



The Pharmacy
Guild of Australia

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COMMUNITY PHARMACY
DELIVERING ACCESSIBILITY, QUALITY AND
CHOICE FOR ALL AUSTRALIANS

SUBMISSION IN RESPONSE TO THE
COMPETITION POLICY REVIEW DRAFT REPORT



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Key Points

What this submission shows

- In recommending that the current Location and Ownership Rules be scrapped, the Review Panel claims they restrict competition, limit consumer choice, result in poor health outcomes, and are costly for taxpayers. **The Review Panel provides no evidence** to support its assertions. On the basis of detailed evidence and analysis, this submission shows these assertions to be deeply flawed.
- Thanks to the Location and Ownership Rules, community pharmacy provides consumers with a **high level of access and choice**, while ensuring equity and lowering the costs of distribution. It also protects quality and results in an extremely high level of public trust. A formal cost-benefit analysis, based on empirical evidence, shows repealing the rules would reduce community welfare by an amount equivalent to almost one-quarter of the sector's value added. The Rules are therefore in the public interest and should be maintained.

How this submission shows it

- Relying on a detailed geo-spatial analysis of pharmacies, supermarkets, medical centres and banks, this submission demonstrates that community pharmacy provides an enviably **high level of access** not only to metropolitan consumers but also to consumers in regional areas, to older consumers and to consumers in areas of socio-economic disadvantage.
- The geo-spatial data also shows that universality of access is achieved without compromising competition and choice, with a high proportion of consumers close to two or more pharmacies. And **access to community pharmacy has increased** over the years, bringing benefits closer to an ever greater number of consumers.
- Importantly, the data shows the goal of universal access is secured at relatively low cost. Community pharmacy provides approximately the same level of access as medical practice (broadly defined) but does so with 16% fewer outlets. Were the density of pharmacy equal to that of medical practice, access would scarcely rise but costs to **consumers and taxpayers would be higher**, in present value terms, by \$1 billion.
- The submission also shows that the ownership rules bring substantial benefits. By ensuring that the ownership of pharmacies remain widely spread, the major supermarket chains are prevented from securing in this area the high degree of market power they have obtained in grocery retailing, including through the use of buying power. Conversely, were the ownership rules repealed, experience in Australia and overseas suggests they would acquire that market power. As a result, the **Commonwealth** would find its **bargaining position** in purchasing dispensing services on behalf of the public **severely weakened**, raising costs to taxpayers and consumers.
- At the same time, the ownership rules ensure pharmacies are owned by pharmacists with a financial, personal and professional interest in providing high quality service. A detailed consumer survey commissioned for this submission shows that consumers understand that fact, **have great trust in the current system** and do not regard supermarket pharmacies as an acceptable alternative. While this view is broadly held, older consumers place even more value on community pharmacy than consumers generally. These consumers would likely suffer more, and gain less from changes to the current arrangements.

- The consumer survey has been used to estimate dollar valuations consumers place on different distribution models. Applying those results in a formal cost-benefit appraisal shows removing the Location and Ownership Rules would reduce consumer welfare by an amount equivalent to 23 percent of pharmacy value added. To that **substantial loss must be added to any costs the Commonwealth would incur** in adopting other policies so as to secure some of the broader benefits the Rules now provide, as well as the loss to the Commonwealth from the reductions in its bargaining power noted above.
- In short, the evidence demonstrates that the current framework provides substantial net benefits. This is unsurprising. As the purchaser of access to dispensing services on behalf of the community, the Commonwealth has incentives to impose an efficient pattern of location and ownership. Well-established economic principles show that that pattern is likely to differ from the one which would emerge in an unregulated market, all the more so given the Commonwealth's equity objectives. The restrictions the Commonwealth imposes so as to better align the sector's structure with its goals are no different from those widely found in competitive markets, where suppliers impose distribution arrangements so as to secure efficient outcomes, including in terms of location and outlet ownership. The **benefits that these kinds of restrictions can bring have long been recognised in competition law and practice.**
- The **Review Panel** suggests such restrictions should be viewed as contrary to the public interest unless it can be shown that they are the 'only' way of achieving policy objectives. This **entirely misrepresents the relevant test**, which asks not whether the restrictions are the only way of achieving policy objectives but whether they are the most efficient way of doing so.
- The Review Panel also suggests that the onus is on those benefitting from the restrictions to demonstrate that they meet the test the Panel has set out. This too misrepresents the well-established practice of Australian public policy, which places a responsibility on **decision-makers to ensure the decisions they take are properly based on evidence and analysis.** Moreover, where decisions have major consequences for the community, and affect investments made in reliance on long-standing policies, decision-makers should have a high degree of confidence in the evidence on which their decisions are based.
- The Review Panel's draft recommendation meets none of those criteria. If it is based on evidence, that **evidence has not been exposed to public testing.** If any economic analysis has been undertaken, it has not been released. If consideration has been given to the precise nature, cost and effectiveness of the alternative policies which would have to be implemented so as to achieve policy objectives, were the current Rules removed, the substance and results of that consideration have not been disclosed. And if a proper cost-benefit test has been developed and implemented, stakeholders and the wider community have had no visibility of it.
- **In contrast, this submission provides ample evidence that the current framework yields significant public benefits in terms of efficiency and equity. Unless and until a better alternative has been specified, properly tested and proven to be demonstrably superior, it would be irresponsible to jettison a system which has clearly demonstrated its merit. The Panel's draft recommendation should therefore be revoked.**

Executive summary

The Australian community pharmacy sector operates within a framework of regulations underpinning the Australian Government's National Medicines Policy intended to achieve a number of distinct Government objectives.

Whilst the Government has a clear interest in controlling public expenditures on subsidised medicines, it also has a number of broader health and social policy objectives that are intended to support the wellbeing of the Australian community, including ensuring universal access to high quality pharmaceutical services for the Australian population and responding to information asymmetries on the part of consumers about medicines with a high level of service.

Review Panel's draft recommendation

The Review Panel has recommended that location and ownership rules that apply to community pharmacies be removed because the Panel considers that these rules restrict competition (Draft Recommendation 52). The Panel cites assertions that these restrictions limit consumer choice, result in poor health outcomes, and are costly for taxpayers.

However, the Panel presents *no* evidence to suggest that this is the case.

Indeed the Panel's own discussion indicates that existing restrictions have not prevented new pharmacy models from evolving.

The Review Panel's approach raises questions about evidentiary and procedural standards. The Panel appears to rely heavily on information said to be confidential, which it has declined to make available, even on a restricted basis. Further concerns arise from the fact that the Panel appears to have come to the firm view that pharmacy deregulation should be implemented as a *fait accompli*, irrespective of the draft nature of its recommendations or the arguments made in support of the longstanding community pharmacy model.

At the same time, there are serious errors in the Review Panel's interpretation of the competition principles as set out in the Draft Report, which guided the Review Panel in its findings in relation to the community pharmacy model. The 'public interest' test component of the original Competition Principles Agreement (CPA), which was adopted by the Panel, requires demonstrating that the objectives of the policy or legislation can 'only' be achieved by restricting competition.

However, it is obvious from the CPA that the competition principles are to be read as a whole; and rather than turning on whether a purported restriction is the 'only' way of achieving an objective, the relevant test is whether that restriction is the most efficient way of achieving that objective. In contrast, the proposed public interest test set out in the Competition Review Panel's Draft Report would not enhance public welfare, nor is it consistent with how policymaking is conducted in practice:

- An unqualified requirement that the objectives of legislation or policy can 'only' be achieved by means that do not restrict competition would require measures to be implemented that achieve the policy objectives at a higher cost than restrictions on competition. As formulated, the test therefore fails to recognise the trade-offs and choices that arise when comparing different mechanisms for implementing policies,

in terms of the effectiveness with which policy objectives can be achieved and the costs of doing so. Those trade-offs are recognised in the CPA read as a whole, and in the structure of the COAG Principles of Best Practice Regulation.

- It has also long been the case in the relevant legislation and in the lived experience of Australian microeconomic reform that the public interest test has involved demonstrating how the objectives of the policy or legislation can best be achieved, taking into account the relevant trade-offs.

The test endorsed by the Panel would seem to rule out consideration of these types of trade-offs, between objectives, on one hand, and costs or benefits, on the other: for the Panel, restrictions on competition would never be justified if an alternative can be shown to exist. The Review Panel's own inconsistent application of the competition principles shows that the proposed public interest test is neither sensible nor workable.

A revised test that is consistent with welfare maximising objectives should instead read: *that restricting competition is the most efficient (or least inefficient) of all feasible ways of achieving the policy objectives*. Otherwise, any instrument that can be cast as a restriction on competition would fail the test, quite regardless of whether it did or did not advance the public interest, and quite regardless of whether it did so more successfully than other options.

The Review Panel additionally suggests that those wishing to retain competitive restrictions are required to demonstrate that their removal would not be in the interests of the broader community. However, this position is not consistent with good governance or policy-making:

- Both in principle and in practice, the burden of proof for making policy choices rests with the policy maker who bears ultimate responsibility for the decision.
- Making the case for change requires articulating an alternative that would better meet government objectives, or would do so at a lower cost, or both.
- The burden of proof, and the evidentiary standard that must be met, by those making the case for change is especially great where large, sunk investments have been made in reliance on long-established policy and where adjustment costs are likely to be high.

The Panel does not identify an effective alternative for achieving the underlying policy objectives of ensuring equity of access and quality advice to consumers at an acceptable cost to the budget, instead drawing parallels to general practitioners (GPs) and referring to unspecified 'empirical evidence'. However:

- The absence of locational regulations for GPs has clearly not enabled equitable access to health care services for all Australians. On the contrary, despite a range of costly interventions, the lack of success of different incentive programs in encouraging medical professionals to move to regional, rural and remote Australia suggests that devising effective mechanisms to achieve this objective through direct subsidies is inherently problematic.
- Furthermore, the empirical evidence from overseas shows that removing location and ownership restrictions entails significant risks in terms of accessibility of medicines, particularly to those who most require them, and of horizontal and

vertical industry consolidation in the pharmaceutical industry (raising concerns about market power). In a number of cases, these outcomes have required new policy intervention. Notwithstanding these risks, reviews undertaken by impartial researchers suggest that deregulation of the community pharmacy sector has not resulted in a reduction in costs.

Any serious failure of pharmacy deregulation would, besides causing damage to those who are badly serviced as a result, almost inevitably lead to remedial policy, whether budget-based or regulatory. Without having considered and evaluated the supporting policies that would be required, the Review Panel is therefore not in a position to conclude that the current arrangements are inferior to feasible alternatives. Given the role of the community pharmacy network in delivering on public policy objectives via the Pharmaceutical Benefits Scheme (PBS) and other programs, the standard of proof that should be applied by policymakers should therefore be higher than usual.

Efficiency rationale for ownership and location rules

The Review Panel recommended removing ownership and location restrictions on community pharmacies on the basis of claimed damage to competition and choice. However, as well as being factually inaccurate, such an analysis mischaracterises the context within which community pharmacies operate. From a public policy perspective, the central role of pharmacies is better characterised as one of agents who provide services to consumers on behalf of the Government; namely, the dispensing of medicines and the provision of advisory and related services. In this context, the Government has an interest in ensuring that dispensing and advisory services are provided efficiently, equitably, and to a high standard, both because it wishes to promote good health outcomes and bears the direct budget costs of the dispensing fees and the medicines dispensed, but also because it bears many of the indirect costs that arise when poor outcomes prevail.

The organisation of the community pharmacy sector should not therefore be compared to that of an unconstrained market in which multiple independent agents compete and the Government is a dispassionate onlooker. The link between Government and community pharmacies instead has strong parallels with a franchise relationship in which the Government is monopsony purchaser of dispensing services for PBS medicines. Franchise agreements, which are common in a broad range of markets, seek to achieve distribution efficiency by ensuring efficient choice of locations, regulating and assuring service quality and reducing the transactions costs involved in monitoring and enforcing agreements between upstream and downstream market participants. These 'vertical restraints' have been extensively studied in the literature and have clear efficiency rationales.

Ownership and location restrictions help achieve the Government's overall economic and social policy goals. Specifically, those restrictions need to be seen in the context of the Government's interest in structuring the commercial framework for the supply of dispensing and advisory services in a manner that is efficient and that achieves broader social and health policy objectives.

The parallels with franchise agreements are immediately apparent in the past five Community Pharmacy Agreements entered into by successive Governments spanning over twenty five years. These agreements are in effect contracts with pharmacy for the delivery of essential prescription products and associated professional services to quality standards that are in accordance with the Government's health and social policy

aims. The Agreements not only articulate the Government's intentions to deliver equity of access to pharmacy services, through location rules, but also enshrine the notion of maintaining a viable pharmacy network, upon which the success of its National Medicines Policy relies.

As the geo-spatial data shows, the outcomes reflect the objectives those Agreements have set out. Thus, the location rules give rise to a spread of pharmacies that provides a very high level of access and choice without unnecessary duplication of fixed costs. It thereby reduces the costs the Government incurs, which are all the greater because of the deadweight loss associated with funding services through taxation. Even the simplest models of locational competition suggest this outcome would not be achieved without any constraints on decentralised locational choice.

At the same time, ownership rules encourage efficiency in the provision of community pharmacy services while ensuring that these services are provided to an appropriate quality standard. By contracting with independent owner-pharmacists, the Government preserves the strong efficiency incentives that exist in franchise relationships. Furthermore, by placing the pharmacist and his or her professional reputation at the centre of the distribution relationship, a position that the pharmacist stands to lose if quality standards are not met, the Government effectively 'raises the stakes' for poor quality performance. Owner-pharmacists therefore have an enhanced incentive to conduct themselves and their pharmacies ethically and professionally, and not risk loss of registration and, therefore, loss of value in the pharmacy.

Additionally and importantly, the ownership rules limit concentration in the supply of dispensing services. This provides crucial benefits to Government, as it both facilitates benchmarking and prevents a situation emerging where the Government, to meet its objectives, would have to purchase distribution services from suppliers with substantial market power. For example, the geo-spatial data shows that to obtain the same level of access community pharmacy provides through supermarkets, the Government would need agreements with both Coles and Woolworths, as well as with independents. It is inevitable – and consistent with any economic theory of bargaining – that Coles and Woolworths would have a high degree of bargaining power in this situation and would hence be able to secure monopoly rents at taxpayers' expense. By avoiding this outcome, the ownership rules result in a substantial public benefit.

The economic literature suggest the location and ownership rules can interact in ways that create net gains to the community. Thus, the location rules can support and reinforce quality performance incentives that arise from the ownership rules. These effects arise because:

- Well-defined 'catchment' areas for pharmacies can assure pharmacists that competitors will not 'free-ride' on the advisory and other services they provide. These services are 'free' for consumers, but costly to provide for pharmacists. To the extent to which these effects occur, pharmacists will be incentivised to provide health services without being undercut on price by competitors who do not provide them.
- Pharmacists are encouraged to invest in human and physical capital required to carry out their functions to a high standard (for example, in ongoing professional training and in the quality of their facilities) because they have some assurance that they will earn a return on that investment.

Overall, the restrictions on ownership and location are parts of the package of measures that enable Government to achieve its objectives in an efficient way.

The experience in those countries in Europe where rules such as these have been removed highlights the complexity of reforms that fundamentally influence competitive behaviour. Contrary to what is claimed by the proponents of deregulation of the pharmacy sector, unconstrained competition has not delivered cost savings, has raised concerns about access to medicines, and has consistently resulted in horizontal and vertical industry consolidation into pharmacy chains, and pharmacy chains owned by wholesalers. Deregulation has not improved access to pharmacies outside urban areas, and there is some indication that accessibility of medicines has been affected because pharmacies owned by wholesalers tend to focus on their own product range.

This was particularly the case in Iceland and Norway, where the distribution of pharmaceuticals was rapidly transformed into oligopolies, which has created new entry barriers for independent pharmacies and broader concerns about market power in its own right. In neither country was a key reform objective – the control of public expenditures for subsidised medicines – achieved. These outcomes are particularly relevant, given the relatively small size of the market and existing concerns about market power in retailing in Australia.

Effectiveness of the regulations – the evidence

The Review Panel cites assertions submitted to it that there is a ‘significant problem in community pharmacy’ that is said to lead to poor outcomes as grounds for changing the current pharmacy regulations.

These assertions seem to be entirely anecdotal and the Review Panel has chosen not to subject them to public scrutiny.

In light of the approach and stance by the Review Panel, the Guild engaged a number of leading consultants in their respective fields to investigate whether or not Recommendation 52 would advance the welfare of the Australian community.

The Guild undertook three streams of new research and analysis, namely a:

- geospatial analysis of pharmacy location in Australia relative to other vital services such as supermarkets, banking and medical centres;
- qualitative survey of consumer preferences for community pharmacy relative to alternative models of service delivery; and
- willingness to pay valuation of community pharmacy, again relative to alternative models of service delivery.

These three streams form the inputs into a full cost benefit appraisal (CBA) of Draft Recommendation 52 as it relates to the current regulatory arrangements.

The empirical analysis undertaken on behalf of the Guild demonstrates that, far from limiting access and choice, the community pharmacy model provides near universal access, high quality service and choice for consumers.

