy and Positive Well Being.

K-10 survey- this tool measures wellbeing, comprising of 10 questions measuring the level of depressive symptoms in the four weeks preceding it being administered. There are five possible responses, ranging from 'none of the time' to 'all of the time' with final scores ranging from 10 (no symptoms) to 50 (extreme distress).

SF-36- this is a generic short-form health survey with 36 questions. It has an 8-scale profile of functional health and wellbeing scores as well as psychometrically-based physical and mental health summary measures and a preference-based health utility index.

AQoL Version 2- the Assessment of Quality of Life instruments are health-related multi-attribute utility quality of life instruments. There are four AQoL instruments that have been developed, which cover the following dimensions: independent living, social relationship, physical senses and physical wellbeing. Scores range between 0 (death) and 1 (good health).

Medicines review and management

Adverse drug reactions are a major burden on the Australian healthcare system in terms of negative consumer outcomes and increased health system costs, with a recorded 14,200 reports in 2010 (Department of Health, 2010). Many of these drug reactions are preventable if consumers are adhering to their medicines, a role in which community pharmacists can play a large part. The literature was the most extensive in terms of community pharmacist-delivered medicine management in the following three demographics: 1) persons on anticoagulation drug therapy; 2) persons on anti-hypertension drug therapy; and 3) older people.

There were a number of tools identified in the literature for measuring medicine adherence – these described further in Figure 4.

For more detail on specific clinical, behavioural and humanistic indicators that could be used to monitor the impact of community pharmacy on health outcomes relating to medicines review and management, refer to Appendix C.

Figure 4: Measurement tools for medicine adherence

Morisky Scale- This scale is self-reported and assesses intentional and unintentional non-adherence. It comprises four items, each of which is scored 0 for yes and 1 for no. The total score represents the final indicator of adherence, with a score of 0 indicating good adherence, and a score of one or more indicating suboptimal adherence.

TABS- This scale is made up of two subscales: adherence and non-adherence. Each subscale comprises 4 items to be answered on a 5 point Likert type scale, ranging from 1 (never) to 5 (always).

MedsIndex- This scale gives a patient a score out of 100 for each of their long term medicines, calculated on refill history. Any score less than 100 implies suboptimal adherence

3.2.8. Palliative care – exploring consumer expectations and experiences and how to measure impact

There was limited literature on the views of consumers on community pharmacist-delivered palliative care. Studies have shown however that when community pharmacists are trained appropriately and included as integrated members of a patient's healthcare team, they can play a valuable role in palliative care, specifically around improving consumers' medicines management and minimising medicine-related errors.

Expectations and experiences – palliative care

The few findings in the literature around consumer expectations and experiences relating to palliative care provided by community pharmacists are detailed in Table 6.

Table 6: Expectations and experiences – palliative care

Consumer expectations and experiences in the provision of community pharmacist-delivered palliative care	
Expectations	• Perception that community pharmacists are willing to go out of their way to help • Believed that pharmacists are a valuable resource for medicine advice and side effects
Experience	• Valued easy accessibility of community pharmacists • Community pharmacists were often the first point of contact

Measurement - palliative care

Community pharmacy can impact consumer health outcomes through the delivery of palliative care in terms of:

- Contributing to safe, efficient provision of medicines through giving advice to consumers and carers
- Delivering medicines to the consumer's home
- Undertaking medicines reviews, ensuring that the consumer is following the most suitable drug therapy
- Providing psychosocial care to consumers, through frequent face-to-face contact with consumers in the community setting.

For more detail on indicators that could be used to monitor the impact of community pharmacy on health outcomes relating to palliative care, refer to Appendix C.

4. Stakeholder Consultation

This section provides an overview of the organisational stakeholder consultations conducted in Phase 2 of the Consumer Needs project to better understand views on consumer needs, expectations and experiences. It includes detail on the purpose and the key findings.

4.1. Purpose

The purpose of the organisational stakeholder consultations was to gain:

- a consensus on the definitions of consumer needs, expectations and experiences
- an understanding of what consumer needs, expectations and experiences of community pharmacy are and the factors which influence these
- an understanding of the important elements relating to consumer needs, expectations and experiences that the Community Survey (undertaken in Phase 3) should explore
- initial thoughts around potential measures that could be used to evaluate the impact of community pharmacy services on consumer health outcomes

There were a total of 30 stakeholder consultations undertaken.

For more detail around the approach taken for the consultations and key findings, refer to the Consumer Needs Consultation Report.

4.2. Key findings

4.2.1. Consumer needs relating to community pharmacy

Influencing factors of consumer needs

The key influencing factors on consumer needs drawn from the consultations are outlined below:

1. **Health status:** depending on the health status of a consumer, their need and the extent to which they rely on community pharmacy products and services will vary substantially. It is assumed that the greater the number of health conditions and co-morbidities a consumer has, the greater their dependence on community pharmacy for medicines and services.
2. **Age:** as a person ages, they are more reliant on their community pharmacy. This factor is closely associated with the health status of consumers, with chronic disease, co-morbidities and other health conditions becoming considerably more prevalent as a person ages.
3. **Consumer awareness of their own health status:** it was commented that in many cases, a consumer may not necessarily know what they need, and as a result may underestimate their needs. This was commented to be particularly the case for the Aboriginal and Torres Strait Islander population, explained in more detail below.

> It was expressed that in the Aboriginal and Torres Strait Islander community, the level of individual understanding of one's health requirements is limited which has a significant impact on what this group perceives they need from community pharmacy. It was commented that this community *"doesn't have the insight into the outcomes associated with not taking medicine"*, a factor which was noted to exist across all ages. Aboriginal and Torres Strait Islanders' lack of awareness in terms of what services can be accessed in a pharmacy setting is exacerbated by the fact that a large proportion of this population live in remote areas and have limited interaction with a pharmacist. The need to publicise the extended scope of pharmacy in Aboriginal and Torres Strait Islander communities was reinforced, especially considering the higher health needs of this population.

4. **Level of health literacy:** a low level of consumer health literacy was commented to lead to a greater reliance on their pharmacist to be pro-active in providing them with all the necessary information and treatment advice.

5. **Availability of alternative services:** if a consumer has easy and affordable access to other health care services, such as general practice or allied health, their need for additional services offered by community pharmacy will be reduced, with the reverse case standing true as well.

Consumer needs from community pharmacy

Consumer needs relating to community pharmacy identified in the consultations are outlined below:

1. **The dispensing of prescription medicines and counselling around the use of medicines:** the correct and timely dispensing of medicines and counselling around their use was expressed by every stakeholder as a foremost need and expectation that consumers have of community pharmacy.
2. **Equipment hire:** pharmacies are a main point of call in the community for accessing aid and medical equipment. This need was expressed to be met, with consumers generally satisfied with the range of equipment that can be accessed in a pharmacy.
3. **Non-prescription medicines:** pharmacies are also a primary access point for consumers seeking non-prescription medicines, which was another key need identified in the consultations. The increasing number of consumers purchasing these products from other sources, for example online and at the supermarket suggests that the need and reliance of consumers on community pharmacy for these products may decline in the future.
4. **Health promotion and prevention services:** health promotion and prevention initiatives offered by pharmacists were noted to be a growing consumer need in the future. The establishment of partnerships between pharmacies and other organisations will facilitate the implementation of these services in a community pharmacy setting.
5. **Health screening services:** similarly to health promotion and prevention services, health screening was acknowledged as a community pharmacy related need that is expected to increase in coming years.
6. **Cultural competency:** there is an unmet need in terms of community pharmacy being able to accommodate people from a non English speaking background's needs relating to medicines and other services. Additionally, there is a need for cultural competency or the employment of Aboriginal and Torres Strait Islander staff within the pharmacy setting to proactively address the health needs and education of this population.
7. **Palliative care:** another need which is predicted to grow in line with the ageing population is the role for pharmacy in the provision of palliative care services. With a growing number of people electing to spend the end of their life in the comfort of their own home, there is an augmented role for community pharmacy to play in supportive services such as home medicine reviews and the home delivery of prescriptions.

For detail on the key findings relating to consumer needs, refer to the Consumer Needs Consultation Report.

4.2.2. Consumer expectations relating to community pharmacy

Influencing factors of consumer expectations

There were three key factors influencing consumer expectations identified in the consultations, each of which is described below:

1. **Level of awareness of the scope of community pharmacy:** the more aware consumers are of the services and products available at community pharmacies, the more they will come to expect, with the opposite also being true.

"consumers who are not aware that government-funded services are available will not ask for them, and will not complain if they are not provided"

2. **The business model or type of pharmacy:** it was expressed that generally, consumer expectations are lower around receiving a personalised consultation in a discount style pharmacy.
3. **Age:** there was divided opinion as to whether expectations increased or decreased with age. One view was that the elderly population tend to be more accepting, not questioning why they are not being offered additional services. The opposite view was also raised; the perception being that as a consumer ages their health needs increase and become more highly valued, leading to higher expectations from community pharmacy.

Consumer expectations from community pharmacy

Consumer expectations are likely to vary substantially, based on those factors identified above. In saying this, there were some common themes identified in the consultations around perceived consumer expectations, detailed below. Generally, stakeholders articulated that consumers' expectations are likely to increase in the future, with consumers wanting to play a more active role in the decision making process around the management of their health:

1. **Counselling around medicines:** consumers expect that community pharmacists will provide them with the necessary information about their medicines to prevent harmful interactions.
2. **A role in the triage process:** it is expected that if a pharmacist suspects a consumer may need to seek alternative healthcare, that they direct them to the appropriate health professional.
3. **A degree of collaboration in the primary health care domain:** there was a common view that some collaboration among primary health care professionals is assumed by many consumers.
4. **Transparent communications:** there is an expectation that pharmacists will volunteer certain types of information. A key example is informing the consumer when a generic or alternative medicine for an existing prescription becomes available.

Consumers do not expect to be provided additional health prevention and screening services

It can however be reasonably assumed that this is due to an overall lack of awareness on the part of consumers that pharmacists are able to provide these services and that they can be accessed in some pharmacies. As consumers become more aware, it is predicted that their expectations around being able to access these services will increase.

4.2.3. Consumer experiences relating to community pharmacy

Influencing factors of consumer experiences

As mentioned already, a strong positive association exists between expectation and experience. If consumers walk into their pharmacy with high expectations, they are more likely to leave dissatisfied if the service they received did not meet these expectations. Experiences will also vary depending on what services are being accessed. For example, the consultations indicated that in general, consumers have high expectations in relation to medicines dispensing and advice, but lower expectations around being offered additional health services.

In terms of external factors which play a part in shaping how a consumer responds to an interaction with their community pharmacy, several themes were drawn out from the consultations, many of which confirm findings presented in the Literature Review. These themes, outlined below, can all be seen as both barriers and enablers to consumers accessing community pharmacy services depending on the degree to which they are present:

1. **Level of engagement:** the level of engagement, e.g. level of interaction, approachability and willingness to discuss medicine requirements and other health needs, was expressed as the principal factor influencing a consumer's experience.