The key messages from the geo-spatial analysis are:

- Using detailed data on locations, the research demonstrates that pharmacy accessibility is high, both in absolute and relative terms, throughout Australia, including for the elderly (less mobile) and low socio-economic communities.
- For Australia as a whole, pharmacies are in almost every case more accessible than the other three services studied (being supermarkets, banking and medical centres, sectors regarded as models of free market competition).
- Crucially, the excellent accessibility to pharmacy services in regional areas provided by the community pharmacy model is not secured at the expense of access in urban areas where it might otherwise be reasonably assured even without the location rules. Rather, there is a very high degree of choice relative to other essential services, and this does not compromise accessibility in regional areas. As a result, it is simply factually incorrect to claim that consumers have less access to competing outlets than in other services.
- The data show that there is high accessibility for those aged 65+ and for low socio-demographics both in absolute and relative terms. This is especially important as there is no reason to believe that that outcome would be achieved were locational decisions unrestricted.
- The data, therefore, strongly support the hypothesis that the community pharmacy model provides choice and similar levels of competition in urban areas, and that it provides better access compared to supermarkets, banks and medical centres in regional and rural/remote areas.

The results of the consumer survey showed:

- 89 per cent of consumers trust their local pharmacist either very highly or completely;
- 64 per cent of consumers support the principle that professionals should own the business they work in;
- community pharmacies have a clear advantage over supermarkets in terms of trust and quality of service; and
- consumers trust their local pharmacist to deliver the medicines they need and have a level of trust in community pharmacy that greatly exceeds what they vest in other potential sources of supply.

In absolute terms, the overwhelming majority of survey respondents place a high degree of trust in the ability of their local pharmacy to provide the best service and advice.

These findings are consistent with the results of a similar study conducted by the Guild in 1999¹. This indicates consumers have held a positive view of pharmacy and pharmacists over a sustained period of time (15 years). Similarly, the majority of

¹ Consumer Survey – value of pharmacist ownership of pharmacies, KPMG Consulting July 1999

consumers continue to be unsupportive of supermarket chains owning and operating pharmacies.

Cost benefit analysis

The Guild commissioned a cost benefit appraisal (CBA) of the Panel's draft recommendation to dismantle the community pharmacy model, utilising new geospatial and consumer survey evidence.

The methodology used to assess the value consumers place on the services pharmacies provide, and to examine changes in net benefits under alternative scenarios, parallels that in the recent report to the Government of the Independent Panel on the Cost-Benefit Appraisal of the National Broadband Network, and relied on the results of a recent consumer survey. The survey (which is similar to that used for the study of the National Broadband Network) relies on a rigorous microeconomic basis to derive estimates of consumer valuations.

Drawing on the valuations derived from the survey, the costs to consumers of altering the structure of supply can be compared to the benefits. The results of the CBA are stark in showing a significant reduction in consumer welfare under alternative scenarios where locational and ownership rules are removed. They demonstrate that consumers – particularly those that are eligible for PBS concessional status (who are the main consumers of medicines and pharmacy services) – would consistently suffer a loss in consumer surplus and would therefore be worse off as a result of the Panel's proposed changes:

- Given consumer preferences, as revealed in the consumer survey, even a small loss of trust or increase in travel time represents a significant loss in consumer surplus. Individually or in combination, the removal of the location and ownership rules would therefore harm consumers.
- Consumers value trust and travel time more than they do price reductions, so that even a hypothesised fall in prices would not offset the consequent loss in consumer surplus.

These results are conservative, not only in terms of the assumptions on which they are based, but also because they take no account of other effects of removing the rules likely to have. For example, as noted above, were major supermarket chains to secure a high market share in dispensing services, the Government would have less bargaining power in purchasing those services and would therefore incur higher costs.

Competition policy and future public administration structures

The Review Panel recommends the creation of an Australian Council for Competition Policy, which may administer competition policy payments to the states and territories who make reforms to regulations approved by the proposed Council. In effect, this would mirror the former National Competition Policy (NCP) structure.

The Guild notes that Australia's system of public administration is becoming increasingly streamlined, as bodies, such as the COAG Reform Council are being abolished to remove 'red tape'.

Moreover, in the lead up to the review of the Australian Federation that will take place during 2015, the Prime Minister has indicated that states should be 'sovereign in their own sphere'. The Guild considers that, in the context of pharmacy regulation, issues relating to ownership are the responsibility of the States and Territories. To the extent that there is a desire for interstate uniformity, matters can be dealt with under well-established COAG processes.

Recommendations to the Review Panel

In summary, the Review Panel's recommendation in relation to the regulatory framework that should apply to community pharmacy:

- is based on a poorly formulated public interest test;
- is not based on a robust and transparent evidentiary standard;
- does not recognise that community pharmacy regulations are effective in achieving the social and health policy objectives intended by government, and are valued highly by consumers; and
- has been developed without a clear understanding or formulation of the alternatives.

Recommendation 52 should therefore be removed.

The Guild also believes that the proposal for the creation of an Australian Council for Competition Policy is incompatible with the way in which the Australian federal structure is evolving. The Review Panel should not proceed with this recommendation.

Abbreviations

CBA	Cost benefit analysis or cost benefit appraisal
CPA	Competition Principles Agreement
CRP	Complaints Resolution Panel
CSO	Community Service Obligation
Fifth Agreement	Fifth Community Pharmacy Agreement
FTE	Full-time equivalent
Guild	The Pharmacy Guild of Australia
IAC	Industries Assistance Commission
NCC	National Competition Council
NCP	National Competition Policy
NMP	National Medicines Policy
OTC	Over-the-counter
PBS	Pharmaceutical Benefits Scheme
PC	Productivity Commission
PPA	Professional Pharmacists Australia
RAAHS	Remote Area Aboriginal Health Services
QUM	Quality Use of Medicines
TGA	Therapeutic Goods Administration

1. Introduction

The Pharmacy Guild of Australia (the Guild) welcomes the opportunity to respond to the Review Panel's Draft Report.

This submission has been prepared by The Pharmacy Guild of Australia with input from Professor Henry Ergas and Professor Jonathan Pincus (economic analysis, including the cost benefit appraisal), the Institute for Choice (consumer choice survey) and MacroPlan Dimasi (geospatial analysis).

The submission provides the Panel with new evidence showing the value of the community pharmacy model to the Australian people.

1.1 Competition Panel Review Draft Report

The Review Panel considered that some regulation of community pharmacy is justified, but questioned the extent of the regulations. In particular, the Panel took the view that regulations concerning the ownership and location of community pharmacies are more restrictive than in other health sectors, and that recent developments in the sector suggest that these arrangements are unnecessary. Therefore the Review Panel recommended the removal of pharmacy ownership and location rules, and their replacement with regulations to ensure access and quality of advice on pharmaceuticals that do not unduly restrict competition (Draft Recommendation 52).

The Review Panel also said that it is keen to have its views tested, and invited stakeholders to comment on the Panel's views and draft recommendations.

However, the Guild considers that the Review Panel's assessment has been made without giving weight to the policy objectives that the current regulations are intended to achieve, and that key claims cited by the Panel have no factual basis. The empirical evidence presented in this submission shows that the ownership and location regulations are effective in achieving Government objectives of ensuring quality and equity of access to pharmaceuticals for all Australians. The regulations are a central aspect of a conceptually sound and efficient economic framework that balances equity and quality of service, and cost objectives. A cost-benefit analysis that assesses the potential net gains arising from the Review Panel's recommendations shows that any gains from increased competition would be small, but that, overall, moving away from the community pharmacy model towards a deregulated environment where supermarkets would take a significant share of the pharmacy market is likely to lead to large welfare losses for consumers, particularly for concession cardholders.

1.2 Structure of this submission

This submission is structured as follows:

- In Section 2 we outline Government policy in relation to medicines and the role of pharmacies in this context. The existing regulatory framework as it is applied to community pharmacies is aimed at delivering safe and effective medicines to all Australians in a cost-effective manner, and at maintaining a responsible and viable medicines industry.

- In Section 3 we discuss the assessment of the community pharmacy sector in the Draft Report of the Competition Panel Review. Section 3 sets out that the Panel based its recommendations on 'evidence' that has not been disclosed, and that the Panel's application of a 'competition principles' test to derive the recommendations is flawed in material respects.
- In Section 4 we describe the empirical evidence that underpins the statements in this submission. In summary, the results of the MPD geospatial analysis strongly demonstrate that the community pharmacy model is meeting the Commonwealth Government's objective of providing universal access to pharmacy services. The data supports the hypothesis that the community pharmacy model provides choice and no less competition in urban areas, while at the same time providing better access than a deregulated model would in regional areas. The data also shows that the model provides high accessibility without an inefficiently high level of investment in bricks and mortar.
- Section 5 discusses the broader conceptual and efficiency justification for the ownership and location rules that are the focus of the Review Panel's recommendations. Section 5 shows that, rather than representing an ad hoc form of government intervention, these rules play a well-understood and important role in the organisation of service delivery by one party on behalf of another.
- Section 6 presents a cost-benefit analysis to assess the implications of the Review Panel's recommendations. The results of the CBA show that consumers – particularly concession card holders – would consistently suffer a loss in consumer surplus and would therefore be worse off as a result of the Panel's proposed changes:
 - Given consumer preferences, as revealed in the consumer survey, even a small loss of trust or increase in travel time represents a significant loss in consumer surplus. Individually or in combination, the removal of the location and ownership rules would therefore harm consumers.
 - Consumers value trust and travel time more than they do price reductions, so that even a hypothesised significant fall in prescription and OTC medicine prices would not offset the consequent loss in consumer surplus.
 - These results are conservative, both in terms of the assumptions made and the range of impacts modelled.

2. Government policy and the role of community pharmacies

This section describes the role of pharmacies and the public interest in the structure and operation of the community pharmacy sector. The regulatory framework that applies to community pharmacies is multi-faceted, and is intended to achieve a number of distinct Government objectives. While the Government has a clear interest in minimising public expenditures on subsidised medicines, it also has a number of broader objectives that are intended to support the wellbeing of the Australian community. Community pharmacies occupy a central place within this framework by combining retail functions with the delivery of health care services and the PBS on behalf of Government, and the regulations are a reflection of this.

2.1 Regulatory framework

Pharmacies are multi-product, multi-service organisations, and are key participants in the Quality Use of Medicines (QUM) policy that underpins the Australian Government's National Medicines Policy (NMP). The QUM policy focuses on selecting management options wisely; choosing suitable medicines if a medicine is considered necessary; and using medicines safely and effectively. The NMP is a cooperative endeavour to bring about better health outcomes for all Australians (Department of Health 2014).² The overall aim of the NMP is to meet medication and related service needs, so that both optimal health outcomes and economic objectives are achieved, and has as its central objectives:

- timely access to the medicines that Australians need, at a cost individuals and the community can afford;
- medicines meeting appropriate standards of quality, safety and efficacy;
- quality use of medicines; and
- maintaining a responsible and viable medicines industry.

An important element of this framework is the Pharmaceutical Benefits Scheme (PBS). The PBS is a Commonwealth Government scheme that subsidises the cost to consumers of a wide range of medicines, in order to provide timely, reliable and affordable access to necessary medicines for Australians. The PBS is part of the NMP.

The Community Pharmacy Agreement (discussed below) sets remuneration levels to approved pharmacists for dispensing PBS medicines and providing other services, such as medication management. Pharmacies must collect patient contributions from general and concessional consumers, and, under the National Health Act 1953, are not permitted to discount those contributions for PBS drugs that are subsidised by the Commonwealth.

The existing regulatory framework for community pharmacies aims to support the achievement of these broad national health policy objectives. Many regulations therefore affect the setting up and operation of community pharmacies; key regulations are set out in the following.

² The term 'medicine' here includes prescription and non-prescription medicines.

2.1.1 Licensing and ownership rules

By and large, pharmacies can only be owned and operated by registered pharmacists. As set out in Section 5, the economic purpose of this restriction is to ensure that quality of service standards are adhered to; pharmacists who breach the standards risk losing the considerable human and physical capital invested in their pharmacy. Ownership rules also have the effect of preventing horizontal and vertical integration and therefore concentration of the pharmacy sector, which would increase costs to the Commonwealth and hence ultimately to the community.

Existing ownership restrictions take the following forms:

- restrictions on who can own pharmacies;
- restrictions on the numbers of pharmacies in which a registered pharmacist may have a proprietary interest;
- restrictions on the ownership structures of pharmacy businesses; and
- pecuniary interest measures to prevent persons and corporations other than registered pharmacists having an indirect interest in a pharmacy business.

The Pharmacy Acts of the states and territories require that a pharmacy be supervised and managed by a registered pharmacist, and be owned either by a pharmacist or by some form of legal entity in which pharmacists have effective and undisputed control of the decision-making of a pharmacy business.³

2.1.2 Location rules

Under the National Health Act 1953, the Commonwealth imposes strict controls on approving a new pharmacy, and on relocating existing pharmacies, for PBS purposes. The current Pharmacy Location Rules (Location Rules) are a fundamental component of the Fifth Community Pharmacy Agreement, and reflect the overall objective of the NMP to improve the health outcomes of all Australians through access to, and quality use of, medicines (Department of Health 2014).

The Location Rules are divided into two general types: those that apply to the relocation of an existing pharmacy; and those for the establishment of a new pharmacy. The rules set out location-based criteria which must be met in order for the Australian Community Pharmacy Authority to recommend approval of a pharmacist.

Following a review of the Location Rules in 2010, the rules were amended in October 2011 to simplify the application process and encourage pharmacies to be established in areas of community need. An existing pharmacy PBS approval is now no longer required before a new pharmacy can be established in facilities such as shopping centres, large medical centres and private hospitals, or in towns where there is only one pharmacy. Certain rules relating to pharmacy relocations were removed, and a new catchment test was introduced for new pharmacies and new additional pharmacies.

These changes have meant that, with the exception of short distance relocations of an existing pharmacy (within 1km in an urban area or anywhere in a small town), there is

³ Other than transitional arrangements for bankrupt businesses and deceased estates, the only statutory exceptions to this general rule are for pharmacies owned and operated by friendly societies, known as FSDs, and for those pre-existing pharmacies that were owned by non-pharmacist corporations or individuals before present ownership restrictions came into force.

no requirement to hold, or purchase, a pre-existing approval in order to establish in a new location. Applications for the establishment of a new pharmacy therefore now have no transaction costs, there is no “market” for approval numbers (the numbers do not have a value in and of themselves), and there is no strict capping of the number of approved pharmacies.

As set out in Section 5, the Location Rules have the effect of directing the application or relocation of community pharmacies to areas where there is a community need, and, to an extent, limiting the overall number of pharmacies. The economic rationale for these rules is to ensure that the distribution of community pharmacies broadly reflects the requirements of the Australian population, limit the costs of maintaining the pharmacy network as a means of distributing PBS subsidised medicines, reinforce service quality requirements and encourage investment in community pharmacy facilities.

2.2 The role of pharmacies

Community pharmacies dispense medicines and provide relevant counselling to accompany the sale of medicines, and assist members of the public who may seek pharmaceutical advice. The services provided by community pharmacies include, *inter alia*:

- dispensing prescription medicines; that is, medicines listed on the PBS whose prices are set by Government;
- supplying over the counter medicines available only from pharmacies;
- providing advice and a range of health services, including services that enhance the quality use of medicines and reduce costs in other areas of the health system, such as medication management services, the provision of Dose Administration Aids, Opioid Replacement Therapies, and many more; as well as
- supplying other products also available from general retail stores.

Community pharmacies are therefore key participants within the NMP framework. That is, pharmacy services are instrumental in ensuring that the medicines consumers purchase are accessible, appropriate for their medical condition and safe for them to use. In addition, community pharmacists provide services as part of public health campaigns, including baby and maternal health services, screening and care-management programmes, methadone or buprenorphine dosing, needle exchange and participation in ‘quit smoking’ and weight management programmes. These services are often provided at no direct charge to consumers.

2.2.1 Fifth Community Pharmacy Agreement

The integral role of community pharmacies within the infrastructure of the health care system is recognised in the five-year Fifth Community Pharmacy Agreement (Fifth Agreement) between the Australian Government and the Guild, which commenced on 1 July 2010. The Fifth Agreement provides \$15.4 billion over the life of the Agreement to remunerate pharmacies and wholesalers, fund a range of health related programs and services, and fund the community service obligation (CSO) of wholesalers.⁴ The Fifth Agreement:

⁴ The Wholesalers’ CSO Funding Pool helps ensure that low volume PBS medicines are delivered to community pharmacies anywhere in Australia and that all PBS medicines are delivered to rural and remote community pharmacies.

- articulates a number of principles and objectives, including:
 - ensuring community pharmacies are paid a ‘fair’ price for medicines;
 - ensuring that programs are patient-focused and target areas of need in the community;
 - ensuring transparency and accountability in the expenditure of funds;
 - promoting the sustainability and efficiency of the PBS, and ensuring that resources continue to be appropriately directed across the health system, while also supporting the sustainability and viability of an effective community pharmacy sector; and
 - ensuring that the Location Rules work for the benefit of the Australian community.
- stipulates that the ‘Commonwealth price’ for a particular PBS medicine is determined on the basis of a formula which comprises the cost of the medicine to the pharmacist, plus allowances for the cost of handling and storage of medicines by the pharmacy and the pharmacist’s specialised skills in dispensing the medicines; and
- includes a commitment to maintaining the Location Rules for approved pharmacies; the specific objectives of the rules, as set out in the Fifth Agreement, are to ensure:
 - all Australians have access to PBS medicines;
 - a commercially viable and sustainable network of community pharmacies dispensing PBS medicines;
 - improved efficiency through increased competition between pharmacies;
 - improved flexibility to respond to the community need for pharmacy services;
 - increased local access to community pharmacies for persons in rural and remote regions of Australia; and
 - continued development of an effective efficient and well-distributed community pharmacy network in Australia.

2.2.2 Government policy objectives for community pharmacies

In combination with Government agreements negotiated with the Guild on behalf of community pharmacies (the current one being the Fifth Community Pharmacy Agreement), the statutes and regulations regarding pharmacies serve to give effect to a broader Government policy framework. In combination, these provisions define how, by whom and in what contexts medicines are dispensed to consumers, what type and quality of services pharmacies provide to consumers and how they are reimbursed, how easily consumers can access medicines, and other issues. From a national health policy viewpoint, community pharmacies therefore have at least three important social functions:

- providing access to pharmaceuticals for all Australians;
- ensuring that consumers receive effective advice on the use of potentially harmful drugs; and
- containing the cost of the PBS so as to maintain its future financial viability.

2.3 Conclusions

The statutes and regulations governing community pharmacies are designed to achieve a range of health policy objectives. The Government has an interest in limiting the costs of dispensing PBS medicines to consumers, but it also has a number of broader (social and health) policy objectives that are more qualitative in nature. These include ensuring that all consumers are able to access medicines (and therefore pharmacies), that consumers are informed about the effective and safe use of medicines, and that certain ancillary health services are provided to consumers. Given the central role of pharmacies in delivering these services, the Government is also concerned to ensure the ongoing viability of community pharmacies.

3. Assessment of community pharmacies in the Competition Policy Review

This section considers the Review Panel's assessment of the regulations governing the community pharmacy sector. The Panel's particular focus in the Draft Report is on ownership and location restrictions on community pharmacies. The Draft Report recommends their removal. However, as set out in this section, the evidentiary basis on which the Review Panel based its findings is not stated and has not been exposed to any form of public testing. Broader concerns arise in relation to the conceptual approach adopted by the Panel, specifically:

- the public interest test that is proposed for evaluating restrictions on competition;
- the 'onus of proof', or where the responsibility should lie for showing that restrictions are not in the public interest and what needs to be shown; and
- the degree of confidence that is required for a decision to remove competitive restrictions.

3.1 The Review Panel's assessment

3.1.1 Evidence provided by The Pharmacy Guild of Australia

In the Competition Policy Review 'Issues Paper' (April 2014), the Review Panel identified a number of regulatory restrictions in services markets. The Panel noted the existence of supply-based constraints, including in the provision of pharmacy advice and dispensing services.

In its submission to the Issues Paper, the Guild demonstrated that the community pharmacy sector is consistently seen by the Australian public as a trusted and valued part of the national health care system. The importance of the community pharmacy sector to the health and welfare of the Australian public continues to expand, driven in part by the increasing burden of chronic disease within an ageing population.

The submission by the Guild also outlined the extent of the changes to the regulatory framework within which the community pharmacy sector operates. These changes were designed to deliver value for money for taxpayers, and the continued provision of quality services to consumers:

- The unique and vital nature of the medicines supply chain has been recognised through the introduction of a Community Service Obligation (CSO) arrangement in 2006.
- PBS reforms have been progressively introduced since 2007, and have resulted in significant savings through reduced expenditure on the PBS. These reforms have put pressure on pharmacy profitability and increased the number of pharmacies in financial distress.
- As part of the National Registration and Accreditation Scheme, all Australian states and territories have reviewed their respective pharmacy legislation in relation to pharmacy ownership, and have elected to retain these provisions.

At least in part as a result of these changes, competition within the community pharmacy sector has increased, as has the number of community pharmacies. Increasing competition is driving innovation in the pharmacy sector, particularly in relation to patient-centred health care.

3.1.2 Review Panel's Draft Recommendation

The Review Panel accepted that 'some regulation' of pharmacies is justified to uphold patient safety, ensure that consumers receive appropriate information and advice, safeguard equitable access to medications, ensure accountability for appropriate standards and behaviour by pharmacists, and manage costs to patients and Government. However, in the view of the Panel, the current ownership and location restrictions impose costs on consumers without a clear corresponding benefit.

The Panel also noted that existing restrictions on community pharmacies were more onerous than those in other health sectors (such as general practice), and referred to recent trends such as the emergence of discount pharmacy groups and online prescriptions. The Panel considered that a range of options are available to Governments to achieve community service and market conduct objectives as they relate to community pharmacies; specifically, this would include imposing obligations directly on pharmacies as a condition of their licensing and/or remuneration.

Overall, the Panel concluded that ownership and location restrictions on community pharmacy do not serve the interest of consumers:

The Panel does not consider that current restrictions on ownership and location of pharmacies are necessary to ensure the quality of advice and care provided to patients. Such restrictions limit the ability of consumers to choose where to obtain pharmacy products and services, and the ability of providers to meet consumers' preferences.

The Panel considers that the pharmacy ownership and location rules should be removed in the long-term interests of consumers. They should be replaced with regulations to ensure access and quality of advice on pharmaceuticals that do not unduly restrict competition. (Draft Recommendation 52)

3.2 Basis for the Draft Recommendation

The Review Panel's discussion of the restrictions on community pharmacy raises a number of questions, both in terms of the evidence relied upon by the Panel and apparent inconsistencies in the Panel's assessment.

3.2.1 Evidentiary standard and procedural issues

The central criticisms made of the current regulatory restrictions appear unsupported by evidence to which the Guild (or the public) has access. The draft report states that restrictions on competition had created a (p.110) "*significant problem in community pharmacy that is leading to poor health outcomes, a stifling of innovation and the taxpayer not receiving value for money*". This statement is a direct citation from a confidential submission to the Panel by Professional Pharmacists Australia (PPA). The evidence supporting it is not described nor analysed in the Draft Report.

Similarly, the Draft Report states that (p.110) *“the current regulations impose costs on consumers”*. However, there is no discussion as to what those costs are, or how significant they may be. More generally, the Draft Report contains no discussion as to the potential merits of ownership and location restrictions to enable these to be weighed up against the claimed costs. As such, the Panel’s approach appears to be inconsistent with its own view (p.79) that a ‘rigorous’ and ‘transparent’ assessment of whether regulations serve the public interest is required.

The reliance by the Panel on (apparently) unsubstantiated claims, including by the PPA, raises a number of wider questions about the processes that were adopted. On 26 September 2014 the Guild wrote to the Panel, requesting the evidence and data that apparently acted as the foundation of the Panel’s views. This request was declined. The Panel appears to have based its main policy conclusion on a submission whose ‘evidence’ remains hidden from public view. Until the submission is publicly available for testing, the claims of the PPA must thus be treated as just that: claims, which can neither be examined in detail, nor contested.

A number of statements by the Review Panel lead the Guild to believe more broadly that the Panel may have approached the subject of pharmacy regulation without the necessary rigour and with preconceived views that have shaped its assessment. For instance, the Guild notes the emphasis in the Draft Report on completing ‘unfinished business’ from the original National Competition Policy (NCP) agenda (for instance, at pages 5 and 25). These references align with the remarks by the Panel at information sessions and public consultation forums which suggest that the Panel views itself as being ‘Hilmer Mark II’, and comments in a letter to the Guild dated 27 September 2014 that the Panel’s views have been informed *“by general principles that we believe ought to apply broadly across the economy”*. Taken together, these various statements suggest that the Review Panel has simply adopted the conclusions of the National Competition Council’s (NCC’s) assessments on the implementation of national competition policy that were made over a decade ago without further analysis.

The Guild also notes that the Review Panel has been cited in the press as follows (Durie 2014):

The Government has already ruled out changes to the Pharmacy Rules, but Harper told the Australian he would maintain his recommendation because it was important to keep the momentum ...

This comment suggests that the Panel has already come to a final decision relating to the regulation of pharmacy in Australia prior to considering submissions designed to provide additional evidence and test the views of the Panel expressed in the Draft Report.

3.2.2 Inconsistencies in the Review Panel’s reasoning

Other aspects of the discussion of community pharmacy regulations appear to be contradictory.

First, the Panel cites the PPA’s argument that (p.110) *“taxpayer(s) [are] not receiving value for money”*. As noted above, this claim is not supported by evidence presented by the Panel. The Panel then goes on to say that *“the introduction, and subsequent expansion, of Price Disclosure arrangements for PBS medicines has lowered the prices the Australian Government pays for key medicines, with a significant downward impact*

on the incomes of community pharmacies.” These statements appear incongruous: on the one hand, recent reforms are said to have had a significant impact on the prices of medicines and payments to pharmacies; on the other, it is claimed that taxpayers are overcharged.

Second, the Panel states that (p.110) “*restrictions limit the ability of consumers to choose where to obtain pharmacy services and limit the ability of suppliers to meet consumers’ demands.*” The Panel then goes on to say that (p.111) “different business models have also emerged including specialist and online pharmacy models and discount groups that operate on a larger scale”. On the Panel’s own assessment, therefore, the current rules have not prevented new distribution models from emerging, a finding potentially inconsistent with the assertion that these rules limit consumer choice.

3.3 The competition principles test

As set out above, the evidentiary basis on which the Review Panel based its recommendation to remove competitive restrictions on community pharmacies is unclear. Broader concerns arise in relation to the Panel’s conceptual approach.

The Panel’s recommendations in relation to community pharmacies is based on the competition principles set out in Draft Recommendation 1, key aspects of which are as follows (Draft Report, p.24):

The Panel endorses competition policy that focuses on making markets work in the long-term interests of consumers. The following principles should guide Commonwealth, state and territory and local governments in implementing competition policy:

- *legislative frameworks and government policies binding the public or private sectors should not restrict competition; ...*

Applying these principles should be subject to a ‘public interest’ test, so that:

- *the principle should apply unless the costs outweigh the benefits; and*
- *any legislation or government policy restricting competition must demonstrate that:*
 - *it is in the public interest; and*
 - *the objectives of the legislation or government policy can only be achieved by restricting competition*

In other words, the application of the competition principles encompasses multiple components: two references to the ‘public interest’, a reference to the need to balance costs and benefits, and a general presumption against measures that restrict competition. It is clear on the face of the document that the approach it sets out, with its focus on comparing costs and benefits, is to be read as a whole, rather than by selecting individual phrases.

3.3.1 Formulation of the test

However, the Panel does not adopt an approach which considers the relevant test as a whole, instead taking an element of that test out of its broader context. The result is that as formulated by the Panel, the application of the competition principles would not support outcomes that improve the welfare of the Australian community.

This is because the Panel's proposed public benefit test generally fails to recognise the trade-offs and complexities that are inherent in public policy-making.⁵

The Panel's form of words – '*can only be achieved by restricting competition*' – has been carried over into the Review from earlier top-level official documents, but its implications should nonetheless be questioned. An unqualified requirement that any claimed restrictions on competition should be rejected if there is any other way in which policy goals can be achieved allows – and indeed requires – measures to be implemented that achieve the policy objectives at higher cost than restrictions on competition. Put in another way, if the top-level test is a cost-benefit comparison, then a proviso that rules out achieving the policy objective by restricting competition (whenever there is any other way of achieving the objective) either conflicts with the top-level test, or it is redundant.

The broader issue here is that there are usually many ways of achieving policy objectives such as the objective of ensuring an equitable distribution of community pharmacies, from budget-intensive ways through to regulation-intensive ways. Indeed, it is readily seen that a near absolute presumption against restrictions on competition would lead to absurd results, as it would prevent governments, when they procure services on behalf of consumers, from imposing conditions such as location, capacity and so on as conditions of providing service. As a result, the question cannot sensibly be whether restricting competition is the *only* way of achieving the objectives; rather, it must be *that restricting competition is the most efficient (or least inefficient) of all feasible ways of achieving the policy objectives*.⁶ Otherwise, any instrument that can be cast as a restriction on competition would fail the test, quite regardless of whether it did or did not advance the public interest, and quite regardless of whether it did so more efficiently and hence successfully than other options.

Policy choices are more generally complex and are best interpreted as continuous variables, to be thought of in terms of more or less. Although two policies may each separately achieve approximately the same policy objectives, it is unlikely that they would achieve them exactly to the same extent. This is recognised in practical policy making. For example, if one policy achieves fewer objectives than another, but at vastly

⁵ Other concerns about the public interest test set out in Draft Recommendation 1 relate to its drafting.

First, the formulation that 'any legislation or government policy restricting competition must demonstrate' is ambiguous. Legislation or policy cannot 'demonstrate' that certain outcomes are likely. The Review Panel may have intended to say that government, using its many resources of inquiry and policy formulation, must demonstrate that a change in legislation or policy satisfies the Panel's test.

Second, as formulated, the application of the competition principles contains an element of circularity. By specifying a 'public interest' test with two parts, the first of which is a comparison of costs and benefits, the Panel implies that the 'public interest' is a broader concept than a comparison of costs and benefits. But the second bullet point also refers to 'the public interest', and thus leaves unclear how these two criteria relate to one another.

⁶ The word 'feasible' is included in our re-formulation as a partial safeguard against the possibility that a public restriction on competition be removed on the grounds that some alternative means can be specified that would achieve the specified objectives of public policy, but that the alternative is never enacted or brought into being.

lower costs to the community, then advisory bodies like the Productivity Commission (PC) may very well recommend the lower cost, lower achievement policy option; and the Government may very well agree that the costs of a fuller achievement are too great. But if the difference in the degree to which two policies achieve the policy objectives is large and the cost difference is relatively small, then it is reasonable for the policy to be accepted that offers a higher achievement at a higher cost. Indeed, this is inherent in the economic concept of opportunity cost, which takes account of the value of foregone benefits.

In contrast, the test endorsed by the Panel would seem to rule out these types of complexities and trade-offs, between objectives, on one hand, and costs or benefits, on the other: for the Panel, restrictions on competition would never be justified if an alternative can be shown to exist.

3.3.2 Past applications of the test

The competition principles endorsed by the Panel (Draft Recommendation 1) do not represent a novel formulation, but one that was enunciated officially in 1992, when the NCP was instituted. The *Competition Principles Agreement* from 1992 for the legislation reviews states:

5(1) The guiding principle is that legislation (including Acts, enactments, Ordinances or regulations) should not restrict competition unless it can be demonstrated that:

(a) the benefits of the restriction to the community as a whole outweigh the costs; and

(b) the objectives of the legislation can only be achieved by restricting competition.

The NCC, when summarising the 1995 Competition Policy Agreement as it related to legislation review and reform, uses a similar form of words to that used in 1992 and in the Draft Report, that is, ‘can only be achieved by restricting competition’ (NCC 2014):

Legislation review and reform involved the Australian Government and all state and territory governments identifying existing legislation that restricted competition, and reviewing, and where appropriate, reforming that legislation. The guiding principle was that legislation should not restrict competition unless the benefits of the restriction to the community as a whole outweighed the costs and the objectives of the legislation can only be achieved by restricting competition ...

Notwithstanding the long history of the public interest test formulated in the Panel's Draft Recommendation 1, in practical terms, its content and application differs significantly from the standard that policy makers and their advisors have adopted before, during and after the NCP regime.

The policy practice of microeconomic reform over the last three decades has not been guided by the principle that restrictions on competition can be justified only if such restrictions bring a public benefit that simply cannot be secured by other means. Rather, public policy has been based on the proposition that restrictions on competition were justified if they met a ‘public interest’ test, and if no other feasible policy could be shown to satisfy the policy objectives better than would a restriction of competition. The Panel notes (p.33) that “*the NCP reforms substantially reduced the amount of anti-competitive regulation*”. The NCC itself conducted many of the required reviews. However,

successive Commonwealth governments have referred a number of more sensitive or difficult matters to the PC. All of these references have, in various ways, asked the PC to report on whether the restriction should remain, be modified, or be removed; and, if removed, what if anything should be put in its place. Without necessarily endorsing the specific outcomes of these reviews, the methodology they have adopted should have informed the Review Panel in its consideration of the relevant test.

That methodology is readily described. Given that the terms of reference sent to the PC almost invariably listed the policy objectives that the Government wished to pursue, the PC generally attempted to find other means for their achievement, which were to be preferred because they offered larger net benefits or lower net costs to the Australian community. The PC received a stream of terms of reference for its NCP reviews (and was usually consulted in their drafting). The terms of reference for the PC's inquiry into the regulation of architects representative of this broader framework (PC 2000, p.IV):

The Commission is to report on the preferred option for regulation, if any, of the architectural profession in Australia, taking into account the following principles:

(a) legislation which restricts competition should be retained only if the benefits to the community as a whole outweigh the costs; and if the objectives of the legislation cannot be achieved more efficiently through other means, including non-legislative approaches; and ..

That is, the PC has typically applied a two-part test:

- Were there technically and administratively feasible ways of achieving the policy goals, other than through restrictions on competition?
- Would the replacement of the restrictions on competition, by alternative means of achieving policy goals, improve or reduce community welfare?