2. **Skills and knowledge of the pharmacist:** the pharmacist's skill set and perceived level of health knowledge was also articulated as a potential barrier or enabler to the overall experience consumers have with their community pharmacy.
3. **Demographics and training of the pharmacist and other staff**: the ethnicity, age and gender of both the pharmacist, and other pharmacy staff should not be underestimated in terms of impacting the overall experience a consumer has with community pharmacy. For example, it was commented that elderly men are disinclined to discuss personal health matters with young female staff, and that Aboriginal and Torres Strait Islander people will have a significantly more positive experience from accessing products and services from their pharmacy if they are served by an Aboriginal Health Worker or Aboriginal pharmacy assistant.
4. **Privacy and layout:** Without a sense of privacy consumers are often reluctant to engage with their pharmacist and ask questions about their health needs.
5. **Access:** whilst the accessibility of pharmacies, in comparison to other health services, was reinforced in the consultations, there were two factors identified that pose a barrier to certain consumer groups, negatively impacting experience. The first was the location of pharmacies relative to public transport options, and the second was the number of pharmacies open 24 hours a day.
6. **Affordability:** It was commented that for those consumers who are aware that community pharmacists are able to provide additional health services, the pharmacy is welcomed as a source of free care advice and other health services. On the other hand, it was raised that the cost of medicines acts as a significant barrier, with 9.2% of consumers delaying access to prescription medicines due to cost (ABS 2011).
7. **Business model/type of pharmacy:** consumers are more likely to experience quality service in a smaller community style setting compared to a discount pharmacy.

Consumer experiences from community pharmacy

Given that this consultation phase of the *Consumer Needs* project was with organisational stakeholders, experiences of community pharmacy at a consumer level was difficult to gauge.

Consumer experiences were able to be explored more comprehensively in the Community Survey, this detailed in the next Section.

5. Community Survey

This section provides an overview of the Community Survey implemented in Phase 3 of the project. It includes the purpose of the survey, the design and implementation and the key findings. Key findings relate to how consumers use pharmacy, what they use pharmacy for, what the perceived role of the pharmacist is, factors influencing choice of pharmacy, interactions with the pharmacist/other staff and identified areas for improvement.

5.1. Purpose

To better understand consumer needs, expectations and experiences relating to community pharmacy, a national consumer survey was designed and implemented. The purpose of the Community Survey was to identify:

- what consumers use their community pharmacy for
- what the most important factors are to consumers when deciding what pharmacy to go to
- what consumers perceive the role of the pharmacist to be, and
- how consumers would like to see community pharmacy change to better meet their needs.

5.2. Approach

The Community Survey (see Appendix E) consisted of 81 questions designed to explore the issues above. The implementation of the survey through to the analysis of response data was conducted over September 2012 to March 2013.

Roy Morgan Research was engaged to administer the survey to a representative sample of 3000 Australian consumers via telephone interview. The sample of participants was recruited from Roy Morgan's Single Source database.[36] The survey took approximately 20 minutes, with questions filtered based on response.

For each survey question, responses were analysed across the following variables: 1) age; 2) gender; 3) location; 4) SEIFA decile (measuring socioeconomic status on a scale of 1-10, with 10 being an indication of the highest socioeconomic group).

For a complete analysis of every question, disaggregated by these four variables, refer to Appendix D – Community Survey Analysis.

Prior to the administration of the survey tool to the national sample of 3000 consumers, cognitive testing and a pilot of the Community Survey were undertaken to test consumers' understanding of the questions and the overall functionality of the survey.

For more detail on the approach taken to the cognitive testing, pilot, sampling methodology and survey analysis, refer to the Community Survey and Focus Groups Report.

5.3. Key findings

5.3.1. What are the characteristics of survey participants?

Key findings around the characteristics of survey participants are detailed below. These results should be interpreted to be representative of the Australian population as the responses to these questions were not weighted in the analysis.

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[36] Roy Morgan's Single Source Database is a thorough and accurate market research tool that provides comprehensive information about consumers. For example it includes information around consumers' health status, this able to be leveraged in the analysis of results.

- There were a total of 3000 participants in the Community Survey, 70% were from major cities and just over half were female (52%).
- The majority of participants (79%) rated their health as 'good' or 'very good' on the SF1 scale, while 6% rated their health as either 'poor' or 'very poor'.
- Approximately 60% of participants were taking one or more medicines while 16% reported having no health conditions. The most commonly reported conditions were musculoskeletal conditions (71%) and mental health conditions (34%).

More detailed survey analysis on the characteristics of survey participants is provided in Appendix D – Community Survey Analysis.

For the key findings outlined below, the descriptive analysis was weighted by the distribution of participants by state, remoteness, age and gender as per the 2006 ABS census. This means these results are reflective of the Australian population. Descriptive analysis refers to the reporting of the responses to each question using a number and percentage for categorical variables and mean and standard error for continuous variables.

5.3.2. How do consumers use community pharmacy?

Key findings around how consumers use community pharmacy are detailed below.

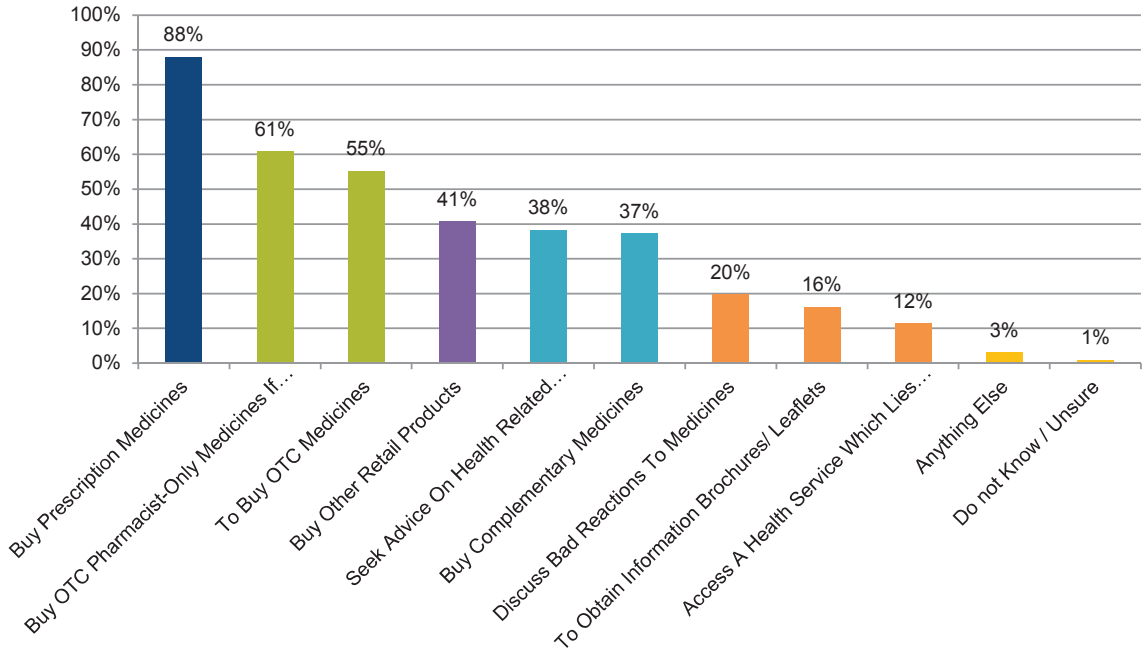
- 49% of participants reported their last visit to a pharmacy had been in the last week. The proportion of participants who had visited a pharmacy in the last week increased steadily with age; also females (58%) were more likely to have visited a pharmacy in the last week compared to males (39%). Five participants reported they had never been to a pharmacy.
- Those participants who were taking five or more medicines and those who reported poor health status access pharmacy more frequently.
- The vast majority of participants (98%) reported no difficulty in accessing community pharmacy.
- 82% of participants reported going to the same pharmacy for most of their pharmacy needs (i.e. more than 75% of the time). This proportion increased with age (from 74% in the 18-24 age group to 95% in the over 65 age group).
- 37% of participants reported their usual pharmacy to be a national brand pharmacy, 29% a discount pharmacy and 29% an independent pharmacy. Socioeconomic status did not appear to have an impact on the use of discount pharmacy.

More detailed survey analysis on the how consumers use community pharmacy is provided in Appendix D - Community Survey Analysis.

5.3.3. What are consumers using pharmacy for?

Participants were asked to identify what they currently use pharmacy for. Figure 5 details an overview of the products and services in community pharmacy accessed by participants.

Figure 5: What participants are currently using pharmacy for



Prescription medicines

Key findings around how consumers use community pharmacy in relation to prescription medicines are detailed below.

- 88% of participants reported that they use community pharmacy to buy prescription medicines and 89% of participants reported that they expect to be offered a cheaper alternative (e.g. a generic brand) if one was available.
- There was a steady increase in participants accessing community pharmacy to buy prescription medicines with age - from 75% of participants aged 18-34 to 96% of participants 65+.
- 76% of participants indicated that the pharmacist generally provided them with advice on prescription medicines, while 80% of participants expected the pharmacist to provide them with advice on their prescription medicines, even when they didn't ask for it.
- 93% of participants reported that they generally follow the pharmacist's advice about prescription medicines and the preferred method of receiving information on prescription medicines was talking with the pharmacist (53%).
- 66% of participants reported they generally followed the advice that pharmacy staff gave on prescription medicines, with the three main reasons cited for not following this advice being:
    1. I do not believe they are qualified (46%)
    2. I would rather ask my doctor (26%)
    3. I would rather ask the pharmacist (17%).

Over the counter medicines

Key findings around how consumers use community pharmacy in relation to over the counter medicines are detailed below.

- 61% of participants used the pharmacy to buy pharmacy-only OTC medicines (e.g. high strength antihistamines), while 55% of participants used the pharmacy to buy general OTC medicines.