The Commission mostly recommended against continuation of restrictions on competition, but never merely on the ground that there existed some other, preferable, means of achieving the policy goals.

It is also the case that although the Consumer and Competition Act (CCA) prohibits a range of private actions that damage competition, it specifically allows for their authorisation, on application to the ACCC (Section 90: Determination of application for an authorisation). The test specified in the CCA is that an otherwise prohibited action can be authorised by the ACCC if it determines that the action would (likely) result in a benefit to the public; and that the benefit would outweigh the detriment to the public constituted by any lessening of competition. Appeals against such ACCC determinations can be made to the Australian Competition Tribunal, which applies the same test: whether there is a public benefit that outweighs the detrimental consequences of any lessening of competition. There is no requirement to prove that the public benefits could *only* have been achieved by the restriction on competition. Indeed, such an interpretation of the test would be inconsistent with the over-riding purpose of promoting the welfare of Australians.

3.3.3 The Review Panel's application of the test

The Panel's own application in different contexts of the public interest test set out in its Draft Recommendation 1 highlights the difficulties with the test, as it is formulated. In Chapter 2, the Review Panel selected a small number of draft recommendations that it

considered priority areas. Five of these concern restrictions on competition: three in transport (4, 5 and 6), and one each on intellectual property and on parallel imports (7 and 9). Yet it is not apparent that the Panel has always applied the public interest test as it has defined it:

- Draft recommendations 5 (coastal shipping) and 9 (parallel imports) are clearly based on the test as formulated: Restrictions should be removed, unless they can be shown to be in the public interest, and there is no other means by which public interest objectives can be achieved.
- For taxis (Draft Recommendation 6), the recommendation is for the removal of restrictions on competition (Draft Report, p.30) “except where it would not be in the public interest”. There is no suggestion that the removal of restrictions can only be justified if the second requirement of the test is met, namely, that there are no other ways to achieve the public policy objectives.
- For intellectual property (IP, Draft Recommendation 7), the Panel appears to accept the almost universal recognition that copyright and similar laws restrict competition, but that this can work in the long-term interests of consumers. The discussion and recommendation imply that there are no alternatives to competitive restrictions arising from copyright and patents, and none are canvassed. However, alternatives to copyright have been tried, especially in the software field, and they have frequently been discussed in other parts of the IP laws. In short, the public interest test, as formulated, has not been applied.
- Draft Recommendation 4 concerns Part X of the CCA which relates to liner shipping. Here, the Panel suggests the creation of ‘safe harbours’ via block exemptions or the use of the ACCC’s power of authorisation. Again, there is no explicit reference to the ‘only’ aspect of their competition principle. Moreover, the ACCC may authorise businesses to engage in anti-competitive arrangements or conduct when it is satisfied that the public benefit from the arrangements or conduct outweighs any public detriment. That is, only the first part of the Panel’s two-way test is required to be satisfied: that it serves the public interest.

3.4 Burden of proof

As well as an erroneous definition of the relevant test, the Review Panel errs in its formulation of the burden of proof. This section discusses where the burden of proof for removing restrictions on competition should lie, and the counterfactual standard that should be applied. The Review Panel states (Draft Report, p.77):

The onus of proof in the NCP process was on those wishing to maintain the restriction to demonstrate that it continues to serve the public interest. There is no evidence that this produced poor outcomes.

This assessment reflects a statement by the PC (2005), which said in its review of the NCP (p.16):

As such, NCP reverses the usual onus of proof for regulatory restrictions to be maintained. That is, those seeking to retain such restrictions are required to demonstrate that removal would not be in the interests of the broader community.

However, as set out in the following, the onus for making the case for change:

- lies and should lie with policy makers;

- involves showing that a well-specified alternative to restrictions on competition will achieve the policy objectives and improve community welfare; and
- requires a higher degree of confidence where large, sunk investments have been made in reliance on the policy, adjustment costs are likely to be high, and when mistaken policy changes may result in substantial public detriment.

3.4.1 Role and responsibility of policy makers

A requirement to place the onus of proof on those wishing to maintain a restriction on competition is neither appropriate from a governance perspective, nor does it reflect how Government operates in practice. As a general matter, and while those seeking to retain restrictions on competition have a duty to the community at large to present their case for retention, the decision is in fact made by Governments or policy makers, on behalf of the community. Governments are accordingly accountable to the electorate, and Government must take responsibility for a decision. In that sense, the ultimate onus of proof must and should lie with the policy maker.

It is also neither sensible, nor is it applied in practice, to effectively insist that a legislative restriction be removed despite the fact that it provides a public benefit, because those who support its retention were unable to show that there exists no other arrangement that can achieve the policy objectives. It is possible that the rationale for this reversal of the onus of proof is based on well-known asymmetries of salience and numbers in interest groups.⁷ However, these asymmetries are not themselves sufficient to justify placing the onus of proof on those defending a restriction on competition. It is one thing to argue that, because of these asymmetries, the presumption should be that restrictions of competition are to be removed unless a good case otherwise can be mounted. It is quite a different thing to absolve the decision maker – Government and its advisors – of the responsibility to consider and if necessary make the best case in favour of the status quo, before deciding that that best case is not good enough.

More generally, Government has an array of considerable means for making and testing such cases: public service departments and agencies, as well as independent bodies of inquiry and advice such as the PC, or *ad hoc* committees or commissions of inquiry. These bodies usually approach the decision-making task by testing the evidence provided against the policy preferences of Government to arrive at a decision that is believed to best advance the public interest. As well as directly enhancing the quality of decision-making, this allows for transparency, which itself promotes better outcomes, increases accountability and strengthens legitimacy.

Regulators who are required to have regard to the COAG Principles of Best Practice Regulation (2007) when framing regulation must particularly follow this methodology. Whilst Principle 4 generally restates the competition principles test,⁸ Principle 3 requires decision-makers to adopt the option that generates 'the greatest net benefit for the community'. When all eight Principles of Best Practice Regulation promulgated by COAG are taken as a whole, one must conclude that a decision-maker must determine

⁷ Those who stand to lose generally have at stake, per person, more than would be gained by those who would benefit from the removal of the restriction; and there generally are fewer losers than gainers (and often the latter are already served by industry bodies and established lobbyists). Therefore, the threatened losers could be expected to be more effective in mounting a case than would those standing to gain.

⁸ This is noted by the Review Panel on page 79 of the Draft Report.

what creates the greatest net benefit on the basis of an objective consideration of all the available evidence.

3.4.2 The need for a properly specified counterfactual

The competition principles proclaimed by the Review Panel and the NCP purport to require a 'proof of non-existence' – that nothing, other than a restriction of competition, can achieve the objectives of public policy. However, in practice such proofs of non-existence have not been required by policy makers and their advisors. As a matter of practical policy-making, making a convincing case for removing restrictions on competition requires showing the existence of a feasible and effective alternative. What policy has then (rightly) depended on are considerations of the likely effects of changing from the *status quo* to another, well-specified policy arrangement. Thus, in practice, policy makers and advisors do not rely on proof that restriction of competition is the only means to achieve the policy goals (and to generate the public benefit). Instead, policy makers and advisors try to show that a superior policy exists—and the burden of proof rightly lies with the policy maker or advisor, and not with the interested parties.

Adherence to these general principles regarding the onus of proof is especially important in the context of the proposed removal of regulations applying to community pharmacies, given the broader public health issues at stake. Yet beyond saying that the present arrangements should be repealed and (p.111) "*replaced with new regulations that better serve consumers and are less harmful to competition*", no alternatives are seriously discussed. Moreover, as discussed below, the Panel's reference to the liberalisation of general practices (GPs) and more generally 'increased empirical evidence' cannot be taken as a serious attempt at policy analysis.

General practices/practitioners in regional areas

The Review Panel says (Draft Report, p.111):

Since 2000 there is a better understanding of how well other primary healthcare sectors operate without such anti-competitive restrictions. For example, ownership of medical practices is not limited to GPs, and nor are GP practices prevented from opening in close proximity to one another.

The Review Panel appears to have attached great significance to this finding, however, it has not been based on careful evidence of the analysis. Had the Panel undertaken such an analysis, it would have found that the absence of location restrictions on GPs has not resulted in more equitable access to medical services for Australians in regional and remote regions. Recent data compiled by the Australian Institute of Health and Welfare (AIHW, 2014) shows that the supply of medical practitioners remains significantly lower in regional and remote areas of Australia than in major cities. While major cities have 426 full-time equivalent (FTE) medical practitioners per 100,000 people, the corresponding number of FTEs is only 257 in remote/very remote areas, and well below 300 FTEs in regional areas.

These outcomes have arisen despite significant financial and other subsidies provided by the Government, including the General Practice Rural Incentives Program (GPRIP), which offers (significant) financial incentives to medical practitioners to relocate and practice in rural and remote communities; the HECS Reimbursement Scheme, which reimburses HECS fees for medical students and graduates working in rural and remote areas; as well as the National Rural Locum Program, the Rural Locum Education

Assistance Program (Rural LEAP), the Bonded Medical Places (BMP) scheme and Medical Rural Bonded Scholarships (MRBS). The Government has accordingly announced new policy initiatives to ‘get doctors to where they are needed most with the right doctor, with the right skills, in the right place’ (Nash 2014). Key initiatives relate to changes to the District of Workforce Shortage (DWS) system to more accurately determine which places are underserved, and moving to the ‘Modified Monash Model’ to allow support and resources to be focused on areas where there is the most need. Additionally, the previous government intended to directly fund medical centres in both metropolitan and non-metropolitan areas, as it had concluded that there were significant gaps in coverage.

In summary, the absence of locational regulations for GPs has clearly not enabled equitable access to health care services for all Australians. Moreover, the lack of success of different incentive programs in encouraging medical professionals to move to regional, rural and remote Australia suggests that devising effective mechanisms to achieve this objective is problematic. These issues highlight the importance of considering the underlying policy trade-offs; that is, the extent to which the alternative regulations that the Review Panel appears to contemplate would be effective, let alone cost-effective in achieving the policy objectives. Obviously, that cannot be done without properly specifying the precise nature of those alternatives, including their costs – a task the Review Panel has not sought to address.

Empirical evidence

The Review Panel notes that ‘increased empirical evidence’ has come to light to inform policy since the Wilkinson review.⁹ However, the empirical evidence from the deregulation of the community pharmacy sector in European countries shows that defining an effective policy to achieve the Government’s policy objectives is far from straightforward. The findings in these studies are explored in more depth in Section 5, but a recent and comprehensive survey of the effects of deregulation of community pharmacies (including the removal of ownership and location restrictions) shows that (Vogler et al. 2012):

- Deregulation of the pharmacy sector does not necessarily lead to more competition. In practice, competition has been compromised by the emergence of dominant new actors, in particular wholesalers establishing large pharmacy chains.
- In all five deregulated countries studied, the removal of ownership rules led to the establishment of pharmacy chains (horizontal integration) and vertical integration with large international wholesalers. In some cases, this has required new regulatory intervention to address competition concerns.

⁹ Although the Wilkinson review covered similar ground, its focus was on two goals, first, ‘protecting the safety of the Australian public by ensuring that pharmacy services are provided in a competent and accountable manner’; and second, ‘ensuring that all Australians have reasonable equality of access to competent and efficient pharmacy services’ (Final Report, Part A: 19). It did not view the issues through the lens that we apply, namely, the mechanisms that the Commonwealth should use, when ‘contracting out’ the task of distributing Commonwealth-subsidised and controlled medications, to ensure not only that those two goals were met, but also that they were met efficiently. Specifically, that review suggested that the original purpose of the locational restrictions had been fulfilled—the number of pharmacies fell under the first Community Pharmacy Agreement and remained static under the second, suggesting to the review that ‘that the initial need for the imposition of tight controls on pharmacy location may well have passed’ (p.75). We suggest that there is continuing economic purpose for the imposition of locational and other restrictions

- While more new pharmacies have been opened after a liberalisation of establishment and ownership rules, they tended to be established at attractive locations (urban clustering) and not in places where no pharmacy had existed before, such as in rural, sparsely populated areas.
- Liberalisation has not reduced the prices of medicines; these are instead influenced by other policies, such as the statutory framework, strategies of third party payers, and policies regarding generics.

Vogler et al. (2012) conclude their study as follows (p.3):

Deregulation in the community pharmacy sector is often connected to certain expectations, in particular to improved accessibility and reduced medicines prices. In reality, these expectations could not be fully met. Liberalisation in the pharmacy sector can even have consequences, which might impede a good and equitable access to medicines, such as

- *an uneven spread of community pharmacies within a country,*
- *the dominance of some market players, for example wholesalers and*
- *the economic pressure to increase the pharmacy turnover through the sale of OTC medicines and non-pharmaceuticals.*

The rulings of the European Court of Justice concluded that limitations to the ownership and the establishment of community pharmacies might be justified for the sake of public health. The present study confirms the benefits of a statutory framework for the community sector to ensure equitable access to medicines.

One of the above authors recently prepared a research paper on the competitive implications of the liberalisation of the pharmacy sector for the Organisation for Economic Co-operation and Development (OECD, Vogler 2014). That paper is cited by the Chemist Warehouse in its submission to the Review Panel in support of changes to current regulations. Chemist Warehouse state (p.6):

The OECD has recently (2014) assessed the impacts on competition of the deregulation of the pharmacy sector in several European countries. The review found:

- *Accessibility of medicines to consumers increased due to the establishment of new pharmacies and the extension of opening hours.*
- *Price decreases were observed in many countries – including a dramatic 42 per cent decrease in retail pharmacy prices in Denmark. No country reported increases.*

These statements by Chemist Warehouse seriously misrepresent the conclusions in Vogler (2014), which mirror those in Vogler et al. (2012, pp.9-10):

- There was no evidence from the studied countries about price competition in non-regulated over-the-counter (OTC) medicines, and a consistent decrease in the prices of OTC medicines was not confirmed. A reduction in overall pharmaceutical expenditure in these countries was therefore found to be unlikely since pharmaceutical expenditure is largely influenced by prescription-only medicines that are publicly funded and whose prices are regulated even in deregulated markets

- While accessibility of medicines was observed to increase in countries whose pharmacy sector had been deregulated because of the establishment of new pharmacies (usually OTC retailers) and the extension of opening hours, new pharmacies and OTC dispensaries were usually established in urban areas. Accessibility of medicines in rural areas was not found to have improved. The authors found that, in general, deregulation tends to favour urban populations, particularly less vulnerable and less seriously ill patients who obtain better access to OTC medicines.
- Another unintended effect of deregulation, which limits a successful increase in accessibility of medicines and distorts competition, is the potential for new oligopolies comprised of a limited number of vertically integrated pharmacy chains.

Similarly, and whilst referring to an increased number of pharmacies in Norway following industry deregulation, Chemist Warehouse make no mention of the clear concerns over the resultant industry structure in that country (further discussed in Section 5). In contrast, Vogler (2014) notes that in Norway:

- pharmacies integrated vertically into three dominant wholesale groups;
- vertical integration distorted competition and impacted the accessibility of medicines since vertically integrated pharmacies aligned their product range to the product offering of their (wholesale) owners and reduced the availability of less frequently requested medicines; and
- these industry consolidation trends required the intervention of the Norwegian Competition Authority to limit the market share of any one chain to 40 per cent after one group organised more than 80 per cent of pharmacies after liberalisation.

In summary, the empirical evidence of pharmacy deregulation highlights the complexity of reforms that fundamentally influence competitive behaviour. Contrary to what is claimed by the proponents of deregulation of the pharmacy sector, unconstrained competition has not delivered cost savings, has raised concerns about access to medicines, and has consistently resulted in horizontal and industry consolidation. Moreover, the interventions required to address these consequences have themselves been costly, adding to the concerns about whether the changes were socially desirable.

3.4.3 Degree of confidence

A final important aspect of the burden of proof relates to the degree of confidence required in making major changes in Government policy (such as the decision to eliminate restrictions on community pharmacies). The argument for requiring those making the case for change to demonstrate its merits is especially great where large, sunk investments have been made in reliance on the policy and adjustment costs are likely to be high.

When recommending the liberalisation of international trade, the Industries Assistance Commission (IAC) followed all three principles regarding the burden of proof articulated by the Guild in this submission. First, the IAC itself largely took on the burden of proof that the benefits of change would likely exceed the costs to the community as a whole. Second, the Commission strove to achieve a high (and justified) degree of confidence in its judgments, bolstered by the evidence it generated that the adjustment costs were likely not to be as high as others claimed. Third, the Commission's recommendation about implementation took account of the extent and concentration of sunk costs induced by the previous policies.

In the context of community pharmacies, the pharmacy regulations have induced owner-pharmacists to make large investments in their businesses. As of June 2012, the average Australian pharmacy held around \$1.1 million in assets and had around \$1.7 million in debt (Guild Insurance 2013). These figures correspond to substantial outlays and obligations that pharmacists would not have entered into without some assurance about the ongoing existence of the present community pharmacy model. However, they are also intrinsic to the regulations: they were designed to ensure that the owner-pharmacists had 'skin in the game' and, therefore, an enhanced incentive to conduct themselves and their pharmacies ethically and professionally, and not risk loss of registration and, therefore, loss of value in the pharmacy. The regulations are designed so that bringing in non-pharmacist partners cannot diversify this risk.