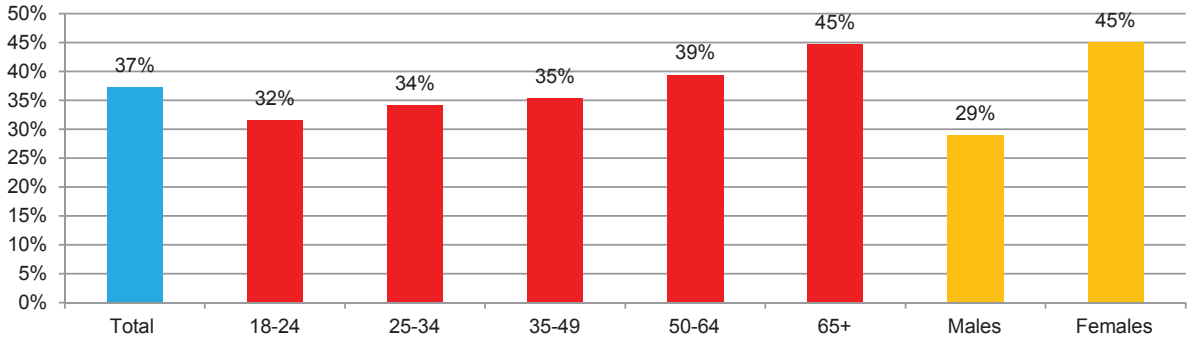
- The majority of participants (77%) expected to be offered a cheaper alternative for an OTC medicine if one was available.
- 62% of participants reported that they generally receive advice on OTC medicines from the pharmacist and 68% expect the pharmacist to give them advice on OTC medicines even when they don't ask for it.
- The preferred method of receiving information on OTC medicines was talking with the pharmacist (53%).
- The majority of participants (92%) reported following the pharmacist's advice on OTC medicines, with participants aged 18-24 most likely not to follow this advice.
- Of those participants who reported not buying OTC medicines from the pharmacy, 81% buy them from a supermarket, 3% buy them from a health food shop and 1% online.
- 40% of participants did not expect to receive advice on OTC medicines from the pharmacy staff

Complementary medicines

Key findings around how consumers use community pharmacy in relation to complementary medicines are detailed below.

- 37% of participants reported that they access a community pharmacy to buy complementary medicines. As illustrated in Figure 6, this was found to increase with age (i.e. from 32% for participants 18-34 to 45% for participants 65+), and female participants were also more likely (45%) than male participants (29%) to use pharmacies to buy complementary medicines.
- Other participants purchase complementary medicines at the supermarket (51%); health food shops (17%) and online (3%). The two main reasons stated for buying complementary medicines from the supermarket were convenience and lower cost.
- 35% of participants reported that they generally receive advice from a pharmacist on complementary medicines and 49% expect the pharmacist to provide advice without asking for it.
- Out of the proportion of participants who reported receiving advice from the pharmacist on complementary medicines, the majority (80%) reported to generally follow this.

Figure 6: Participants using pharmacies to purchase complementary medicines (by age and gender)



Health advice on the treatment and management of health conditions

Key findings around how consumers use community pharmacy in relation to health advice on the treatment and management of health conditions are detailed below.

- 35% of participants reported that they seek health advice on the treatment and management of health conditions at their community pharmacy.

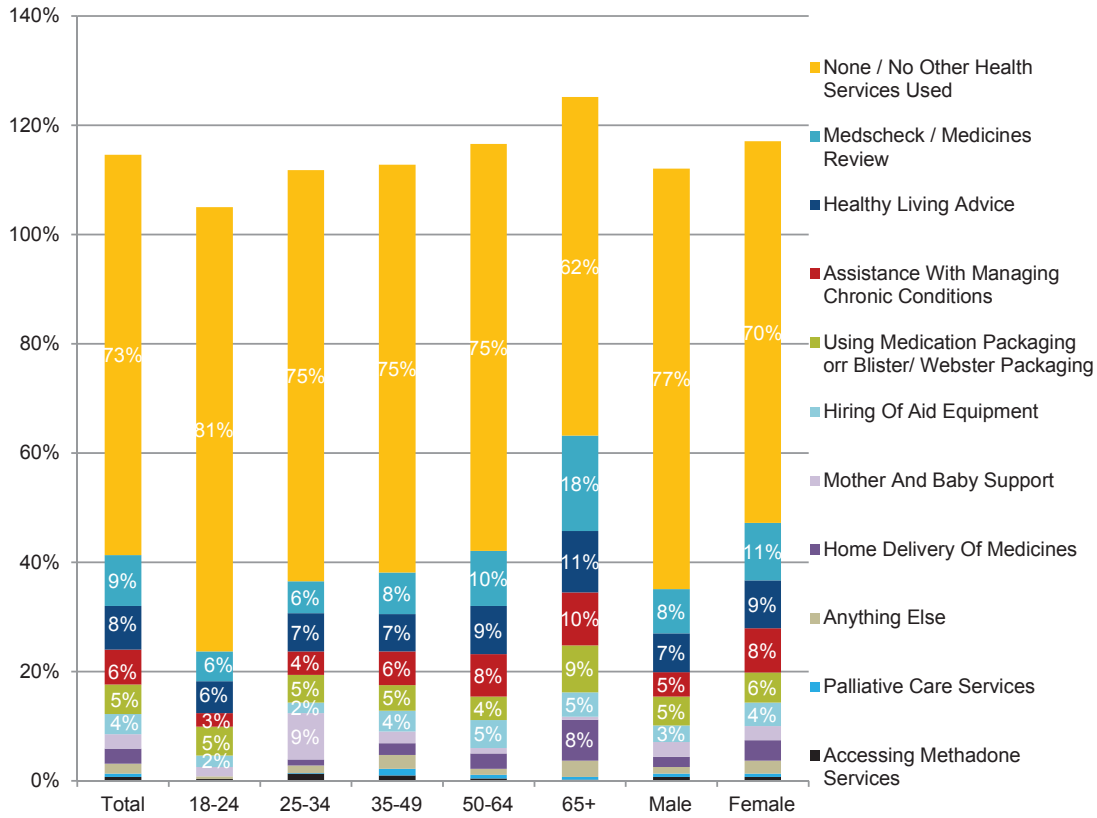
- 47% of participants reported that they generally receive advice from their pharmacist about the treatment and management of their health condition, with this higher among rural participants (74%).
- 55% of participants reported that they expect pharmacists to provide them with advice on the treatment or management of health conditions without asking for it, this was highest in the 18–24 age group (70%).
- The majority of participants (83%) reported that they generally follow the pharmacist's advice on the treatment and management of health conditions.
- In terms of the way in which participants prefer to receive information about minor ailments or chronic conditions, 51% reported their pharmacist and 46% reported their GP.

Health services

Key findings around how consumers use community pharmacy in relation to health services are detailed below.

- Only 12% of participants reported having accessed a health service that did not involve the dispensing of medicines in the last 12 months. The most commonly accessed service was a medicines review/MedsCheck (9%). The health services accessed through pharmacy by age and gender are depicted in Figure 7.
- Of those participants who reported having used a health service in the last 12 months, 66% reported being very satisfied. Participants aged 65 and over were more likely than on average (81%) to be very satisfied.
- When participants were asked what services they would use now or in the future if they were available, the most commonly reported service was blood pressure monitoring / checks (26%).

Figure 7: Health services accessed through pharmacy (by age and gender)



An increased role for community pharmacy around medicines reviews and MedsChecks

The Community Survey results showed that 14% of participants were taking five or more medicines, however there was only 9% of participants who had accessed a medicines review or MedsCheck in the last 12 months. This low proportion is expected to align to an overall lack of awareness that this service can be accessed in community pharmacy. Further, when participants were asked what health services they would most likely use in the future, 19% of participants reported a medicines review – this being the second most commonly reported service after blood pressure monitoring/checks. These findings highlight that there is a role for community pharmacy to play around increasing consumer awareness of the availability of these services, for example pharmacists volunteering these services to consumers who are taking multiple medicines or those expected to benefit.

More detailed survey analysis on what consumers use community pharmacy for is provided in Appendix D – Community Survey Analysis.

5.3.4. What do consumers perceive the role of the pharmacist to be?

Key findings on what consumers perceive the role of the community pharmacist to be are detailed below.

- 16% of participants reported going to their pharmacy 'always' or 'most of the time' for information on prescription medicines in the first instance, compared to 40% for information on OTC and complementary medicines and 34% for information on minor ailments. It is assumed that participants are more likely to receive information on prescription medicines from their GP in the first instance based on responses showing that the majority of participants would choose the GP in the future. This is detailed in Figure 8.
- When participants were asked where they would go in the first instance for future advice/information on prescription medicines, 65% chose their GP, compared to 36% who indicated that they would go to a pharmacy (see Figure 9).
- When participants were asked where they would go in the first instance for future advice/information on OTC medicines and complementary medicines, 79% of participants chose their pharmacist, compared to 12% who chose their GP.
- The top two reasons that consumers chose their pharmacy first for over the counter and complementary medicines were: 1) to receive trusted advice and information; and 2) it was cheaper than going elsewhere.
- When participants were asked where they would go in the first instance for future advice/information on minor ailments or chronic conditions, 51% chose their pharmacist, compared to 46% who chose their GP.
- 74% of participants expected their pharmacist to refer them to seek treatment from another health provider if they believed it was necessary, while 80% of participants believed it was important for the pharmacist to provide up-to-date information on new and existing medicines that they are taking.

Figure 8: Proportion of participants who go to their pharmacy first for information on prescription medicines, over the counter and complementary medicines and minor ailments

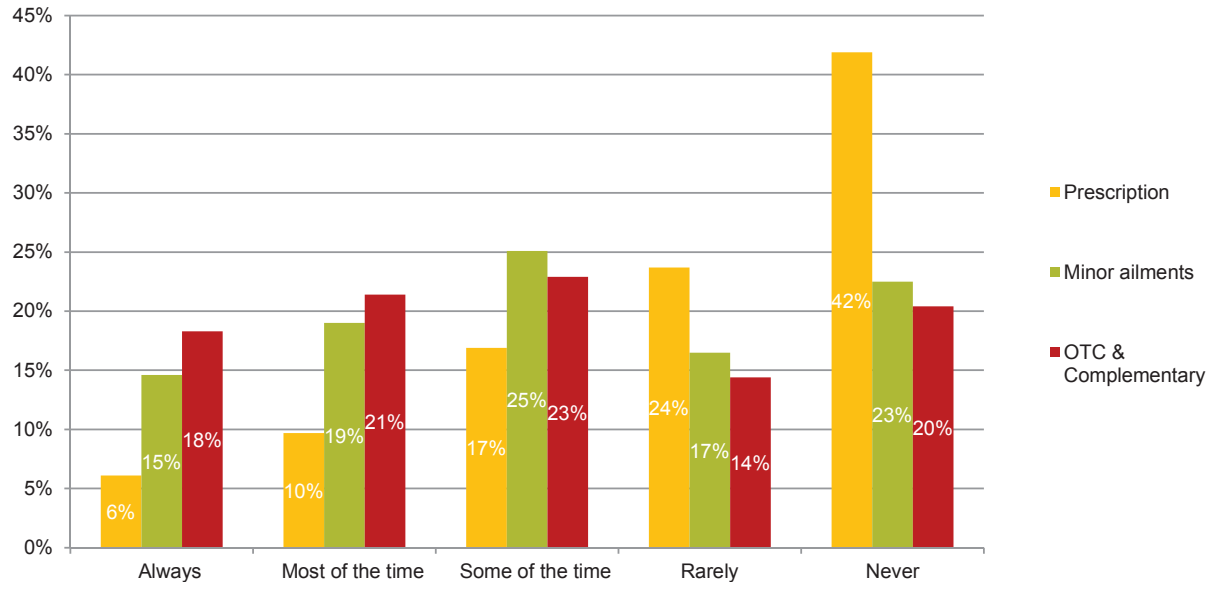
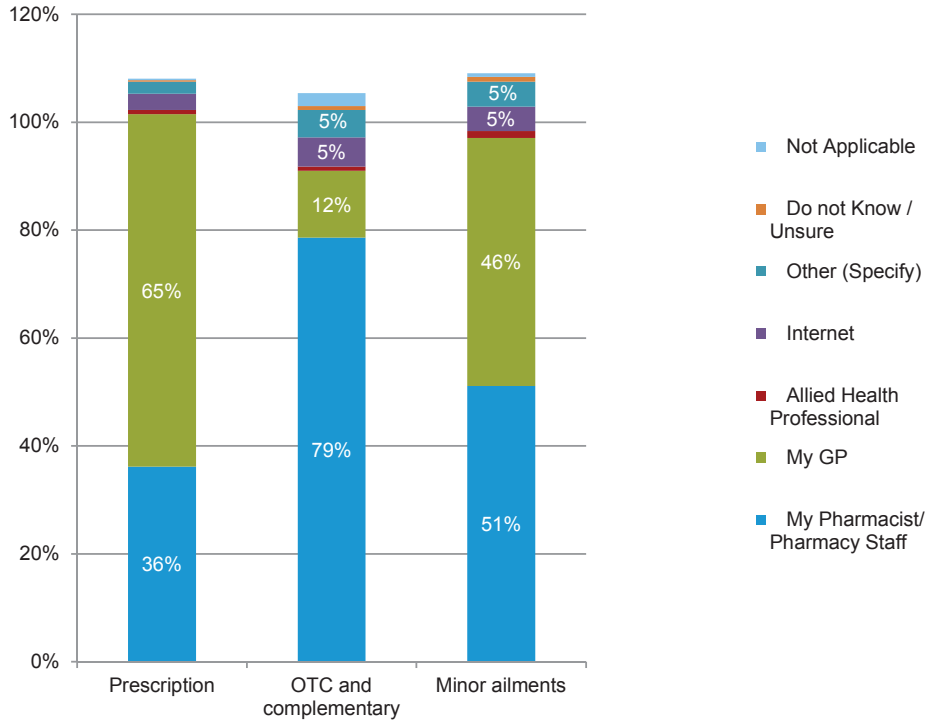