As the evidence presented in Section 4 shows, there are large gaps between the trust and confidence that consumers place in the current pharmacies, and those that they expect would be in place in the alternative. That is, there is a considerable public benefit hazard, which suggests that discarding the regulations should be based on evidence and arguments in which decision makers have a high degree of confidence. Clearly, one aspect of ensuring that degree of confidence must be public testing of evidence and analysis, which the Guild has commented on above.

3.5 Conclusions

The current statutory framework for community pharmacies requires that pharmacies be owned and operated by pharmacists, and imposes certain limitation on the location of new pharmacies or the relocation of existing pharmacies.

The Review Panel recommends that location and ownership rules on community pharmacies be removed because the Panel considers that these rules restrict competition. The Panel cites claims that these restrictions limit consumer choice, result in poor health outcomes, and are costly for taxpayers. However, the Panel presents no evidence to suggest that this is the case, and indeed the Panel's own discussion indicates that existing restrictions have not prevented new pharmacy models from evolving.

The Review Panel's approach raises questions about evidentiary and procedural standards. The Panel appears to rely heavily on information said to be confidential, which it has declined to make available to the Guild. Further concerns arise given that the Panel appears to have come to the view that pharmacy deregulation should be implemented, irrespective of draft nature of this recommendation.

A more fundamental concern relates to the competition principles set out in the Draft Report, which guided the Review Panel in its findings in relation to community pharmacies. The 'public interest' test component of the competition principles requires demonstrating that the objectives of the policy or legislation can only be achieved by restricting competition. However, the proposed public interest test would neither enhance public welfare, nor is it consistent with how policy making is conducted in practice:

- An unqualified requirement that the objectives of legislation or policy can 'only' be achieved by means that do not restrict competition would require measures to be implemented that achieve the policy objectives at a higher cost than restrictions on competition. As formulated, the test therefore fails to recognise the trade-offs and choices that arise when comparing different mechanisms for implementing policies,

in terms of the effectiveness with which policy objectives can be achieved and the costs of doing so.

- It has also long been the case in the relevant legislation that, and in the practice of Australian microeconomic reform, that the public interest test has involved demonstrating how the objectives of the policy or legislation can best be achieved, taking into account the relevant trade-offs.

The test endorsed by the Panel would seem to rule out these types of complexities and trade-offs, between objectives, on one hand, and costs or benefits, on the other: for the Panel, restrictions on competition would never be justified if an alternative can be shown to exist. The Review Panel's own inconsistent application of the competition principles shows that the proposed public interest test is not workable.

A revised test that is consistent with welfare maximising objectives should instead read: *that restricting competition is the most efficient (or least inefficient) of all feasible ways of achieving the policy objectives.*¹⁰ Otherwise, any instrument that can be cast as a restriction on competition would fail the test, quite regardless of whether it did or did not advance the public interest, and quite regardless of whether it did so more successfully than other options.

The Review Panel suggests that those wishing to retain competitive restrictions are required to demonstrate that their removal would not be in the interests of the broader community. However, this position is not consistent with good governance or policy-making:

- Both in principle and in practice, the burden of proof for making policy choices rests with the policy maker who bears ultimate responsibility for the decision.
- Making the case for change requires articulating an alternative that would better meet Government objectives or would do so at a lower cost.
- The burden of proof by those making the case for change to demonstrate its merits is especially great where large, sunk investments have been made in reliance on the policy and adjustment costs are likely to be high.

The Panel does not identify an effective alternative for achieving the underlying policy objectives of achieving equity of access and quality advice to consumers at an acceptable cost to the budget, instead drawing parallels to GPs and referring to 'empirical evidence'. However:

- The absence of locational regulations for GPs has clearly not enabled equitable access to health care services for all Australians, while the lack of success of different incentive programs in encouraging medical professionals to move to regional, rural and remote Australia suggests that devising effective mechanisms to achieve this objective is problematic.

¹⁰ The word 'feasible' is included in our re-formulation as a partial safeguard against the possibility that a public restriction on competition be removed on the grounds that some alternative means can be specified that would achieve the specified objectives of public policy, but that the alternative is never enacted or brought into being.

- Furthermore, the empirical evidence from overseas shows that removing location and ownership restrictions entails significant risks in terms of accessibility of medicines, particularly to those who most require them, and new horizontal and vertical industry consolidation trends. The existing community pharmacy rules therefore represent an effective mechanism that has prevented the excessive concentration and vertical integration that characterises other small markets that have been liberalised.

Any serious failure of pharmacy deregulation would, besides causing damage to those who are badly serviced as a result, almost inevitably lead to remedial policy, whether budget-based or regulatory. Given what is at stake from a public policy point of view, the standard of proof that should be applied by policy makers should therefore be higher than usual.

Looking forward, the Review Panel recommends the creation of an Australian Council for Competition Policy, which may administer competition policy payments to the states and territories who make reforms to regulations approved by the proposed Council. In effect, this would mirror the former NCP structure. The Guild notes that Australia's system of public administration is becoming increasingly streamlined, as bodies, such as the COAG Reform Council are being abolished to remove 'red tape'. Moreover, in the lead up to the review of the Australian Federation that will take place during 2015, the Prime Minister has indicated that states should be 'sovereign in their own sphere'. The Guild considers that, in the context of pharmacy regulation, issues relating to ownership are the responsibility of the States and Territories. To the extent that there is desirable for interstate uniformity, matters can be dealt with under well-established COAG processes. These matters are further discussed in Appendix A.

4. New Evidence in support of the community pharmacy model

The Guild has noted the lack of supporting evidence for Recommendation 52 in the Competition Review Panel's Draft Report (see Section 3). The Panel has stated that its recommendation to remove location and ownership rules is based partly on evidence provided by Professional Pharmacists Australia (PPA), but has not released that evidence (Section 3.2). The Guild also notes the reversal of the widely-accepted onus of proof for proposed competition policy changes applied by the Panel, effectively asking the pharmacy industry to prove that the current regulations are in the best interests of the Australian community rather than for the Panel to show that this is not the case (Section 3.4). In summary, there is no evidence in the Panel's Draft Report to support the assertion that the current regulatory framework is resulting in poor patient outcomes or a lack of accessibility.

In light of the approach and stance by the Review Panel, the Guild engaged a number of leading consultants in their respective fields to investigate whether or not Recommendation 52 would advance the welfare of the Australian community. In essence, the Guild has undertaken three streams of new research and analysis, namely:

- a geospatial analysis of pharmacy location in Australia relative to other vital services such as supermarkets, banking and medical centres (Section 4.1);
- a qualitative survey of consumer preferences for community pharmacy relative to alternative models of service delivery (Section 4.2); and
- a willingness to pay valuation of community pharmacy, again relative to alternative models of service delivery (Section 4.2).

These three streams form the inputs into a full cost benefit appraisal (CBA) of Draft Recommendation 52 as it relates to the current regulatory arrangements (Section 6).

4.1 Geo-spatial analysis of pharmacy location

The Guild engaged MacroPlan Dimasi (MPD) to undertake a geospatial and statistical analysis of pharmacy accessibility by geographic region, age-profile and socio-economic characteristics.¹¹ In essence, MPD has compared the accessibility of pharmacies in Australia to other common essential services that require a shopfront, namely supermarkets, banks and medical centres. MPD has defined accessibility by distance to the service and the availability of choice for each service.

¹¹ MPD is a geo-spatial consulting firm that specialises in analysing firm location characteristics. See: <http://www.macroplan.com.au>

Box 4-1. Accessibility classifications

'Grade 1 Accessibility' is defined as the proportion of people having access to at least **1** supermarket/pharmacy/medical centre/bank within a 2.5km radius in Metropolitan Areas and either a 2.5km or 5.0km radius in Regional Areas (depending on the simulation being run).

'Grade 2 Accessibility' is defined as the proportion of people having access to at least **2** supermarkets/pharmacies/medical centres/banks within a 2.5km radius in Metropolitan Areas and either a 2.5km or 5.0km radius in Regional Areas (depending on the simulation being run).

4.1.1 Geo-spatial results summary

In summary, the results of the MPD geospatial analysis strongly demonstrate that the community pharmacy model is meeting the Commonwealth Government's objective of providing universal access to pharmacy services. The data supports the hypothesis that the community pharmacy model provides choice and no less competition in urban areas, while at the same time providing better access than a deregulated model would in regional areas. The data also shows that the model provides high accessibility without an inefficiently high level of investment in bricks and mortar.

The key conclusions from the analysis are:

1. Pharmacy accessibility is high, both in absolute and relative terms across the whole country, including for the elderly (less mobile) and low socio-economic communities.
2. For Australia as a whole, pharmacies are in almost every case more accessible than the other three services studied (being supermarkets, banking and medical centres):
 - a. For instance, at the Grade 1 level of accessibility (2.5km radius), across 15 regions,¹² in only a single case is pharmacy accessibility exceeded by any of the three comparator services.
 - b. At the Grade 2 level (2.5km city) for the 7 capital cities and 4 services, there are only three pairwise comparisons out of 21 in which another service is more accessible than pharmacy (and then by only 1-2 percentage points in terms of the population with this level of access).
 - c. At the Grade 2 level (5.0km regional) pharmacies are equally or more accessible in 16 of the 21 pairwise comparisons; only once are supermarkets more accessible than pharmacies (in Regional Victoria and by a single percentage point). In the regions where pharmacy is less accessible than one of the other services, the difference is generally 1-4 percentage points¹³.
3. Crucially, the excellent accessibility to pharmacy services in regional areas provided by the community pharmacy model does not compromise access in urban areas where it would otherwise be reasonably assured even without the location rules. In other words, in urban areas, there is a very high degree of

¹² The 15 regions are the capital city and rest-of-state for each of the eight Australian jurisdictions, less one since Canberra/ACT is counted as a single region.

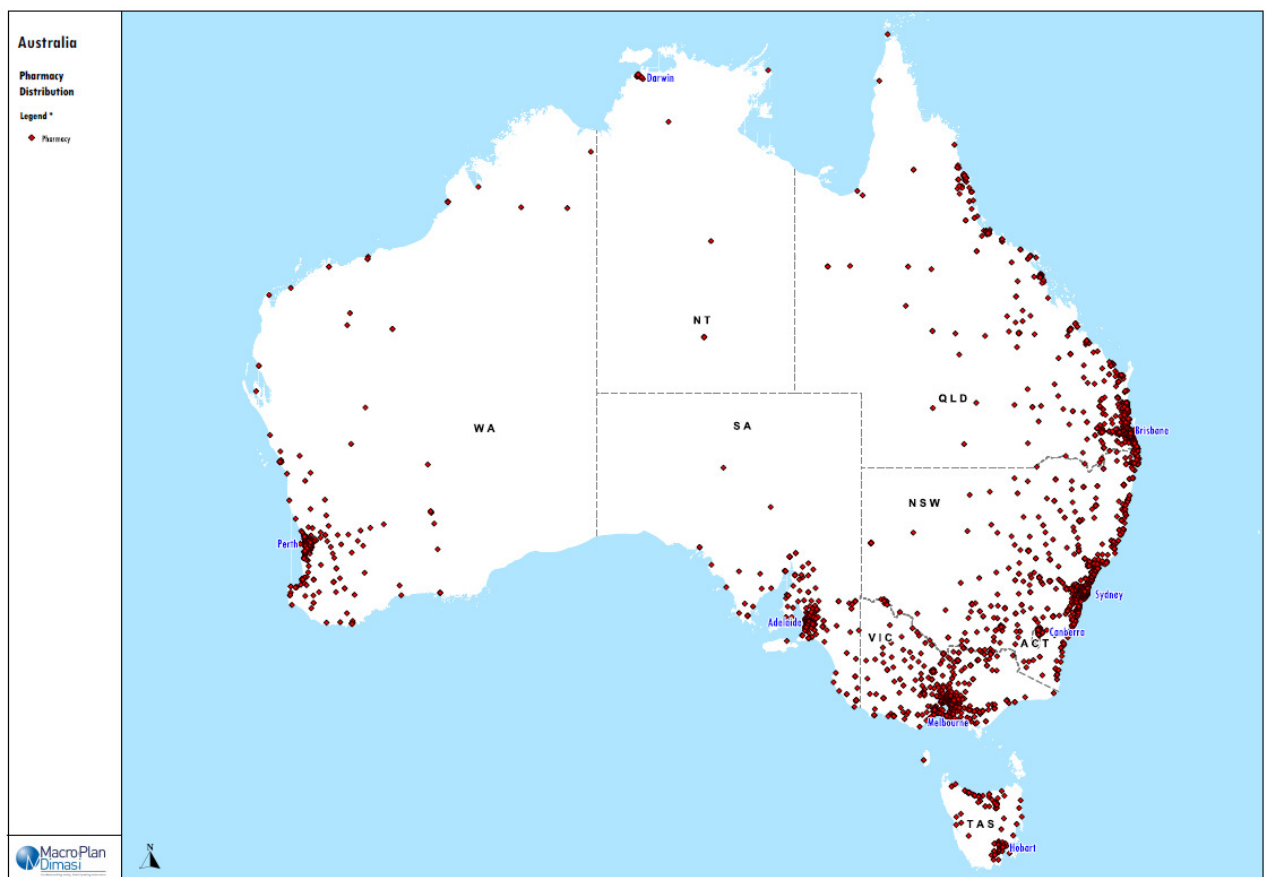
¹³ The exceptions being the Northern Territory and ACT.

choice relative to other essential services, and this does not compromise accessibility in regional areas.

4. The data shows that there is high accessibility for those aged 65+ and for low socio-demographics both in absolute and relative terms.

Map 4-1 (below) illustrates that locational rules have ensured universal access across all populated areas in Australia, as well as providing choice in major urban centres.

Map 4-1. Map of pharmacies across Australia



4.1.2 Detailed geo-spatial results

MPD used a number of indicators of accessibility to undertake appropriate sensitivity analysis and ensure the robustness of the results. All combinations of distance and choice indicators show that pharmacy is highly accessible both in absolute and relative terms. There is also a high degree of choice of pharmacy compared to the other services analysed.

Grade 1 Accessibility – 2.5km urban and regional radii

The starting point of the analysis is to look at the whole country at the 2.5km radius and find the basic level of accessibility (being access to a single choice of service within 2.5km from home).

At this fundamental level of accessibility, pharmacy is clearly more accessible than supermarkets, banks and medical centres, both in the city and in regional areas. In Australia's cities, access to a pharmacy within 2.5km (at 95%) is almost universal. For Australia's regions, from mid-sized cities to remote desert communities, pharmacy accessibility stands at 72%, significantly higher than supermarkets (65%), banks (56%) and medical centres (58%) (Table 4-1).

Apart from Darwin (77 per cent) and Hobart (84 per cent), capital city pharmacy accessibility ranges between 92 per cent (Brisbane) and 99 per cent (Canberra).

Table 4-1. Accessibility at Grade 1 level (2.5km urban and regional)

At Grade 2	Pharmacy	Supermarket	Bank	Medical centre
City	95	93	84	91
Rest of State/Territory	72	65	56	58
Total	87	83	75	80

Source: MacroPlan Dimasi analysis.

4.1.2.1 Comparing the raw numbers of services

MPD also reported on the number of services offered by each industry.

It is particularly noteworthy that community pharmacy achieves this very high level of accessibility at a significantly lower 'bricks and mortar' cost than the other services as a direct result of the locational rules in place. In total, there are 5,638 pharmacies in Australia, more than supermarkets (3,327) but fewer than banks (6,204) and medical centres (6,711).