Figure 9: Where participants would go in the first instance in the future for advice on prescriptions, OTC and complementary medicines and minor ailments



What consumer characteristics influence pharmacy as the first point of consultation?

In the principal component analysis carried out on the frequency of pharmacy as the first point of consultation, it was shown that:

- The frequency of pharmacy as a first point of consultation decreased with age
- The frequency of pharmacy as a first point of consultation was higher among female participants
- Participants in the NT and WA were more likely to frequent pharmacy first, compared to participants from SA, TAS and VIC
- People with cardiovascular co-morbidities appeared slightly less likely to use the pharmacy as first consultation.

More detailed survey analysis on what consumers see the role of the community pharmacist to be is provided in Appendix D – Community Survey Analysis.

5.3.5. What factors influence consumers' choice of pharmacy?

Key findings around the factors that influence consumers' choice of pharmacy are detailed below.

- The four leading factors impacting participants' choice of pharmacy were: convenience (59%); knowing and trusting the pharmacist/staff (18%); cost (14%); and good service (6%).
- Convenience was the leading factor across all age groups. For participants below the age of 50, the second most important factor was cost, while for participants 50 or older, the second most important factor was the interaction or relationship they had with the pharmacist.
- Approximately half (48%) of all participants reported a private consultation area in a pharmacy to be important, while 80% of participants expect to be able to speak privately with the pharmacist if needed and 49% were satisfied with the amount of privacy in their pharmacy.
- A higher proportion of female participants reported privacy as being important, and the level of importance placed on privacy was shown to decrease with age.
- 82% of all participants still reported rarely or never going to a pharmacy different to their regular pharmacy to buy prescription medicines cheaper.

More detailed survey analysis on the factors influencing consumers' choice of pharmacy is provided in Appendix D – Community Survey Analysis.

5.3.6. How do consumers interact with the pharmacist and other pharmacy staff?

Key findings around how consumers interact with the pharmacist and other pharmacy staff are detailed below.

- 90% of participants reported being satisfied with the interaction they had with their pharmacist (based on the last three visits to the pharmacy), with satisfaction shown to increase with age, and higher among females and those taking one or more medicines. The main reason for satisfaction was that the pharmacist is knowledgeable and provides good advice (51%).
- 56% of participants reported that they encountered no barriers to speaking with the pharmacist. However for those who did report a barrier, the key barrier was that the pharmacist appeared to be busy or not available (30%).
- 88% of all participants reported being satisfied with the interaction they had with other pharmacy staff (based on their last three visits to the pharmacy), with satisfaction being shown to increase with age, and higher among females and participants taking one or more medicines. The main

reason for satisfaction was that the pharmacy staff are knowledgeable and provide good advice (39%).

- The most important factor for participants in terms of expectations was to be treated with respect and consideration by the pharmacist and pharmacy staff.

What consumer characteristics are significantly associated with the level of expectations around community pharmacy?

In the principal component analysis carried out on the expectations held in relation to pharmacy, it was shown that:

- Females were seen to have a much higher level of expectation then men
- Participants with very poor or very good self-rated health had a higher level of expectation
- Level of expectation increased with socioeconomic status (i.e. the higher the socioeconomic status the higher the expectation).
- Participants with a greater number of mental health co-morbidities appeared to have higher expectations than those without

More detailed survey analysis on how consumers interact with the pharmacist and other staff is provided in Appendix D – Community Survey Analysis.

5.3.7. What are the areas for improvement in community pharmacy?

Key findings in terms of the areas of improvement for community pharmacy are detailed below.

- 70% of all participants did not report on any services they would like to see newly offered or offered more of in the community pharmacy. For areas of improvement identified through the focus groups, refer to Section 6.3.4.
- 66% of participants did not report anything when asked whether anything could change in community pharmacy to better meet their needs.
- 57% of all participants reported that they did not feel they needed to consult with any other health professional apart from the pharmacist.

More detailed survey analysis on the areas for improvement in community pharmacy is provided in Appendix D – Community Survey Analysis.

6. Focus Groups

This section details the key findings from the ten focus groups that were undertaken across different population groups. These include the usage of pharmacy products and services, what consumers perceive the role of the pharmacist to be, those factors that consumers value when it comes to pharmacy, and the identified areas for improvement or change.

6.1. Purpose

To complement the findings of the Community Survey, ten focus groups were conducted with population groups anticipated to be either high users, or have unique needs, expectations and experiences relating to community pharmacy. These groups were discussed and agreed on with the Advisory Panel. The purpose of these focus groups was to carry out a deep dive analysis of the underlying attitudes and beliefs towards community pharmacy that impact consumer behaviours. Specifically the focus groups sought to explore in more detail:

- what consumers use their community pharmacy for
- what the most important factors are to consumers when deciding what pharmacy to go to
- what consumers perceive the role of the pharmacist to be
- how would consumers like to see community pharmacy change to better meet their needs.

6.2. Target groups

Ten focus groups were carried out, each with a consumer group identified to have a unique set of needs and experiences, these groups outlined in Table 7. Sampling for the focus groups was not intended to be representative of the Australian population (as was undertaken in the Community Survey), but rather an opportunity to explore different groups of consumers' experiences and needs relating to pharmacy in more depth. The consultation guide followed in the focus groups is included in Appendix F.

Table 7: Focus groups

Target consumer group	Assisting organisation (if applicable)	State
1. Mothers with babies	N/A	NSW
2. Young working professionals	N/A	NSW
3. Older consumers	COTA Tasmania	TAS
4. Culturally and Linguistically Diverse/ Disabled	Action on Disability in Ethnic Communities (ADEC)	VIC
5. Regional	Probus Club of Wangaratta	VIC
6. Consumers with chronic disease: asthma	Asthma Foundation	NSW
7. Consumers with chronic disease: arthritis	Arthritis NSW	NSW
8. Men	Katoomba Men's Shed	NSW
9. Aboriginal and Torres Strait Islander	Blue Mountains Aboriginal Cultural and Resource Centre	NSW

Target consumer group	Assisting organisation (if applicable)	State
10. Aboriginal and Torres Strait Islander	Bagot Community Health Clinic	NT

6.3. Key findings

6.3.1. What are consumers using pharmacy for?

Consumers in the focus groups were seen to use their community pharmacy for prescription, over the counter and complementary medicines as well as accessing health advice for minor conditions. To a lesser extent, consumers were seen to access health services in community pharmacy.

Prescription medicines

Key findings around how consumers use community pharmacy for prescription medicines are detailed below.

- The most common use of community pharmacy in all focus groups was for prescription medicines. Consumers with chronic conditions, disability and mental illness reported accessing the pharmacy most frequently – usually fortnightly or monthly for prescription medicines.
- Older consumers were found to be more likely to return to the same pharmacy for the majority of their prescription needs compared to younger participants.
- The majority of consumers felt they were almost always offered a generic for a prescription medicine if it was available. Opinions were mixed around whether the generic was preferred, with low cost the primary reason as to why consumers chose to take the generic. Older consumers were more likely to prefer to continue with the branded medicine due to them being more comfortable with it and that it minimised confusion around what medicine was for what condition.

  "If I stay with the brand then I do not get my medicines mixed up"

- Consumers reported noticing a decline in the number of Consumer Medicine Information (CMI) leaflets included with their prescriptions. Older consumers also reported often not being able to read the small print of CMI leaflets.
- There is an expectation that the pharmacist will explain prescription medicines in detail, including how to take the medicine and possible side effects.

Over the counter and complementary medicines

Consumers buy over the counter and complementary medicines from a number of different sources: the pharmacy, the supermarket, the health food store and online, with low cost being the primary factor influencing this.

"I buy it (over the counter medicines) where it's cheapest...which is generally not your community chemist"

Health advice and accessing other health services

Key findings around how consumers used community pharmacy for accessing health advice and other health services are detailed below:

- The majority of consumers had previously gone to see a pharmacist for health advice for minor conditions and ailments. Convenience and accessibility were the key reasons cited behind this.

  "It takes time to get into the doctor, if it's a quick question I'd go to pharmacist first, if not, I'd go to the doctor"

- There was a general lack of awareness around health services being available in a pharmacy setting, particularly among younger consumers. There were very few participants who knew that pharmacists could undertake a medicines review or a MedsCheck.

"I didn't know that you could get health services in a community pharmacy"

- Where consumers had experienced a health service, satisfaction was high.

6.3.2. What do consumers see the role of the pharmacist to be?

Key findings around consumers' perceived role of the community pharmacist are detailed below:

- Consumers perceive the primary role of community pharmacists to dispense medicines. Further, there is an expectation that the pharmacist will volunteer information about taking medicines without the consumer having to ask for it, e.g. side effects and interaction with other medicines.

  "A good chemist will understand you and the other medicines you are on and the interactions"

- Consumers expect the pharmacist to be capable at offering health advice around minor conditions and ailments.

  "...a professional opinion at a moment's notice"

- Consumers did see the pharmacist as part of their medical team, however it was raised by some consumers that the growing commercial interests of community pharmacy have, to a degree, diluted the traditional 'professionalism' of the pharmacist's role.

- The majority of consumers did not see prescribing as part of an extended role for community pharmacists.

6.3.3. What do consumers value in relation to community pharmacy?

Key findings around the factors influencing consumers' overall experience of community pharmacy are detailed below:

- **High quality service:** this was seen to encompass a pharmacist who is familiar with your health status and background, a pharmacist that offers trusted, reliable advice and who will go the extra mile in terms of service delivery, a pharmacist that keeps a record of consumer spending and prescriptions, a pharmacist that can accommodate the needs of people from a non-English speaking background and a pharmacist that collaborates with other health professionals if needed.

  "...the staff are the most important thing in your business – they must be thoroughly trained, obliging, and show empathy with peoples' problems"

  "My medicine is $34 at the pharmacy and $12.99 at the chemist warehouse, but I still go to the pharmacy because I can afford to do it– I pay for the service I get"

- **Convenience:** this was a key driver behind choice of pharmacy for consumers. Other factors that were important to older consumers included the pharmacy having wide aisles that could accommodate walking frames, the availability of parking, extended opening hours and a home delivery service.

  "For me the most important thing in deciding which pharmacy to go to is convenience"

- **Product range and other services:** while high quality service and convenience were the two principal factors influencing consumers' choice of pharmacy, the range of products stocked and also other non-health related services offered were also seen to impact consumers' choice of pharmacy.

  "I tend to go to different pharmacies for different things... depending on what range the pharmacist stocks - that will influence of my decision"

- **Price of medicines:** price was an important influencing factor behind choice of pharmacy for many consumers.

  "I was horrified at the difference in the pricing from one pharmacy to another"

6.3.4. Where could there be change?

There were a number of areas for improvement or change in community pharmacy noted by consumers in the focus groups. These are detailed below:

- **More information about complementary medicines, including interactions with prescription medicines and pharmacists' knowledge in this area:** on the whole, consumers felt they did not receive much information about complementary medicines from the pharmacist, including the possible interactions that can result with prescription medicines.

  > *"More needs to be known on interactions between all your medicines and complementary medicines"*

  > *"I don't think of pharmacists as being as trained in complementary medicines compared to prescriptions...I'd go to the naturopath as I think they would be more trained"*

- **Greater differentiation from the supermarket:** consumers agreed that the traditional role of the pharmacist as both a dispenser of medicines and someone who provides trusted health advice needs to be preserved. In line with this notion, they would like to see pharmacies lend a greater focus towards selling specialised products, rather than general products that are available in the supermarket.

  > *"I would have more respect for the pharmacist if they didn't sell things like cat and dog shampoo...it questions their credibility"*

- **Electronic transfers and storage of information:** consumers would value the added convenience of having their prescriptions stored electronically, and transferred directly from their GP to the pharmacy as well the pharmacist keeping a record of all medicines, including OTC and complementary, that the consumer had previously bought.
- **More privacy:** consumers were in consensus that there is not much privacy offered in a community pharmacy setting to discuss private health matters – with the majority of participants never having consulted privately in a pharmacy.
- **More integration with other health service providers, for example increased communication between pharmacists and GPs:** some older consumers commented that they would like to see increased collaboration between pharmacists and other health professionals, in particular GPs and nurses.
- **Increased communication to the community, for example around extended opening hours, pricing of prescriptions and what services are offered:** it was commented that communication around these areas is often lacking, in particular the cost of prescriptions given this varies between pharmacies.
- **Increasing the role that community pharmacy has in delivering primary health care to consumers:** examples raised were pharmacists carrying out overall health assessments and wider adoption of home delivery services.
- **Increased accommodation of the specific needs of people with English as a second language:** An example given was pharmacies having CMI leaflets in other languages available either in the pharmacy, or the pharmacist being able to tell consumers where to find the translated material online.
- **Increased knowledge and experience of other pharmacy staff members:** Some consumers expressed that since the pharmacy staff are often the first point of contact with the consumer, they should be more experienced and better able to answer questions.
- **Longer opening hours:** A common point raised across participants in all focus groups was the need for more 24 hour/night time pharmacies.

7. Measurement Tool

This section provides an overview of the development, implementation and validation of a Measurement Tool to measure the impact of community pharmacy on consumers. It details the purpose for developing the tool, the design of the tool, the approach taken for validation and the conclusions drawn.

7.1. Purpose

One of the principal objectives of the Consumer Needs project was to ***develop and validate*** a self-reported Measurement Tool (the tool) to measure consumer health impacts and outcomes sensitive to the community pharmacy context.

The purpose of the validation process was to develop a tool which can:

- help government, policy makers and community pharmacy monitor the impacts that community pharmacy services have on the health outcomes of consumers, and
- understand whether community pharmacy services are meeting the current needs of consumers, including consumers' satisfaction with community pharmacy.

The information gathered through previous phases of the project – that is the Literature Review, Community Survey and Focus Groups - served to inform the development of the tool. For the purpose of this project, the tool was **not** designed to collect a baseline in terms of monitoring the impact of community pharmacy services. Rather, the intention was to validate the tool so that it is fit for purpose for future administration, allowing for the impact of community pharmacy on consumers to be measured at a population level.

7.2. Design

7.2.1. Scope

The following were **in scope** for the development and validation of the tool:

- A consumer self-reported tool
- All services provided within pharmacy (see Appendix G – Community Pharmacy Services)
- Interactions with all pharmacy staff e.g. pharmacists and/or pharmacy assistants
- All pharmacies accessed by a consumer (i.e. not an individual pharmacy)
- Responses are on behalf of the participant only
- A one month recall period.

The following were **out of scope** for the development and validation of the tool:

- Tailoring the tool to specific sub-populations (e.g. Aboriginal and Torres Strait Islander; Culturally and Linguistically Diverse).
- Responding to the tool on behalf of a third-party e.g. a carer on behalf of the person they care for or a mother on behalf of their child.

7.2.2. Domains

In the development of the tool, questions were grouped into four domains: demographic information, utilisation, attitudes/beliefs and impact. The types of questions asked under each of these domains are described in Table 8 below.

Table 8: Measurement Tool domains

Domain	Description
Demographic and health information	The following demographic information was collected: • Age and gender • SEIFA and geographical location The following health information was collected: • Self-rated health status (SF1) • Number of medicines the participant was taking (broken down into prescription and over the counter or complementary), and whether participant had experienced any side effects from medicines they were taking
Utilisation	To provide context to how consumers use community pharmacy, participants were asked to consider their pharmacy experience in the last month including: • Frequency – how frequently they visit a community pharmacy and whether they use their pharmacy to purchase medicines • Whether or not participants had used health services in a community pharmacy • Who they usually interact with at the pharmacy –pharmacist or pharmacy staff
Attitudes/beliefs	Questions in this domain examined: • Self-efficacy around medicine management: this refers to a person's belief in their capability to organise and execute the course of action required to deal with prospective situations. Questions were included in the tool that explored how confident participants are in taking their medicines. • Participants' self-rated importance placed on various aspects of community pharmacy
Impact	Questions in this domain explored: • Whether or not participants had experienced an adverse event or interaction from medicines • Satisfaction - the participant's self-reported satisfaction levels relating to their pharmacy experience • Health literacy - to what extent consumers are able to seek, understand, and use health information

7.2.3. Use of already validated scales

Two previously validated scales were administered alongside the tool to measure participants' beliefs about medicines and their medicine adherence. These were:

- *The Beliefs about Medicines Questionnaire (BMQ) (Horne et al 1999):* This questionnaire seeks to understand personal views about medicines in general. Respondents are asked to what extent

they agree or disagree on two factors that is; whether medicines are harmful/addictive (General Harm) or whether that medicines are overused by doctors (General Overuse).

- *Medication Adherence Questionnaire (MAQ) (Morisky et al 1986):* A 4-item and valid measure of patient medicine adherence. The properties of the scale are designed to facilitate the identification and addressing of problems and barriers to adequate compliance.

Given these scales were found to be well established in the literature and already validated, it was determined that administering these in their original form, alongside the tool developed, would allow for the most accurate measurement of participants' beliefs about medicines and medicine adherence – two important aspects when examining community pharmacy's impact on consumer health. Due to restrictions around copyright, the individual items in both the BMQ and the MAQ were unable to be incorporated into the final measurement tool developed. Thus it is recommended that these two scales be administered alongside the tool.

Both the BMQ and the MAQ are included in Appendices I and J respectively in their original form.

In addition to these scales, the SF-1 or the first item of the SF-36 survey (a validated self-rated scale designed to measure the patient's perspective of his or her health), was used in our tool.

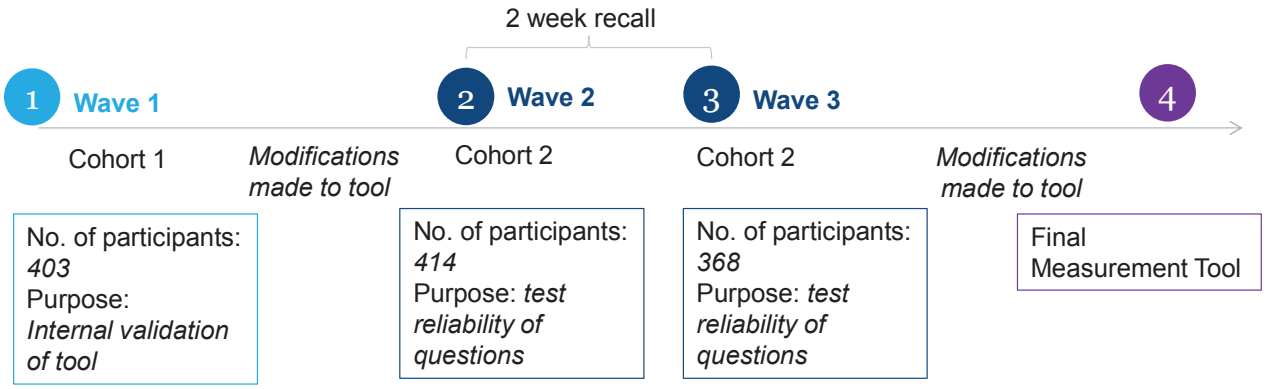
7.3. Approach for Validation

7.3.1. Summary of overall approach

Validation of the tool was a critical step in order to determine whether the questions measure what they are supposed to, whether the questions provide consistent results and finally whether the questions are sensitive to differences between population groups – for example based on age, gender or socio-economic status.

The process of validation involved administering the tool at three points in time, or across three 'waves'. This is depicted in Figure 10 below.

Figure 10: Process for validation of the tool



Wave 1 of administration was targeted to a sample of participants from Roy Morgan's Single Source Database. The purpose of Wave 1 was to undertake internal validation of the tool – i.e. determining whether or not the questions measure what they are designed to measure, and based on the results, to ascertain whether any changes to the tool were required to improve its internal validity in subsequent waves.