In particular, for the 60 capital city and regional observations:

- community pharmacies account for the highest number of outlets only once (in regional Tasmania);
- community pharmacies account for the second highest number of outlets only four times; while

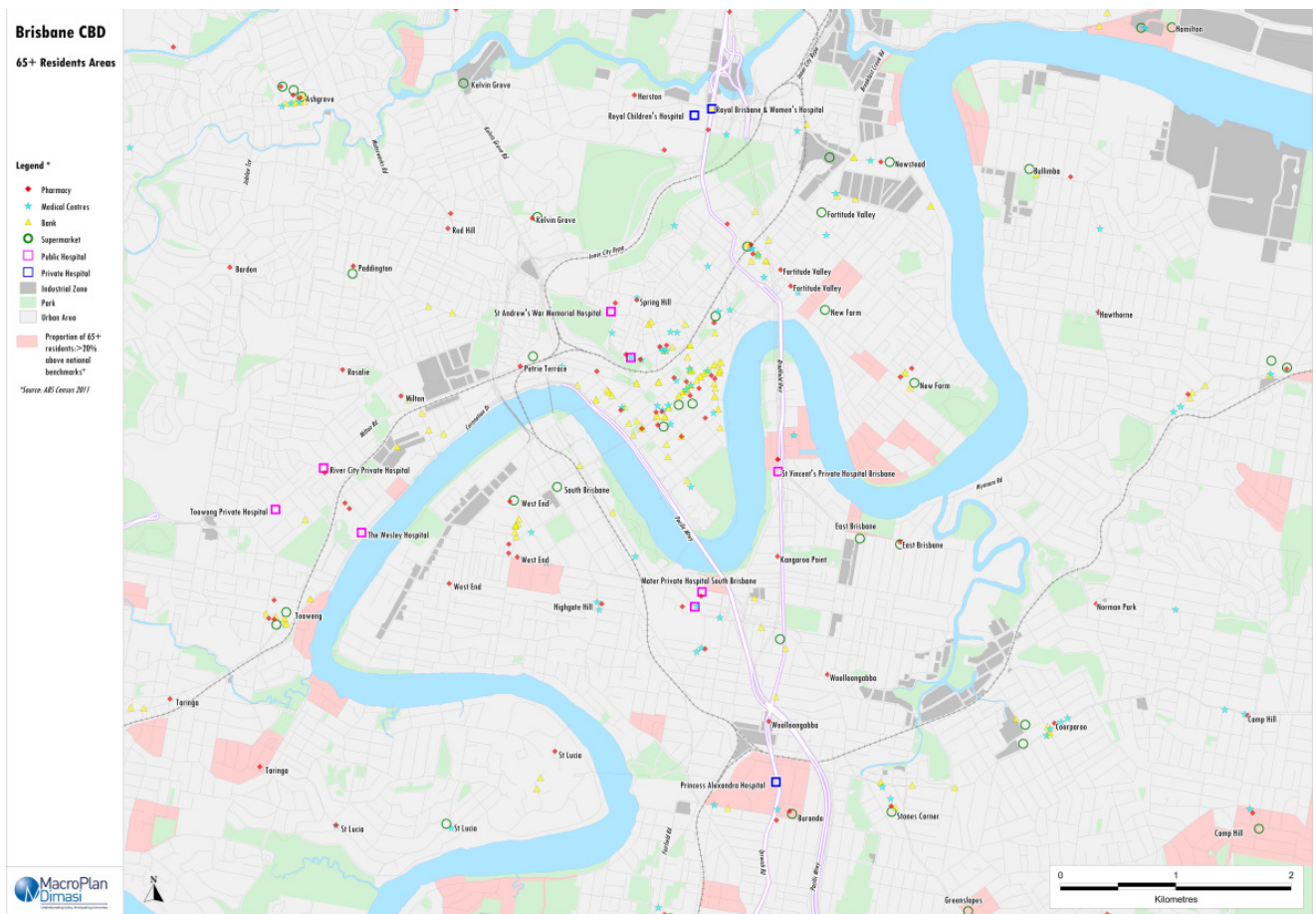
- for all the other observations, bank or medical centre represent the most or the second most frequent numbers of outlets.

Taking the Grade 1 results together with the raw data on number of 'shopfronts', this new evidence clearly demonstrates that the locational structure of community pharmacy secures the Commonwealth Government's policy objective of accessibility while still economising on the costs of the dispensing network. As those costs are ultimately largely borne by taxpayers, that is an important form of public benefit.

Box 4.2 - Resource savings from pharmacy location rules

Using the data on the total number of services, the Guild posed the question - what if the achievement of pharmacy accessibility came at the same cost as medical centres (which has roughly the same level of accessibility as pharmacy)?

To do this, we assumed that there would be the same number of pharmacies as medical centres. That is, an additional 1,073 pharmacies would be located throughout Australia. Based on data from our annual Guild Digest, we made a number of conservative assumptions about the upfront capital cost of starting a pharmacy (\$550,000) and applied a minimum annual maintenance cost for each additional pharmacy (\$55,000 per year). Over a 10 year period, the net present value of the cost of the additional pharmacies is a little over \$1 billion.



Geo- Spatial map Brisbane CBD (QLD)

This Brisbane CBD map shows high levels of accessibility for pharmacies in all major areas. This is in contrast to supermarkets and medical centres which are more likely to be clustered around major city/suburban town centres with poorer accessibility around out suburban areas.

Urban - 'Grade 2 Accessibility – 2.5km'

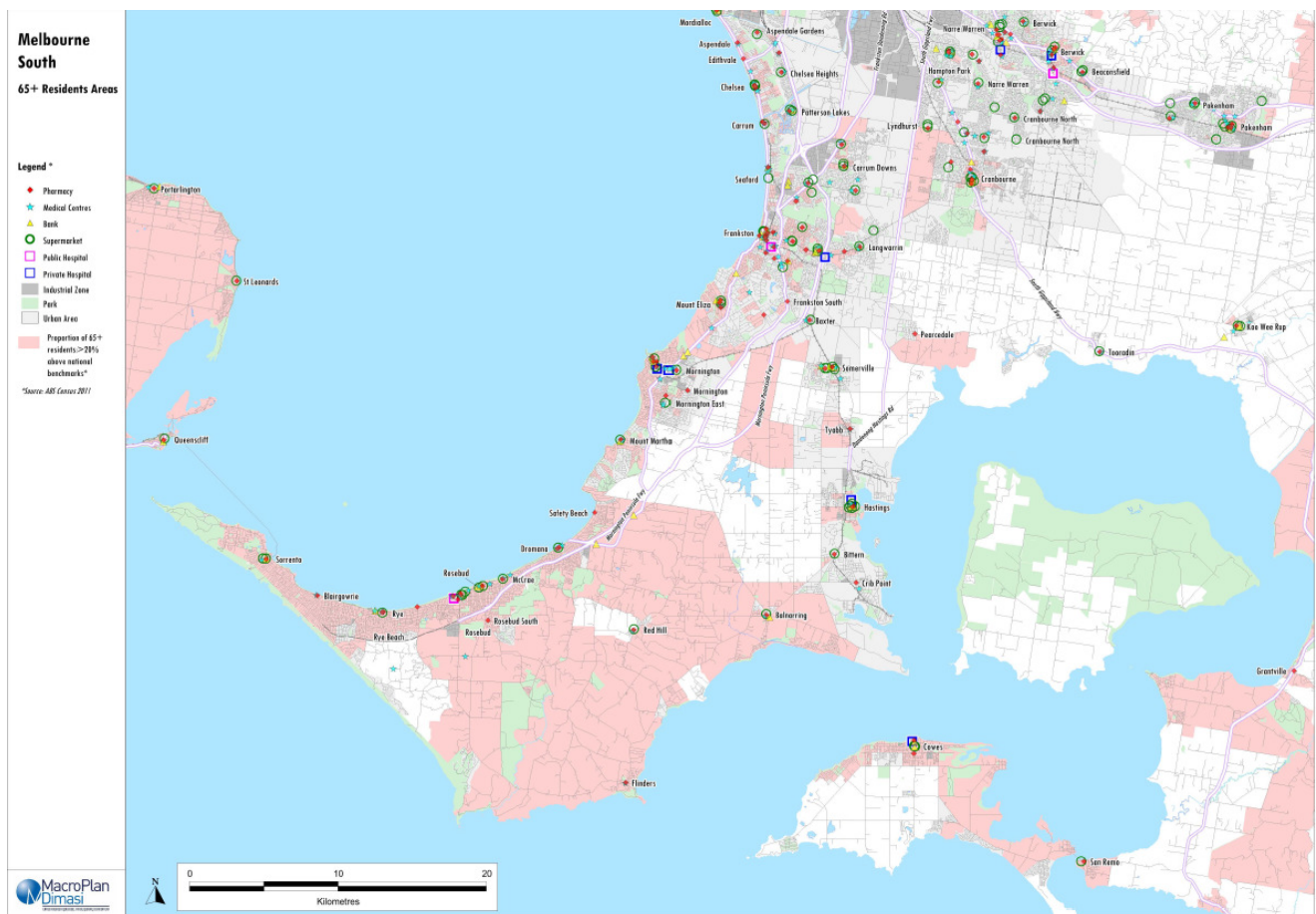
MPD also reported on a higher level of accessibility, being Grade 2 (i.e. a choice of at least two outlets) within a 2.5km metro radius and a 5km regional radius. We are highlighting the Grade 2 results (in addition to the Grade 1 analysis above) because these results clearly contradict the claim that locational rules lead to local monopolies. The evidence shows this is not the case in Australia's capital cities.

The 5km radius results for the Australian regions is particularly relevant because of Australia's geo-demographic characteristics. Australia is the world's sixth largest country but has the world's fourth lowest population density, as well as having some of the most remote settlements in the world. The 5km radius for the regions is arguably a more suitable classification for accessibility, particularly for the more remote regional areas.

Across Australia's capital cities, pharmacy accessibility compares very well to the three other essential services studied. Overall, accessibility to *at least* two pharmacies within 2.5km (at 92%) is significantly better than for banks (80%), and marginally better than for supermarkets (89%) and medical centres (91%) (Table 4-2 below).¹⁴

This general result is consistent with the accessibility pattern in Sydney, Brisbane, Perth and Hobart. In Melbourne, Adelaide and Darwin, medical centre accessibility marginally outperforms pharmacy by 1-2 percentage points, notwithstanding the very broad definition of 'medical centre'. The ACT is somewhat of an anomaly to the general result, with supermarkets (98%) and medical centres (98%) exhibiting an extremely high level of accessibility (see note on ACT at end of this section).

¹⁴ A proportion of the medical centres counted in the survey are either not open 7 days per week or may not have a qualified GP present on a full-time basis. Therefore the accessibility estimate for medical centres can be regarded as an overestimate. In addition, it should be noted that some medical centres (for instance Aboriginal Health Services) are not subject to commercial pressures and are therefore largely immune from locational decisions in a commercial sense.



Geo- Spatial map Melbourne South (VIC)

On the far outskirts on Melbourne South (In particular Flinders, Pearcedale and Grantville), the only easily accessible amenity is a pharmacy. In other areas pharmacy accessibility is equal or superior to supermarkets and medical centres.

Regional – ‘Grade 2 Accessibility – 5km’

Outside the capital cities in Australia’s vast regions, in total pharmacy accessibility at the Grade 2 level (69%) is higher than for supermarkets (65%) and banks (66%), and a single percentage point lower than for medical centres (70%) (noting again that the latter are very broadly defined, and would include practices that are only intermittent or part-time).

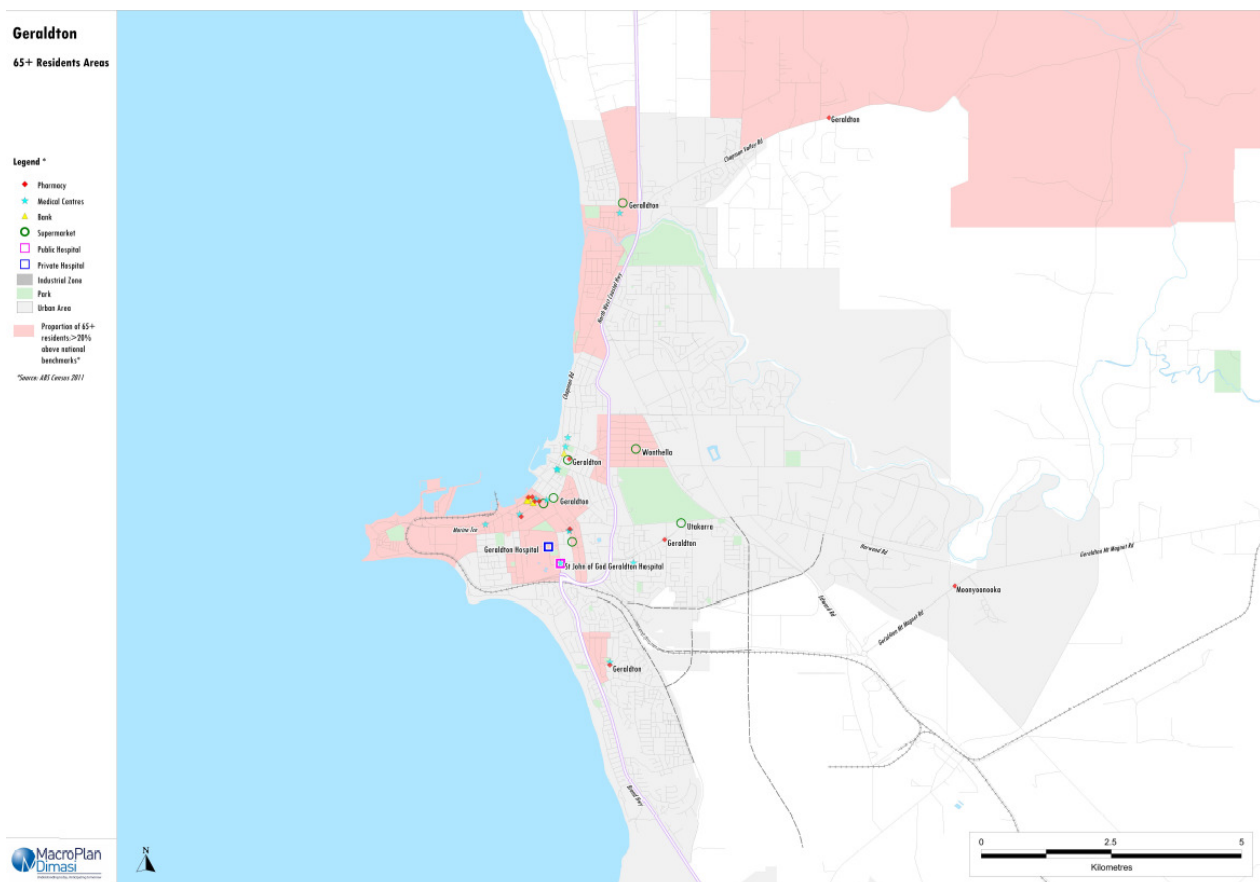
Turning to specific regional areas, pharmacy accessibility ranges from 52% in regional SA and WA to 79% in regional Queensland, which is relatively more urbanised.¹⁵ By comparison, regional supermarket accessibility ranges from 45% in SA to 75% in QLD; and regional bank accessibility ranges from 56% in SA to 72% in WA.

Table 4-2. Accessibility at Grade 2 level (urban (2.5km) and regional (5.0km))

At Grade 2	Pharmacy	Supermarket	Bank	Medical centre
City	92	89	80	91
Rest of State/Territory	69	65	66	70
Total	84	81	76	84

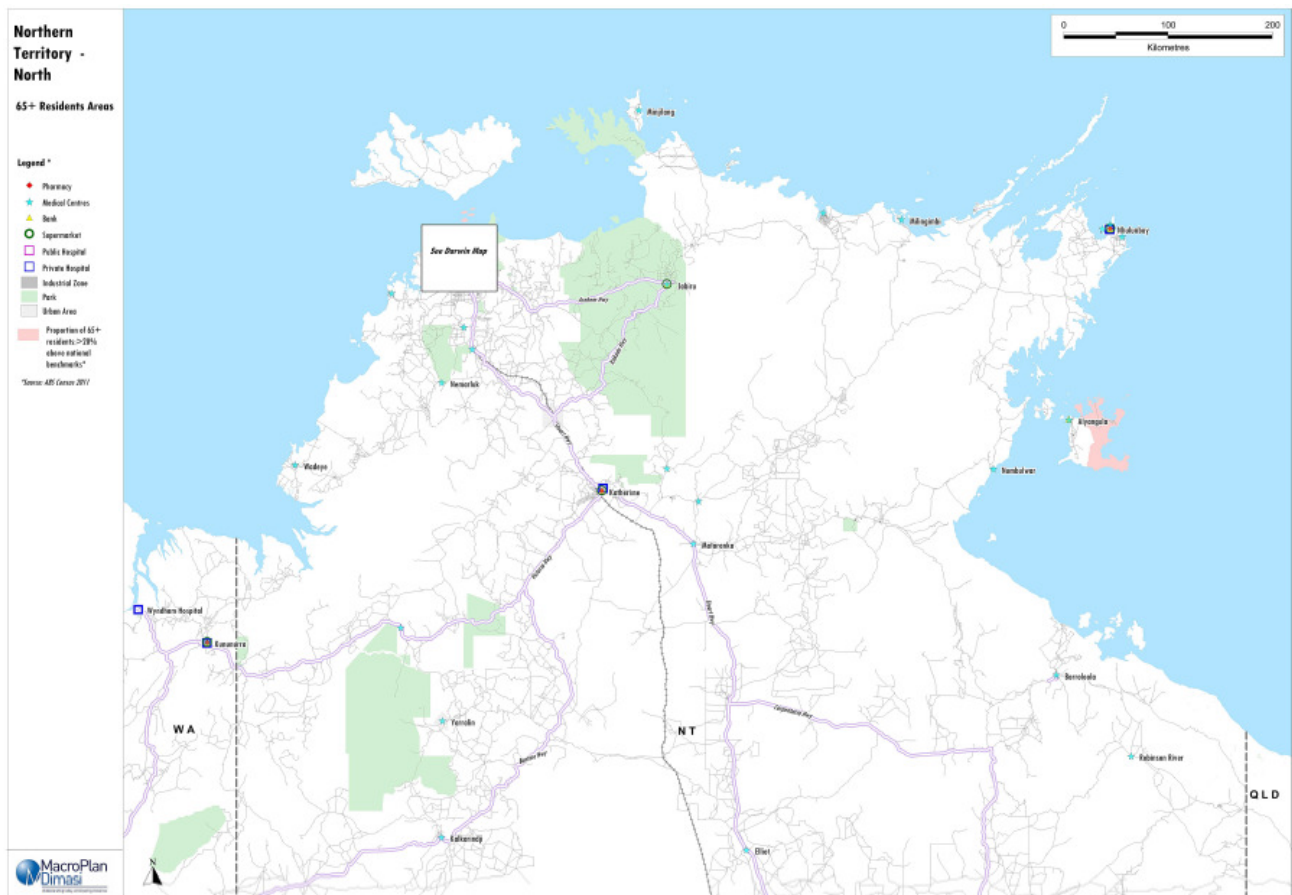
Source: MacroPlan Dimasi analysis.