Waves 2 and 3 of administration of the tool were conducted on a different sample from Roy Morgan's Single Source Database. The purpose of these two waves was to test the reliability of the questions. To achieve this, Wave 3 administration was undertaken two weeks after Wave 2 and with the same cohort.

This short recall period was designed to minimise the likelihood of any change influencing participants' responses. A target of 410 participants was set for Wave 2 to allow for a small attrition rate in between the two rounds of administration.

7.3.2. Sampling framework

A cohort of 400 participants was deemed to be sufficient to accurately determine the validity and the reliability of the tool. As mentioned above, a target of 410 participants was set for Wave 2 to account for attrition between Waves 2 and 3.

Quotas for sampling were set by:

- Gender – male/female
- Age group – across three brackets: 18-34; 35-64; 65+
- SEIFA score – across three brackets: 1-3; 4-6; 7-10 (the higher the SEIFA score, the higher the socio-economic status of participants).
- Number of medicines – across two brackets: 0-1 medicines and 2+ medicines.

Only participants who had visited a pharmacy in the last month were eligible to participate.

The sampling framework targets for Wave 1 of administration is detailed in Table 9.

Table 9: Wave 1 Administration sampling framework targets

	Male			Female		
SEIFA	*1,2,3*	*4,5,6*	*7,8,9,10*	*1,2,3*	*4,5,6*	*7,8,9,10*
18-34	13	18	29	13	18	29
35-64	22	30	49	23	31	51
Over 65	7	10	16	9	12	19
Total	**43**	**58**	**94**	**45**	**60**	**99**
Total M/F	**195**			**205**		

Number of medicines	
0-1	200
2+	200

The sampling framework targets for Wave 2 (and Wave 3 given the tool was administered to the same cohort) is detailed in Table 10.

Table 10: Wave 2 & 3 Administration sampling framework targets

	Male			Female		
SEIFA	*1,2,3*	*4,5,6*	*7,8,9,10*	*1,2,3*	*4,5,6*	*7,8,9,10*
18-34	14	18	30	14	18	30
35-64	23	31	50	24	32	51
Over 65	7	10	17	9	12	20
Total	**44**	**59**	**97**	**47**	**62**	**101**
Total M/F	**200**			**210**		

Number of medicines	
0-1	205
2+	205

7.3.3. Cognitive testing

Prior to Wave 1 of administration, cognitive testing was undertaken to test the functionality, usability, consumer understanding and length of the tool. Cognitive testing was carried out with six individuals. The key changes that were made to the structure and content of the tool as a result of the cognitive testing, and agreed with the Advisory Panel, were:

- Questions relating to the participant's health conditions were removed. It was found that participants were sensitive to these questions, and they were not deemed essential from a validation point of view.
- Detail around the health services received by participants was added to facilitate longer term use of the tool for data collection. Questions were added around whether or not participants were aware of specific health services offered in community pharmacy (Yes/No), and if answered yes, if participants had used the services in the last month (Yes/No).
- Questions relating to awareness and use of health services were moved from the end of the tool to before the satisfaction questions.

7.3.4. Wave 1 administration

Pilot

The pilot was conducted with 17 participants, with an average interview length of 20 minutes. It was found that:

- no participant did not know or refused to answer how many medicines they were taking
- questions were easy to answer, with few refusals to answer the questions or 'I don't know' answers
- no participant mentioned that they couldn't distinguish between the pharmacist and other pharmacy staff.

Sampling quotas achieved

There were a total of 403 interviews were completed in Wave 1. By the end of the administration, the average interview time was 19 minutes.

The original quota for the number of males in the sample was 195, with 187 interviews achieved. This equates to a variance of -8. There were slightly fewer male interviews achieved compared to the original quotas across the majority of age/SEIFA groupings.

The original quota for the number of females in the sample was 205, with 216 interviews achieved. This equates to a variance of +11. All original quotas across age/SEIFA groupings were met, with the additional 11 interviews achieved across the following groups:35-64, SEIFA score 4-6; 35-64, SEIFA score 7-10; 65+, SEIFA score 7-10.

Overall, quotes were closely achieved in Wave 1 and are detailed in Table 11.

Table 11: Variance between sampling quotas and actual achieved Wave 1

	Male			Female		
SEIFA	*1,2,3*	*4,5,6*	*7,8,9,10*	*1,2,3*	*4,5,6*	*7,8,9,10*
18-34	-1	-7	-5	0	0	0
35-64	0	+1	+1	0	+5	+2
Over 65	0	+3	0	0	0	+4
Total	**-1**	**-3**	**-4**	**0**	**+5**	**+6**
Total M/F	**-8**			**+11**		

Number of medicines	Variance
0-1	-31
2+	+34

Analysis and modifications made to the tool post Wave 1 administration

Analysis of Wave 1 responses showed that overall there was good internal consistency of the scales used. This was evident with the cronbach alpha being over 0.75 (range 0-1) for the majority of scoring scales.

There were however a number of questions, mostly those relating to satisfaction with pharmacy, that had a high proportion of participants responding 'I don't know' or 'Not applicable' which resulted in a high number of missing values.

Analyses also showed that the internal consistency of the tool could potentially be increased through the clustering of questions when applying scoring scales.

Based on these key statistical findings, the tool was modified slightly for Waves 2 and 3 of administration in order to improve its validity. The key changes made were:

- **A total of 12 questions were removed from the tool.** These were primarily those questions that asked the participant whether it was the pharmacist or another pharmacy staff member who offered explanation, help or advice on things such as how to take prescription medicines and over the counter medicines and medicines management. These questions were removed given that it was evident in the analysis of Wave 1 responses that for prescription medicines, the large majority of participants consult with their pharmacist and for non-prescription medicines, the majority of participants consult with pharmacy staff. Further, participants are asked upfront whether it is the pharmacist or pharmacy staff that they spend more time talking to. It was also determined that these questions did not contribute to the validation of the tool. Based on these findings, it was concluded that the questions did not add value and were thus removed to improve the overall flow of the tool.

- **The response scale for satisfaction questions was changed from a rating of poor to excellent to a scale ranging from very dissatisfied to very satisfied.** This was intended to make it easier for the participant to respond and to minimise the number of missing values (participants responding 'I don't know' or 'Not applicable').
- **Questions with a high number of missing values in Wave 1 were reworded.** This was to try and minimise the number of participants responding 'I don't know' or 'Not applicable'. Examples of these questions are included in Table 12.

Table 12: Examples of questions reworded to minimise missing values

Wave 1 question	Reworded question for Wave 2 & 3
How confident are you that you can take your prescription medicines even when they cause some side effects?	If you were to experience side effects from your prescription medicines, how confident would you be in continuing to take your prescription medicines?
Sometimes if you feel worse when you take the medicine, do you stop taking it?	Do you ever stop taking your medicine because you feel worse when you do take it?
In the last month, rate the different types of information available to you in your pharmacy e.g. verbal information, printouts, video etc.	In the last month, how satisfied were you with the amount and types of information that were available to you in your pharmacy; e.g. verbal, printouts, video etc.?
In the last month, rate how well it was explained how to take your prescription medicines	In the last month, how satisfied were you with the explanation provided to you on how to take your prescription medicines?
In the last month, rate how well you were helped to manage your prescription medicines	In the last month, how satisfied were you with the amount of help and advice you received with managing your prescription medicines?

7.3.5. Wave 2 administration

Pilot

The tool was piloted with 30 participants in Wave 2. The key point of feedback from the pilot was to move the screening questions of: whether or not the participant had been to the pharmacy for themselves in the last month; and also questions relating to age, gender and postcode up front, before the participant is asked for their contact details. This was so it can first be determined whether or not the participant qualifies for the survey.

Sampling quotas achieved

There were a total of 414 interviews achieved in Wave 2 of administration. The average survey length was 22 minutes. This was slightly longer than Wave 1, as participants were asked for more personal contact information so they could be entered in a draw for an incentive prize (there was no draw in Wave 1).

There was minimal variance between the sampling quotas set and actual quotas achieved in terms of SEIFA, age and gender for Wave 2. This is detailed in

Table 13. While there is some variation in the sampling quotas set and actual quotas achieved for the number of medicines, this is not regarded to be critical in terms of the tool's validation. It was expected that there would be a higher number of participants on two or more medicines accessing the pharmacy in the last month.

Table 13: Variance between sampling quotas and actual achieved Wave 2

	Male			Female		
SEIFA	*1,2,3*	*4,5,6*	*7,8,9,10*	*1,2,3*	*4,5,6*	*7,8,9,10*
18-34	0	0	0	0	0	0
35-64	-1	-1	0	0	0	0
Over 65	-1	0	0	-1	0	0
Total	**-2**	**-1**	**0**	**-1**	**0**	**0**
Total M/F	**-3**			**-1**		

Number of medicines	Variance
0-1	-60
2+	+64

7.3.6. Wave 3 administration

Administration

Wave 3 of administration of the tool was carried out on the same subset as Wave 2. The only change made to the tool between Waves 2 and 3 was the requirement that they had to have been to a pharmacy in the last month. All participants needed to have been to a pharmacy in the last month in order to participate in Wave 2, however they may not have been back to a pharmacy by the time they were contacted for Wave 3 (which was approximately two weeks following Wave 2). Rather than terminating the survey for these participants (as per previous filtering specifications), it was concluded that these participants should still respond to all questions that weren't specific to experience or satisfaction in the last month.

Participants were contacted approximately two weeks after their Wave 2 interview for the administration of Wave 3.

Sampling quotas achieved

There were a total of 368 interviews achieved in Wave 3 of administration. The average survey length was 18 minutes. This lower number of interviews achieved compared to Wave 2 was due to a number of respondents not answering their phone in this round of administration. The lower number of interviews achieved in Wave 3 was determined not to impact the ability to test the validity of the tool. Given the lower response rate compared to Wave 2, there was evidently a larger variance between the sampling quotas and the actual interviews achieved for Wave 3. These variances are detailed in

Table 14.

Table 14: Variance between sampling quotas and actual achieved Wave 3

	Male				Female			
SEIFA	*1,2,3*	*4,5,6*	*7,8,9,10*	*Unspecified*	*1,2,3*	*4,5,6*	*7,8,9,10*	*Unspecified*
18-34	-5	-3	-11		-3	-2	-5	1
35-64	2	-4	-2	3	-2	-1	-6	
Over 65	-3	0	0		1	-1	-1	

Total	-6	-7	-13		-4	-4	-12	
Total M/F	**-23**				**-19**			

Number of medicines	Variance
0-1	-91
2+	49

7.4. Analysis

The George Institute for Global Health undertook the statistical analysis on the data collected from the administration of the tool in all three waves.

Analysis of responses to questions corresponding to the BMQ and the MAQ was carried out based on the scoring algorithms of these tools.

For questions related to consumer satisfaction with community pharmacy, scores were created by testing different combinations of questions – i.e. grouping questions, to which a score was applied.

In total, 13 different scores were used on sub groups of questions included in the tool. Some of these scores were calculated based on an average across the individual questions included in the subgroup, whilst others were calculated based on a sum across questions. For scores based on averages, two methods were tested to address missing data. The first was calculating the score only if there was no missing data, the second calculating the score if at least 50% of the questions in the group were answered.

The validity of the tool was determined by examining the following four statistical measures for each scoring scale used in the analysis:

1. **The proportion of missing values** – i.e. examining how many participants responded "I don't know" or N/A.
2. **The internal consistency (measured by the Cronbach alpha)** – i.e. testing the average correlation of questions (how closely they are related) in the tool to gauge its overall consistency.
3. **The sensitivity (measured by the Cohen d)** – i.e. testing the standardised difference between two means.
4. **The reproducibility (measured by the Intraclass Correlation Coefficient (ICC))** – i.e. measuring the ability of the answers to be accurately replicated (that is, bringing about the same responses by participants).

Performance against each of these was assessed using the following guidelines:[37]

	% Missing	Cronbach alpha	Cohen d	ICC
Good	<5%	>0.7	>0.8	>0.6
Average	5%-10%	0.5-0.7	0.3-0.8	0.4-0.6
Bad	>10%	<0.5	<0.3	<0.4

37

Retrieved from the Kings College London, http://www.kcl.ac.uk/iop/depts/biostatistics/SAS/faqs9.aspx

After testing the 13 different scoring scales against the four statistical measures above it was concluded that:

- Most scores reported high to very high internal consistency
- Reproducibility was either moderate or substantial
- Restricting the calculation of a score to just those cases where there were no missing values for questions (i.e. only questions that were answered by all participants) was found to increase reproducibility slightly, yet it also increased the proportion of missing scores. This was particularly the case with scores calculated on questions in the tool measuring satisfaction with community pharmacy. Based on this, scores calculated using averages were only computed when at least 50% of the questions had been answered.
- Questions relating to consumer awareness of services offered in a community pharmacy setting were shown not to add value to the overall validity of the tool, and thus were removed in the final version included in Appendix H.
- Questions relating to consumer satisfaction specific to prescription and non-prescription medicines were also shown not to add value to the overall validity of the tool due to high numbers of missing values, and thus were removed in the final version included in Appendix H.

Further, the tool was found to be sensitive to differences in population groups across the following factors:

- **Age** – the tool was found to be sensitive to differences in age across responses to all questions.
- **Gender** – the tool was found to be sensitive to difference in gender for questions relating to health literacy, and the level of importance consumers placed on various aspects of community pharmacy
- **SEIFA** – the tool was found to be sensitive to differences in socio-economic status (measured by SEIFA score) for questions relating to health literacy, satisfaction with community pharmacy services and the importance consumers placed on various aspects of community pharmacy.
- **Number of medicines (prescription and non-prescription/complementary)** – the tool was found to be sensitive to differences in the number of medicines a consumer was taking for questions relating to health literacy, and the importance consumers placed on various aspects of community pharmacy.
- **SF1** – the tool was found to be sensitive to differences in a consumer's self-rated health status, measured by the SF1, to questions relating to health literacy, self-efficacy around medicine management, and the importance consumers placed on various aspects of community pharmacy.

Descriptive analysis

Descriptive analyses were carried out on all questions included in the tool. This analysis highlighted those questions with a high proportion of missing values. Specifically, it identified the following questions which had the most significant number of missing values:

- Does your pharmacist communicate with your doctor about your medicines or general health?

  (394/414 missing = 95%)

- In the last month, how satisfied were you with the extent to which your pharmacist involved you in decisions about your medicines? For example whether you preferred a generic medicine, discussing the range of cold and flu medicines available and what might be best for you etc.?

  (90/414 missing = 22%)

It is likely that these questions had the highest number of missing values as they had not experienced, or knew about, their pharmacist communicating with their doctor, nor had their pharmacist involve them in decisions about medicines – leading participants to respond 'I don't know' or 'Not applicable' to these questions.

Based on this finding, these questions have also been removed from the final Measurement Tool presented in Appendix H.

7.5. Measurement Tool Questions

Table 15 below includes the final questions included in the Measurement Tool, based on the analysis of response data in Waves 2 and 3 of administration, and recommendations provided by the George Institute. The questions are presented under the corresponding domain, as outlined above.

The Measurement Tool has been included in its full form in Appendix H, which includes the response options and scoring guide for each question.

Table 15: Groups of questions included in the Measurement Tool

Domain	Questions
Screening, Demographic and health information	• Have you been to a pharmacy for yourself in the last month? • How old are you? • What is the postcode where you live? • What is your gender? • How many different medicines are you currently taking regularly or have taken in the last month? (by medicines, we mean all types - prescription, over the counter and complementary) • How many of these were prescription medicines? • How many of these were over the counter or complementary medicines? • In general would you say your health is (Excellent – Very good – Good – Fair – Poor)?
Utilisation	• In the last month, how many times have you used a pharmacy for yourself? • In the last month, did you go to the same pharmacy for most of your pharmacy needs more than 75% of the time? • In the last month, have you used a pharmacy to buy or receive advice on prescription medicines? • In the last month, have you used a pharmacy to buy or receive advice on non-prescription medicines, i.e. over the counter and complementary medicines? • In the last month, have you used a pharmacy to buy or receive assistance with buying retail products? • In the last month, have you used a medicine review service in a pharmacy? e.g. Home Medicines Review (HMR), Residential Medication Management Review (RMMR), Medscheck, Diabetes Medscheck? • In the last month, have you received advice or assistance with managing your chronic conditions at a pharmacy? • In the last month, have you received general health advice at a pharmacy? e.g. advice on minor ailments, common colds and flu, etc • In the last month, have you accessed services related to health monitoring, screening or health checks in a pharmacy? e.g. blood pressure/lipids/glucose monitoring, quit smoking advice, weight loss, vaccines, mother and infant services, palliative care services • In the last month, have you used medication packaging services in a pharmacy? e.g. webster or blister packs which are filled pillboxes that help you take the correct medicines at the correct times on each day of the week at

Domain	Questions
	pharmacies. • In the last month, have you received pharmacy services outside the pharmacy (that is, outreach services provided in the community, e.g. at home, aged care facilities, school etc)? • Have you used pharmacy for anything else? • In the last month, who did you spend more time speaking with at the pharmacy? • In the last month, has a pharmacy staff member referred you to speak to the pharmacist?
Attitudes/beliefs	*Questions examining participants' level of self-efficacy relating to medicines:* • How confident are you that you are able to manage your prescription medicines? • How confident are you that you can take your prescription medicines at the correct time and dose when you are busy at home / at work/ or away? • How confident are you that you can get refills for your prescription medicines before you run out? • If you were to experience side effects from your prescription medicines, how confident would you be in continuing to take your prescription medicines? • How confident are you that you can take your prescription medicines when you feel well or have no symptoms? • How confident are you that you can take your prescription medicines when they cost a lot of money? • How confident are you that you can ask the pharmacist questions about your prescription medicines? *Questions examining participants' level of self-rated importance on aspects of community pharmacy:* How important would you rate the following factors on a scale of 0 to 10, where 0 is 'not important at all' and 10 is 'very important': • To have access to medicines, information and advice regarding my medicines and health needs; • To receive safe and high quality care; • To be treated with respect, dignity and consideration • To be informed about various services, treatments, options and costs in a clear and open way • To be included in decisions and choices about my care • To be able to consult privately and that information discussed will be treated with confidentiality • To be able to comment on my care and to have my concerns addressed • That the pharmacist communicates with my local doctor if required • What else can your Pharmacist do to help you stay healthy?
Impact	*Questions examining adverse events/interactions of medicines:* • Have you in the last month experienced any side effects (adverse reactions) or interactions from any of the medicines you were taking? • If yes, what role did the pharmacist play in helping you address this side effect and/or interaction?

Domain	Questions
	Questions examining participants health literacy: • Are you able to make time for things that are good for your health? • Are you able to change your lifestyle to improve your health? • Are you able to pay attention to your health needs? • Are you able to find the energy to manage your health? *Questions examining participants' satisfaction with community pharmacy:* • In the last month, how satisfied were you with your experience with pharmacy services overall? • In the last month, how satisfied were you with the courtesy and respect shown to you in your pharmacy? • In the last month, how satisfied were you with the availability of the pharmacist to answer your questions? • In the last month, how satisfied were you with the availability of the other pharmacy staff to answer your questions? • In the last month, how satisfied were you with the way in which the pharmacist or pharmacy staff helped you improve your health or stay healthy? • In the last month, how satisfied were you with the amount of privacy for discussion offered in your pharmacy? • On a scale of 0-10 where 0 is not important at all and 10 is very important, how important is the pharmacist in assisting you to manage your health? • On a scale of 0-10 where 0 is not important at all and 10 is very important, how important is the pharmacist in assisting you to manage your medicines? • In the last month, have you gone to the pharmacy in the first instance, before seeing another health professional, for advice on your health or medicines?

7.6. Conclusions

Given the significant investment in programs and services in community pharmacy, there is a need to better understand and measure the benefit and experience that community pharmacy provides to the Australian community. As such, one of the principal objectives of the Consumer Needs project was to develop and validate a measurement tool that could provide insights into how community pharmacy impacts consumers. This has been achieved and the tool is ready for future use, as is evidenced in the statistical validation described previously. In particular, the robustness of the tool is evident in the fact that it was found to be sensitive across all four factors tested – that is by age, gender, socio-economic status (measured by SEIFA) and self-rated health status (measured by SF1).

Now that the tool has been validated, it is fit for purpose to be administered to consumers, helping to better understand the benefit and experience they get from investment in community pharmacy programs and services. This will be useful in informing future primary health care policy and needs to form part of an improved measurement strategy of the investments made in both community pharmacy and primary health care more broadly.

Examples of how the tool could be used in the future include:

- Identifying differences between population groups in terms of how consumers experience community pharmacy and what the barriers/enablers are in terms of accessing services – this can be achieved given the tool has proven sensitive to differences across demographic characteristics.
- Determining the impact of a community pharmacy intervention on a group of consumers – this could be achieved through administering the tool directly before and after the intervention to monitor the

impact that it had. This may be in terms of a consumer's health literacy, beliefs about medicines (measured through the BMQ),or medication adherence (measured through the MAQ).

- Measuring change at a community pharmacy agreement level – for example administering the tool before and after the fifth community pharmacy agreement to monitor change in relation to consumers' level of satisfaction with community pharmacy
- Monitoring differences in consumers' perceptions and expectations relating to community pharmacy and medicines depending on a number of factors – e.g. whether they frequent a community style pharmacy versus a discount style pharmacy/how frequently they access community pharmacy/their gender or age.
- Applying the tool to measure change and impact in other areas of primary health, for example general practice. The broad question domains that make up the tool have been designed in a way that they can be replicated across other areas.