¹⁵ We have excluded the NT (26%) and ACT (90%) from this comparison because of their unique characteristics.



Geo- Spatial map Geraldton (WA)

Pharmacy Accessibility is strong on the outskirts of Geraldton, particularly around Moonyoonooka and North Geraldton. Consumers residing in these areas would have to travel significantly further to access a medical centre and supermarket. The number of pharmacies is significantly more than the number of supermarkets



Geo- Spatial map Northern Territory- North

In remote locations, Remote Area Aboriginal Health Services (RAAHS) supply medications to patients via an alternative arrangement to the PBS (The RAAHS Program is a special supply arrangement administered under Section 100 (S100) of the *National Health Act 1953*) and these medications are provided to the health service by a community pharmacy provider in the Northern Territory. In other words although a pharmacy may not be physical located there, residents in these remote locations can still access their medications via this scheme.

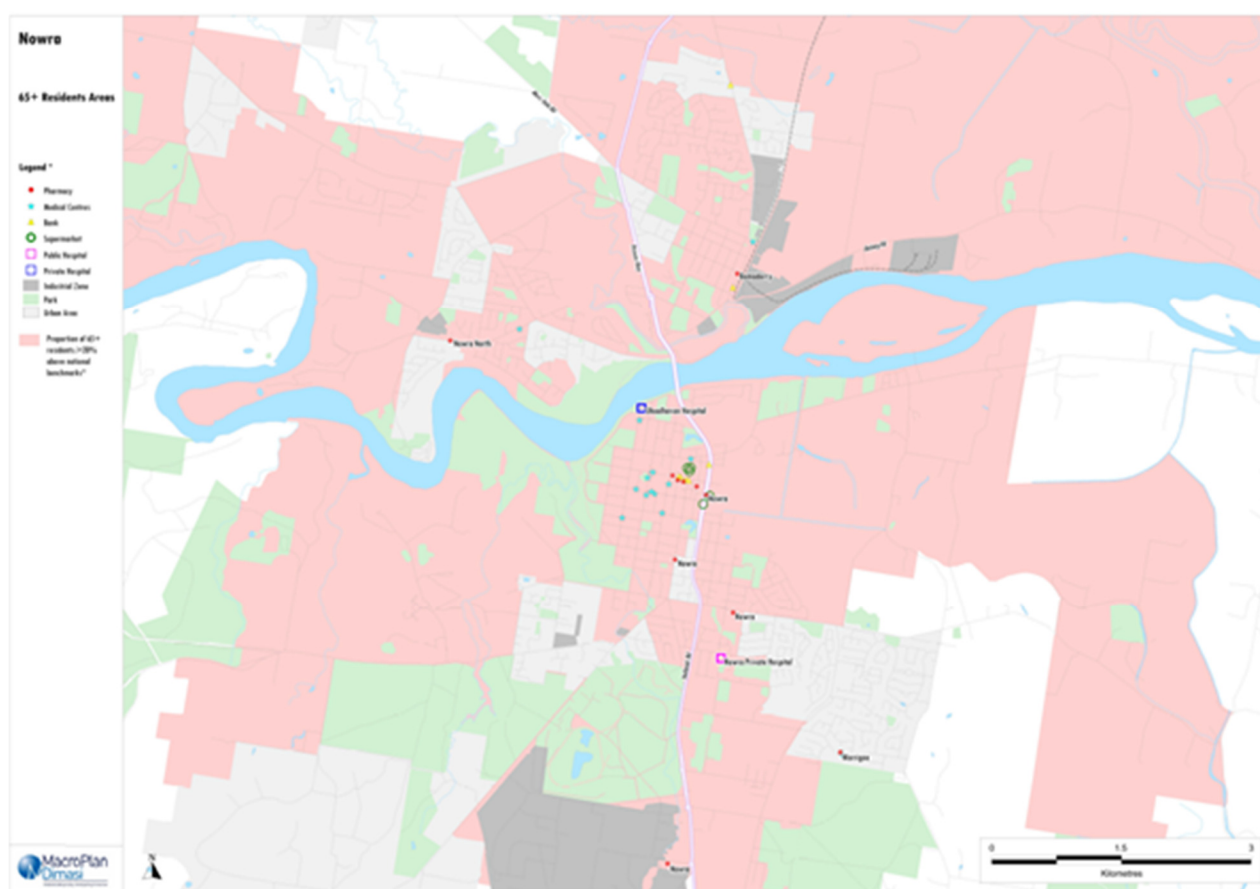
Regional – ‘Grade 1 Accessibility – 5km’

Based on the Grade 1 classification, for regional areas community pharmacy (81% proves to be significantly more accessible than supermarkets (76%) and banks (72%), and marginally below medical centres (83%), notwithstanding the definitional problems with medical centres noted already (Table 4-3). This general result for Australia's regions holds in all States except for WA, where medical centres (73%) outperform pharmacy (72%) by a single percentage point and in SA where banks (88%) significantly outperform pharmacy (74%).

Table 4-3. Accessibility at Grade 1 level (urban (2.5km) and regional (5.0km))

At Grade 1	Pharmacy	Supermarket	Bank	Medical centre
City	95	93	84	91
Rest of State/Territory	81	76	72	83
Total	91	87	80	88

Source: MacroPlan Dimasi analysis.



Geo- Spatial map Nowra (NSW)

Pharmacies in Nowra are located in the town centre as well as on the outskirts. Conversely the medical centres and supermarkets are located only in the town centres.

Moving from Grade 1 to Grade 2 accessibility

In urban areas, there is little loss of pharmacy accessibility when moving from the Grade 1 to the Grade 2 classification. The 3 percentage point loss for pharmacy is roughly the same as for supermarkets and banks (see Table 4-4 below). For the regional areas, the loss is higher in absolute terms, but accessibility is starting from a higher base relative to the other services and so still exceeds supermarkets and banks when moving to Grade 2 (Table 4-4).

Table 4-4. Percentage point loss in accessibility moving from Grade 1 to Grade 2 classification

Percentage loss	Pharmacy	Supermarket	Bank	Medical centre
Capital City	-3	-4	-4	no change
Rest of State	-12	-11	-6	-8

Source: MacroPlan Dimasi analysis.

Similar arrangements for the supply of S100 medications exist in Western Australia which is particularly important for areas which may not have access to a pharmacy

Accessibility by Age Profile

We also engaged MPD to consider whether there was a difference in accessibility between the over-65s and the under-65s.

First, in Australia's capital cities, on average, a resident is located 1km from the nearest pharmacy (Table 4-5). This is an extraordinary level of access to a service that all Australians rely on. And outside the capital cities, country residents are 6.5km on average from the nearest pharmacy. Considering the vastness of the Australian continent and our very low population density, this is an equally extraordinary result.

Across Australia, in both the capital cities and the regions, the over-65s enjoy better access to pharmacy than the under-65s. The difference in the capital cities is only marginal, with the over-65s being on average 100 metres closer to the nearest pharmacy than the under-65s.

The difference between the age groups in the regions is significant, with the over-65s (4.3km) being much closer to the nearest pharmacy than the under-65s (6.9km). Given that the level of reliance on a local community pharmacy increases with age (as a result of being prescribed a larger number of medicines and having a greater need for health services) this difference in accessibility indicates that the current arrangements are fostering an appropriate distribution of community pharmacies.

Table 4-5. Accessibility by Age Group and Region (2014 Survey) [km's from residence]

	Under-65	Over-65	Total Population
Capital City	1.0	0.9	1.0
Rest of State	6.9	4.3	6.5
Total	3.1	2.3	3.0

Source: MacroPlan Dimasi analysis.

Comparison to the 1998 survey¹⁶

In 1998, the Guild undertook a similar survey of accessibility by age cohort. Despite the intervening 16 years, the results are remarkably similar and generally improved.

For the capital cities, accessibility for both the under-65s and over-65s has remained unchanged (Table 4-6). In terms of individual cities, most reported no change or a slight improvement. Balanced against that was a slight deterioration in Brisbane and Perth.¹⁷ In 1998, a 65+ rural resident was on average 5.3km away from the nearest pharmacy and a 65+ remote resident was on average 48.7km away from the nearest pharmacy. The population-weighted average of the two results is around 10km, significantly higher than the 4.3km the rest-of-state result in 2014.

Table 4-6. Accessibility by age group and region (1998 survey) [km's from residence]

	Up to 54 yrs	55-64 yrs	65+ years	Total
Metro	1.1	1.0	0.9	1.1
Rural	6.9	6.8	5.3	6.7
Remote	58.6	58.4	48.7	57.9
Total	4.7	4.5	3.1	4.5

Source: Pharmacy Accessibility Study 1998 Culvenor & Associates.

Accessibility based on socioeconomic characteristics

The Guild also commissioned a geospatial analysis of accessibility by socioeconomic characteristics (Table 4-7). The results of this analysis shows that Pharmacy (4.4km) is significantly more accessible for the lower socioeconomic group than supermarkets (6.4km) and banks (5.9km). Pharmacy accessibility is only slightly less accessible than medical centres (3.6km) for the lower socioeconomic group, again notwithstanding the issues with the broad definition of medical centres.

Apart from Hobart and Darwin, there is little difference in pharmacy accessibility in the capital cities where, in absolute terms, accessibility is very high for both groups. Outside of the capital cities, the distance to the nearest pharmacy is between one-third and one-half greater on average (8km disadvantaged, 5.6km advantaged) for the lower socioeconomic group. This ratio is similar to banks, lower than supermarkets and higher than medical centres.

¹⁶ Pharmacy Accessibility Study 1998 Culvenor & Associates.

¹⁷ The regional classification was different for the 1998 survey with the Rest of State being split into 'Rural' and 'Remote' categories.

Table 4-7. Accessibility by socioeconomic characteristics

Ave. distance (km)	Pharmacy		Supermarket		Medical Centre		Bank	
	Dis-adv	Adv	Dis-adv	Adv	Dis-adv	Adv	Dis-adv	Adv
Capital cities	0.8	1.0	1.2	1.3	0.9	1.1	1.5	1.6
Rest of Australia	8.0	5.6	11.6	7.2	6.2	5.4	10.3	7.6
Total	4.4	1.7	6.4	2.2	3.6	1.8	5.9	2.6

Source: MacroPlan Dimasi analysis.

A note on the Northern Territory

As expected, the results for the Northern Territory are significantly different from those for the Australian states and, hence, unless properly understood, distort the picture. In response to the underutilisation of PBS medications by Aboriginal and Torres Strait Islanders in remote areas, special arrangements were introduced in 1999 for the supply of PBS medicines to clients of eligible remote area Aboriginal and Torres Strait Islander Health Services (ATSIHS). The arrangements are not specific to the Northern Territory, but are naturally the most prevalent there.¹⁸

Under the s100 Remote Area Aboriginal Health Service (RAAHS) program medications are ordered by the health service through an approved community pharmacy and then supplied “in bulk” to the health service. ‘In bulk’ refers to medications being supplied unlabelled and not recorded under individual patient profiles to the remote area health service and can include small or large quantities depending upon the size and needs of the health service.

These medicines are then available to be supplied to patients by an appropriate health professional working at the remote health service. The patient is not charged a co-payment for this supply and the pharmacy is reimbursed directly by Medicare Australia.

A note on the ACT

Similarly to the NT, we have also largely ignored the results for the ACT since it does not really have a regional area. Almost the entire ACT population resides in the city of Canberra and access to all services studied is high. In general, ACT governments have placed a high priority on ensuring the provision of local centre convenience supermarket shopping. Hence, there is a higher proportion of floor space going to smaller supermarkets such as IGA and other independents. This has tended to promote a more dispersed locational pattern for supermarkets in the ACT than would prevail under an unrestricted framework. In this sense, the ACT outcome for supermarkets reflects locational rules, rather than a ‘free entry’ benchmark.

¹⁸ For more detail, see: <http://www.ruralhealthaustralia.gov.au/internet/rha/publishing.nsf/Content/RemoteAreaAboriginalHealthServicesProgram>.

4.2 Consumer survey results

The Guild engaged the Institute for Choice to undertake a detailed analysis of consumer attitudes towards pharmacy and to quantify the value consumers place on various key attributes of pharmacies.¹⁹ A detailed description of the survey methodology and results is contained in the Institute for Choice Summary Report (Appendix B). In addition, a full analysis of the consumer survey results is contained in the CBA section of this submission (Section 6).

The key objectives of the consumer survey was to explore how much consumers value the current pharmacy environment and to understand what is most important to these consumers when choosing a pharmacy. In particular, the purpose of the survey was to identify:

- How much do consumers value the current pharmacy market structure (e.g., availability, location and number of different types of pharmacies)?
- How much do consumers value aspects of trust and service when it comes to pharmacy choice?

Data was collected via online (n=947) and telephone (n=480) surveys across all Australian jurisdictions in October 2014. The total sample size was 1,427, which was statistically adequate for the analysis undertaken.

4.2.1 Survey results

In summary, the data from the consumer survey show that:

- On a 1-5 scale, 89% of consumers trust their local pharmacist either very highly (4) or completely (5) (Figure 4-1);
- Community pharmacies have a clear advantage over supermarkets in terms of trust and quality of service (compare low);
- Only 10% of consumers disagreed with the principle that professionals should own the businesses they work in.
- Figure 4-1 with Figure 4-2); and
- 80% of consumers take 10 minutes or less to get to their local pharmacy;
- Consumers do not incur high travel costs to visit their local pharmacy relative to their local supermarket. A higher proportion of consumers takes more than 10 minutes to get to their local supermarket than their local pharmacy;
- In absolute terms, the overwhelming majority of survey respondents place a high degree of trust in the ability of their local pharmacy to provide the best service and advice (see table extracts below);

¹⁹ <http://www.unisa.edu.au/Research/Institute-for-Choice/>

- Only 10% of consumers disagreed with the principle that professionals should own the businesses they work in.

Figure 4-1. Trust in community pharmacies

	Online		CATI	
	Count	Percent	Count	Percent
(On a scale of 1 to 5 how much trust do you have that your pharmacy will provide the best service and advice (where 1 is 'I don't trust them at all' and 5 is 'I trust them completely')?)				
I don't trust them at all (1)	1	.1%	3	.6%
2	14	1.5%	5	1.0%
3	109	11.5%	28	5.8%
4	380	40.1%	144	30.0%
I trust them completely (5)	443	46.8%	300	62.5%

Source: Institute for Choice 2014.

Figure 4-2. Trust in supermarkets

	Online		CATI	
	Count	Percent	Count	Percent
On a scale of 1 to 5 how much trust would you have that a supermarket pharmacy will provide the best service and advice (where 1 is 'I would not trust them at all' and 5 is 'I would trust them completely')?				
I would not trust them at all (1)	106	11.2%	150	31.3%
2	188	19.9%	96	20.0%
3	395	41.7%	139	29.0%
4	182	19.2%	44	9.2%
I would trust them completely (5)	76	8.0%	51	10.6%

Source: Institute for Choice 2014.

Turning to whether consumers trust supermarkets to provide health services, a majority of respondents:

- do not think that supermarkets should provide health services, with only 25% of respondents having a 'very high' or 'complete' trust in supermarkets to undertake this service (Figure 4-3);
- would not be happy to get their prescriptions filled in a supermarket, with only 15% responding positively to the proposal (Figure 4-4); and
- have a problem with supermarkets keeping their personal health information, with only 11% responding positively to the proposal (Figure 4-5).

Figure 4-3. Supermarkets – Health services

	Online		CATI	
	Count	Percent	Count	Percent
I think supermarkets should provide health services				
Strongly disagree	349	36.9%	299	62.3%
Disagree	242	25.6%	79	16.5%
Neutral	259	27.3%	64	13.3%
Agree	75	7.9%	23	4.8%
Strongly Agree	22	2.3%	15	3.1%

Source: Institute for Choice 2014.

Figure 4-4. Supermarkets - Prescriptions

	Online		CATI		Results from 1999
	Count	Percent	Count	Percent	
I would be happy to get my prescriptions filled in a supermarket chain such as Coles, Woolworths or Safeway					
Strongly disagree	257	27.1%	278	57.9%	
Disagree	240	25.3%	89	18.5%	76.70%
Neutral	285	30.1%	66	13.8%	4.70%
Agree	137	14.5%	30	6.3%	18.70%
Strongly Agree	28	3.0%	17	3.5%	

Source: Institute for Choice 2014 and Consumer Survey – value of pharmacist ownership of pharmacies, KPMG Consulting July 1999

Figure 4-5. Supermarkets – Personal information

		Online		CATI	
		Count	Percent	Count	Percent
I don't have a problem with supermarkets keeping my personal health information	Strongly disagree	373	39.4%	310	64.6%
	Disagree	238	25.1%	71	14.8%
	Neutral	224	23.7%	53	11.0%
	Agree	88	9.3%	21	4.4%
	Strongly Agree	24	2.5%	25	5.2%

Source: Institute for Choice 2014.