Administering the tool may also serve as an initial step to inform cost benefit analyses around the value of community pharmacy run programs or interventions. The tool is designed to show value or impact realised at a consumer level; which is important to consider in addition to value at a health system level. For example, administering the tool before and after a community pharmacy program has been implemented may show tangible improvements in a consumer's level of health literacy or self-efficacy around medicine management. The dollar value of these changes could then be calculated in a cost benefit analysis aimed at determining whether or not the program should be continued or discontinued.

7.7. Practical Guidance when administering the tool

If the tool is to be administered, it is important to note the following:

- The tool may be administered to the consumer or self-administered either over the phone, online or on paper.
- The tool cannot be changed in any way; the tool has been validated in its current format and changes to the tool may impact its validity.
- The tool can be administered alongside other validated tools, for example condition specific tools, should additional information on the consumer be needed.
- The scoring method for the tool has been provided; it is recommended that this scoring approach is followed.
- The first question is a screening question – that is only consumers who had been to a pharmacy for themselves (i.e. not using community pharmacy on behalf of others) in the last month are targeted. If this screening question is used in future administration of the tool, results cannot be interpreted to be reflective of the population given this creates bias in the selection process.
- Questions asking for demographic and health information of consumers are critical to determine whether there are any significant correlations between demographics (e.g. gender/age/SEIFA), and health status (SF1; number of medicines consumer is taking) and consumers' experiences with community pharmacy.
- In addition to the questions included in the Measurement Tool, attached in Appendix H, it is recommended that the BMQ and the MAQ be administered alongside. The BMQ is a validated means of measuring consumers' perceptions and attitudes around taking medicines. Correlations may be able to be drawn between a consumer's beliefs about medicines, and other aspects examined in the Measurement Tool such as their utilisation of and satisfaction with community pharmacy services. The MAQ is a validated means to measure a consumer's adherence to medicines. This scale could be useful in examining the impact of a community pharmacy intervention, and the impact that it has on a consumer's adherence. This could be conducted through administering the MAQ before and after an intervention.

8. Discussion

How can community pharmacy play an increased role in a changing primary healthcare system?

The primary healthcare system is changing, with service delivery becoming more integrated to face the growing demand on the health system. This increase in demand is being driven by an ageing population, the increased prevalence of chronic disease, ever growing community expectations and continued advances in medical technology including the expansion of information systems. The changing landscape is characterised by a move towards more collaborative multidisciplinary care models with the consumer at the centre – i.e. designed around supporting the individual, their family and carers in the care received. This shift towards a consumer-centric model is creating a more empowered group of consumers who actively participate in decisions about their health.

Community pharmacy has great potential to play a much larger role in reforming the way primary care is delivered. The accessibility of community pharmacy, with its convenient location, longer opening hours and appointment free visits, means that it is often the first point of contact between consumers and the health care system. This makes it well placed to provide services to consumers and only goes to reaffirm the increased role it can play in the context of recent primary health reform. In order for community pharmacists to become integrated into the system, there is a need for both collaboration with other health professionals, namely prescribers, and greater focus on the consumer – i.e. delivering a service that goes beyond just providing a product.

Community pharmacy can play a significant role in helping consumers better manage their health conditions in the community and also in health promotion and prevention. Two key identified areas of focus are administering medicines reviews and increasing consumer health literacy, empowerment and self efficacy. Through increased administration of medicines reviews, community pharmacy can help increase medicine adherence, reduce adverse events from interactions between medicines, and increase consumer health literacy in helping consumers to learn how their medicines impact their medical conditions.

Community pharmacy further has the potential to increase consumer empowerment and self efficacy in relation to health, encouraging consumers to take a more pro-active approach in the management of their health. Consumers with high self efficacy in relation to their health are more likely to change risky behaviours such as smoking, will set more challenging goals to improve their health and have higher persistence against setbacks that may undermine motivation. Before consumers can adopt an empowered approach in the management of their health, they need to be health literate. Not only does the literature show that low health literacy is a statistically independent risk factor for poor health[38], but it also highlights that only 41% of Australians have adequate to high levels of health literacy to successfully access, understand, evaluate and communicate health information as a way to promote, maintain and improve health.[39] In the interactions that pharmacists have with consumers, whether it be advising them how to take a medicine or offering health advice around a minor ailment or chronic condition, pharmacists could take advantage of this opportunity to both increase consumer health literacy and encourage consumers to take a pro-active approach to the management of their health.

The importance of understanding consumer needs, expectations and experiences

In order for community pharmacy to play an increased role in the delivery of primary health care services, it is important that there is a comprehensive understanding of consumer needs, expectations and experiences as they relate to community pharmacy. This is essential in terms of informing the pharmacy profession and policy makers which areas are currently working well and those that require change or development. A better understanding of consumer needs, expectations and experiences is

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[38] Kanj, M. and Mitic, W. (2009). *Health Literacy and Health Promotion: Definitions, Concepts and Examples in the Easter Mediterranean Region*. Individual Empowerment- Conference Working Document. World Health Organisation

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also important from a business perspective for community pharmacy, given the growing competition from discount pharmacies.

The *Consumer Needs* project has begun to form a baseline understanding of consumers of community pharmacy through the Literature Review, Community Survey and Focus Groups.

In terms of consumer needs from community pharmacy, there was very little information found in the literature. This is likely to be attributed to the lack of consensus on the definition of 'need', as well as the difficulty consumers have differentiating specific health needs from expectations. The Community Survey showed that the large majority of consumers access their pharmacy at least once a month with frequency of access increasing with age. Consumers were seen to go to the same pharmacy to meet the majority of their needs, this more evident in consumers over the age of 65. Not surprisingly, the most common reason for accessing a pharmacy was to buy prescription medicines. When it came to over the counter and complementary medicines, consumers reported often buying these at the supermarket due to convenience and lower cost. The Community Survey and focus groups showed that while consumers do access their pharmacy for health advice for minor ailments and conditions, they do not see their community pharmacist as a provider of health services, with only 12% of respondents in the survey reporting accessing health services outside the dispensing of medicines. This finding is likely a result of an overall lack of awareness of what services can be accessed in community pharmacy.

Convenience was the leading influencing factors behind consumers' choice of pharmacy. The Community Survey showed a slight variation, depending on age, for the second most important factor that influenced choice of pharmacy. For consumers below the age of 50, it was cost; and for those aged 50 or older, it was the interaction or relationship they had with the pharmacist.

In terms of consumer expectations as they relate to community pharmacy, it was found that consumers expect:

- the pharmacist to provide advice on medicines
- to be offered a generic version of a medicine if it is available
- to be informed when updated information becomes available on medicines
- for the pharmacist to provide health advice on minor conditions
- for the pharmacist to collaborate with their GP if necessary
- to be able to speak privately with the pharmacist
- to be treated with respect and consideration

Interesting to note is that the literature review, stakeholder consultations and focus groups were consistent in finding that there is a perception of pharmacists being 'too busy' to provide personalised advice to consumers. Further, there was a perceived lack of time for community pharmacists to provide health services other than prescribing medicines – for example health promotion and management services. It was also found that a lack of privacy in the pharmacy creates a barrier to the uptake of these services.

Both the literature and the Community Survey and focus groups showed that overall consumers are satisfied with the services used in community pharmacy and the interactions they had with their pharmacist or pharmacy staff. Interestingly, the Community Survey showed satisfaction increased with age, which may be due to older participants more likely to have established a strong relationship with their pharmacist over many years and more likely to go to the same pharmacy for most of their needs.

It is important to consider consumer satisfaction in the context of initial expectations and the level of consumer awareness. For example, it was found that overall consumers' still view the principal role of the pharmacist to dispense and give advice around how to take prescription medicines, as opposed to providing screening and health promotion services. This lack of awareness around the expanded role pharmacists can play is linked to lower expectations in this area, which may then translate to higher satisfaction when these services are offered to the consumer.

Overall, many of the findings of the Community Survey and Measurement Tool were in line with the findings and perceptions in the literature.

Areas of future focus for community pharmacy

This research project has highlighted two key focus areas for community pharmacy in the future:

- There is a need to increase consumer awareness around what health services, other than the dispensing of medicines, can be accessed in community pharmacy. This will be important in terms of increasing consumer recognition of the full capabilities of community pharmacists and further the integral part they play in the primary health care team.
- Community pharmacists can play a greater role around helping consumers better manage their medicines, including complementary medicines. In particular, around the possible interactions with prescription and over the counter medicines. This can be expected to have an impact on the number of medicine related adverse events.

Other areas for change included:

- Greater differentiation of the pharmacy from the supermarket
- Increased use of electronic transfers and storage of information
- More privacy to discuss health matters with the pharmacist
- More integration with other health service providers, for example increased communication between pharmacists and GPs
- Increased communication to the community, for example around extended opening hours, pricing of prescriptions and what services are offered.

However, the cost effectiveness of these areas for change need to be determined before being implemented.

Measuring the impact of community pharmacy on consumers

The Literature Review showed that in terms of community pharmacist delivered care, three types of indicators were identified: (1) clinical; (2) humanistic and (3) behavioural. Studies showed many of the core measurement indicators were the same suggesting that the measurement of a core group of indicators has the potential to observe the input and impact on consumer health outcomes across a range of areas in community pharmacy.

Building on the findings in the literature, a measurement tool was developed and validated. Questions were developed under four core domains: demographic and health information, utilisation of community pharmacy services, attitudes and beliefs around medicines – including self-efficacy around medicines, and the impact of community pharmacy on consumers, both in terms of overall consumer satisfaction and the impact of pharmacy on the health literacy of consumers.

An underlying goal of the project was to design a tool that could provide insights into how community pharmacy impacts consumers. This has been achieved, and is evidenced in the following statistical validation outcomes of the tool:

- The majority of scores reported high to very high internal consistency
- Reproducibility was either moderate or substantial

  The tool was found to be sensitive to differences in population groups across age, gender, SEIFA, the number of medicines (prescription and non-prescription/complementary) a consumer was taking and a consumer's self-rated health status (SF1).

Now that the tool has been validated, it is fit for use and will help to better understand and measure the benefit and experience that consumers gain from community pharmacy and to inform future policy and investment in programs and services. Examples of how the tool could be used in the future include identifying differences between population groups in terms of how consumers experience community pharmacy and what the barriers/enablers are in terms of accessing services and determining the impact of a community pharmacy intervention on a group of consumers.

The tool needs to form part of a better measurement strategy in primary health care. For example, administering the tool may provide an initial step in informing cost benefit analyses on the value of community pharmacy run programs or interventions. The tool is designed to show value or impact at a consumer level which is important to consider in addition to value at a health system level. For example, administering the tool before and after a community pharmacy program may show tangible improvements in a consumer's level of health literacy or self-efficacy around medicine management. The dollar value of these changes could then be calculated in a cost benefit analysis aimed at determining whether or not the program should be continued or discontinued.