Taken together, the survey data suggest that pharmacies provide a significantly higher quality of service and advice than supermarkets, and that consumers value these services highly.

The policy implication is that if altering current regulatory arrangements led to supermarkets providing prescriptions instead of pharmacies, then *ceteris paribus* this would make consumers worse off.

4.2.2 Willingness to Pay Results

The consumer survey also asked respondents to choose between various bundles of pharmacy services. These choice bundles manipulated factors such as distance to the pharmacy, whether the pharmacy was located on the street or in a shopping centre, whether the pharmacy sold a full range of health products, the time taken to process a prescription and the cost of that prescription. In this way, and by applying econometric tools to identify underlying utility and demand functions, the survey was able to rigorously estimate respondents 'willingness to pay' for these various bundles of pharmacy services.

The evidence from the willingness to pay analysis indicates that consumers place a relatively high marginal value on pharmacy ownership, travel distance, trust, and access to health advice and other services. One of the most important econometric results is that there are significant differences in the marginal valuations placed on various attributes for general patients and concession cardholders. Since a large share of annual prescription volumes is driven by the medical needs of concession card holders as well as policies that are specifically targeted at this group, this finding has important implications for the efficiency and equity evaluation of policy changes to location ownership and location rules.

The willingness to pay results are then used to conduct a cost benefit analysis, which estimate changes in aggregate consumer surplus in response to various policy changes, relative to the baseline of no policy change. The main policy change scenarios assume that the removal of location and ownership rules is accompanied by significant reductions in the prices of prescription and OTC medicines. Despite these assumed price reductions (which are likely to be unrealistic), the results indicate that consumer surplus would fall significantly (relative to the baseline) under all scenarios considered - and that concession cardholder are particularly negatively affected. The cost benefit analysis suggests that it is very difficult to justify changes to location and ownership rules either on efficiency grounds or for equity reasons²⁰.

²⁰ The full analysis and discussion of the willingness-to-pay results is contained in Section 6.

4.3 Conclusions

The Guild has commissioned two leading consultants in their respective fields to undertake empirical research with a view to informing the Review Panel's assessment of the ownership and location rules currently applied to community pharmacies.

The policy objectives of the location rules are broadly to match the location of new pharmacies and the relocation of existing pharmacies with the needs of the Australian population. The results of the geo-spatial analysis of pharmacy locations relative to other vital services that require a physical presence shows that these rules achieve their intended objective:

- the vast majority of Australians, including groups with high needs and disadvantage groups, have easy access to one or more community pharmacy, irrespective of where they live;
- for almost all Australians, community pharmacies are more accessible than supermarkets, banks and medical centres; and
- the fact that Australians living in regional areas have excellent access to a community pharmacy does not compromise choice for those living in urban centres.

Ownership rules also support the Government's quality of service objectives. The results of a survey of a representative sample of Australians suggest that consumers regard community pharmacies highly.

Finally, the overwhelming majority of survey respondents place a high degree of trust in the ability of their local pharmacy to provide the best service and advice. In contrast, consumers are not comfortable with having prescriptions filled or personal health data stored at supermarkets.

5. Efficiency rationale for ownership and location rules

This section discusses the economic and policy rationale for the ownership and location rules that apply to community pharmacies in Australia.

The Review Panel recommended removing ownership and location restrictions on community pharmacies on the basis of what might be described as a ‘first pass’ competition analysis. In that analysis, pharmacies are considered as independent agents who compete for customers; the location (and ownership) rules are viewed as restrictions on that competition, and those restrictions harm consumers.

However, such an analysis mischaracterises the context within which community pharmacies operate. Some share of pharmacies’ activities corresponds to those of conventional retail outlets; for instance, pharmacies compete with supermarkets, convenience stores and other retail outlets for sales of conventional products such as toiletries. From a public policy perspective, however, the central role of pharmacies is better characterised as one of agents who provide services to consumers on behalf of the Government; namely, the dispensing of medicines and the provision of advisory and related services. In this context, the customer is the Government; and it has a number of broader health and social policy objectives that it would like community pharmacies to achieve. The Government has an interest in ensuring that dispensing and advisory services are provided efficiently and to a high standard, both because it wishes to promote good health outcomes and bears the direct budget costs of the dispensing fees and the medicines dispensed, but also because it bears many of the indirect costs that arise when poor outcomes prevail.

The organisation of the community pharmacy sector should not therefore be compared to that of an unconstrained market in which multiple independent agents compete and the Government is a dispassionate onlooker. The link between Government and community pharmacies instead has strong parallels with a franchise relationship: an agreement between an upstream franchisor (such as a manufacturer) and a number of downstream franchisees (such as retail outlets or ‘dealers’) to arrange for the supply of goods or services. In this context, the franchisor has the objective of maximising sales or output, but not in an unrestricted manner. Instead, franchise agreements are generally characterised by a range of provisions, imposed by the franchisor, that require franchisees to adhere to certain quality standards. These ‘vertical restraints’ have been extensively studied in the literature and have clear efficiency rationales.

The parallels from franchising extend to the community pharmacy sector. As outlined in this section, the regulatory framework applied to community pharmacies – in particular the various competitive restrictions that currently apply – enables the Government to exercise control over the costs of the distribution of medicines and advisory services, while ensuring that access and quality objectives are met at the required standard.

5.1 Pharmacy ownership rules

As set out in the following, pharmacy ownership rules support an industry structure whereby the Government contracts with independent pharmacies as distribution agents for medicines and health services, and which creates strong commercial performance incentives in terms of both sales of medicines and service quality. Similar ownership

regulations exist in Austria, Denmark, Finland, and Spain where all pharmacies are owned by pharmacists.²¹

5.1.1 Competition incentives

Ownership restrictions are inherent in franchise agreements: franchise agreements exemplify the advantages that the franchisor hopes to gain by 'outsourcing' distribution operations to independent agents. That is, would be franchisors face certain trade-offs in how they structure their operations: keeping distribution and retail activities 'in-house', or contracting with third parties to undertake them. In the final analysis, which of these options is preferable depends on the respective incentives of the parties.

At the heart of the franchisor-franchisee relationship is what is referred to in economics as a 'principal-agent' relationship. This is a setting whereby one party, the 'principal', would like one or more 'agents' to take certain actions that the principal finds desirable. The problem at the heart of a principal-agent relationship is asymmetric information: the principal cannot directly observe some or all of the actions of the agent(s), for instance, the pre-sale service an automobile dealer offers to potential customers, or the amount of time and quality of advice provided by a pharmacist to consumers. The principal-agent problem is 'solved' by designing a commercial framework that incentivises the agent(s) to achieve the outcome preferred by the principal while minimising monitoring costs.

The franchise decision therefore fits in with the broader economic literature on the boundaries of the firm (Lafontaine and Slade 2013). Firms have a choice of vertically integrating (or expanding their operations into distribution and retailing), or of selling their products and services through arms-length market transactions. The difference is that, under the former, ownership is joint and control rights are integrated, whereas under the latter organisational form, they are separate. Franchising occupies a space somewhere in between – a franchise is an independent business under the law and is thus not vertically integrated with the upstream firm. Nevertheless, transactions are not completely arm's length.

The literature has revealed consistent patterns as to when franchising is efficient and welfare maximising (Lafontaine and Slade 2013). In particular, there is systematic evidence that franchisors rely on independent retailers or franchisees to a greater extent, when the effort of the franchisee is important, or in sectors that require highly decentralised operations at multiple sites. In these circumstances, the franchise relationship is a solution to the 'agency problem' of motivating site managers to optimise their sales effort. Franchising gives strong incentives to the dealer to maximise their efforts, because they are the 'residual claimant' of operations at the site, that is, they get to keep any surplus that they generate.

Similar parallels can be drawn between the Government and the owner-pharmacist relationship, and therefore, for the rationale for ownership restrictions. The Government wishes to organise an efficient system for distributing PBS medicines. By contracting with independent owner-pharmacists, the Government preserves the strong efficiency incentives that exist in franchise relationships. The owner-pharmacist is the residual claimant, and gains directly from dispensing more medicines or otherwise attracting more sales. To the extent that the owner-pharmacist can exploit economies of scale

²¹ In Austria and Spain, co-ownership is allowed, but the pharmacist must own at least 50 per cent (51 per cent) of the pharmacy.

their profits will increase; over the longer term, and as discussed in Section 5.2, lower costs (compared to a less efficient system) will tend to be reflected in the costs of the distribution system to the budget.

It is consistent with an assessment of the owner-pharmacist relationship as a commercial framework that creates strong incentives to compete that deregulation of ownership and other restrictions has not been found to reduce prices in Europe (Vogler 2014). As is the case for PBS medicines, the prices of medicines that are subsidised by Governments are regulated in most European countries. The analysis of price impacts post-deregulation has therefore focused on OTC medicines that do not require a prescription. However, studies of the impact of deregulation on the prices of OTC medicines could not confirm a consistent decrease in OTC medicines prices, and competition on prices was generally found to be limited (Vogler 2014).

5.1.2 'Quality' incentives

In franchising, dealer performance is 'enforced' through the threat of termination of the transactional relationship.²² However, in order for termination to be an effective threat, the franchisee must have 'something to lose'. Additional conditions must therefore hold in order for the threat of a loss of the income stream to assure dealer performance, for instance (Klein and Murphy 1988):

- there is some type of future quasi-rent stream that accrues to the dealer, whose loss is valued sufficiently by the dealer to encourage 'good behaviour'; or
- dealers have made investments that are specific to the franchising relationship, so that termination is costly because these investments are effectively stranded.

These parallels can be found in the Government – owner-pharmacist relationship. The Government has a strong interest in ensuring that pharmaceutical services are delivered to a high quality standard. A hypothetical (conventional) commercial relationship where the Government selected the least-cost bidder(s) to dispense medicines may result in a low cost outcome, but it would do nothing to ensure that pharmacists make the time to offer consumers advice (irrespective of whether they make a purchase). Alternatively, the Government could institute extensive monitoring programs with associated sanctions, but these would almost certainly be costly and time-consuming. The third option, which corresponds to the relationship between the Government and owner-pharmacist, is to view the situation as being akin to a franchise relationship in which the incentives are designed to achieve quality outcomes.

Pharmacists invest considerably in human and physical capital to operate their businesses. By placing the pharmacist and his or her professional reputation at the centre of the distribution relationship, a position that the pharmacist stands to lose if quality standards are not met, the Government effectively 'raises the stakes' for non-performance. If a chain or corporation were found to have breached standards, it would almost certainly face a fine or similar sanctions, rather than being forced out of business. In contrast, and by inducing owner-pharmacists to make large investments, the Government ensures that pharmacies have 'skin in the game'. Owner-pharmacists therefore have an enhanced incentive to conduct themselves and their pharmacies

²² In practice, additional 'vertical restraints' tend to be imposed by the franchisor on the franchisee to ensure performance. As discussed in Section 5.2, these include locational restrictions.

ethically and professionally, and not risk loss of registration and, therefore, loss of value in the pharmacy.

There appear to be no comparative studies of the 'quality' of advice or similar measures provided by pharmacists pre and post deregulation. However, a recent survey provides some indication that in the absence of ownership restrictions (which has generally resulted in vertical integration between pharmacies and upstream medicines wholesalers) other aspects of quality may have suffered (Vogler 2014):

- In Norway, where the industry consolidated rapidly, vertically integrated pharmacies were observed to align their product range to the supply of their owners, and less frequently requested medicines became less available in pharmacies. Anell (2005) notes that, as the number of pharmacies increased, the number of pharmacists per pharmacy decreased. Opinion surveys as of 2003 indicate that 73 per cent of pharmacists reported a significant increase in workload since the reform, and 75 per cent of pharmacists reported that the conflict between professional and commercial interests had become greater after the reform.
- In Denmark, a focus on the wholesaler's product range and limited availability of less frequently requested medicines was also reported. Despite a growth in OTC medicines sales of 54 per cent from 2001 to 2011, the availability of OTC medicines only increased for a few top-selling medicines.
- In Sweden, pharmacies tended to focus more on body and beauty products; fewer prescription-only medicines were held in stock, and there are indications that such medicines take longer to supply.

5.1.3 Competitive effects

A separate and important issue in respect of the ownership restrictions on community pharmacies relates to the effect of their removal on industry structures. In countries where the ownership of pharmacies has been deregulated, this process has set in motion horizontal and vertical consolidation and, in the case of Norway, has required new regulatory intervention by antitrust authorities.

Anell and Hjelmgren (2001) and Anell (2005) compared the effects of pharmacy deregulation in Iceland (1996) and in Norway (2001). They found that oligopolies formed, which led to new policy interventions:

- In Iceland, the number of independent pharmacies fell dramatically post deregulation. The number of pharmacies increased, the average number of customers per pharmacy decreased, as did the prices of medicines as a result of aggressive discounting on consumers' co-contributions (in urban, but not rural areas). This resulted in decreased pharmacy revenues, which in turn led pharmacies to add non-pharmaceutical products to their range, moving to smaller premises and reducing personnel. Horizontal mergers gave pharmacies power to negotiate discounts from wholesalers, which in turn encouraged wholesalers to merge in order to increase their negotiating power. Intervention by the Icelandic competition authority was required to force one group to sell off specific pharmacies in order to prevent the formation of local private monopolies. In 2001, the three dominant chains (including individually owned pharmacies collaborating in purchasing from wholesalers) controlled about 85 per cent of the market; by 2004

concentration had increased further, and two pharmacy groups controlled 85 per cent of the market.

- In Norway, deregulation of the pharmacy sector resulted in significant merger activity with the result that the competition authority was forced to intervene to prevent any one pharmacy group from controlling more than 40 per cent of the market. Individually owned pharmacies began forming purchasing chains in anticipation of deregulation, and subsequently began merging with wholesalers. In 2002, one year after the reforms, three main pharmacy groups controlled more than 55 per cent of the market; by March 2004, 97 per cent of all community pharmacies had entered into alliances with the three main pharmacy groups, 77 per cent through full ownership.²³ In contrast to the experience in Iceland, however, Norwegian pharmacies did not compete with one another on the basis of discounts or lower prices. According to an evaluation by the Norwegian Department of Health, the integrated groups did negotiate discounts from pharmaceutical companies, in particular for generic drugs, but these discounts were not transferred to consumers or to the national Government in the form of reduced subsidies.

Overall, Anell and Hjelmgren (2002) and Anell (2005) conclude that:

- Rather than leading to more competition, deregulation of community pharmacies in both Iceland and Norway resulted in horizontal mergers and coalitions between pharmacies and, in Norway, vertical integration between pharmacies and wholesalers. The distribution of pharmaceuticals was rapidly transformed into an oligopoly.
- The extent of vertical integration in Norway has created new entry barriers, given that independent pharmacies do not enjoy the same discounts as pharmacists linked to wholesalers.
- In neither country, was a key reform objective – the control of public expenditures for subsidised medicines – achieved.
- In both Iceland and Norway the respective Governments were surprised and frustrated by the rapid changes in competitive behaviour and market structure. Ad hoc interventions were implemented to prevent developments in the market that were not in line with Government expectations.

In the UK, new dominant players have emerged (Lluch and Kanavos 2010), including Lloyds Pharmacy, Boots the Chemist, Moss Pharmacy, and pharmacies owned by supermarkets (Tesco, Safeway, Sainsbury's). In 2002, 40 per cent of pharmacy outlets belonged to big chains and supermarkets; by 2003 the percentage of pharmacy chains had increased to 53 per cent. Vertical integration is ongoing (for example, Boots has integrated with Alliance Unichem), and the authors expect this trend to continue.

In a general survey of the effects of the deregulation of community pharmacies, Vogler et al. (2012) compared five countries with liberalised community pharmacy sectors (England, Ireland, the Netherlands, Norway, and Sweden) and four countries with regulated community pharmacy sectors (Austria, Denmark, Finland, and Spain). Their broad conclusions were that, in practice, competition has been compromised by the

²³ Measured by number of pharmacies, 'Apotek 1' was the largest with a 32 per cent market share, followed by 'Alliance unichem' and 'Vitusapotek' with market shares of 23 per cent and 22 per cent, respectively.

emergence of dominant new actors, in particular wholesalers establishing large pharmacy chains. In all five deregulated countries, the removal of ownership rules led to the establishment of pharmacy chains and vertical integration with large international wholesalers. As of 2011, some of the country results are as follows:

- In Norway, four major pharmacy chains (three owned by wholesalers; one an 'agreement-based' chain involving a wholesaler) own more than 85 per cent of all pharmacies; only 3.7 per cent of pharmacies are not part of a chain.
- In England, 61 per cent of pharmacies are organised in 'multiples' of six pharmacies or more, and there are nine chains with more than 100 pharmacies. These 'multiples' account for a market share of 58 per cent. The share of pharmacies owned by owners of six and more pharmacies increased from 59 per cent in 2006 to 65 per cent in 2011.
- In Ireland, 48 per cent of pharmacies are organised in chains, mostly located in urban areas. Two of the three large wholesale companies operating in Ireland operate the two leading pharmacy chains; Alliance Boots owns the third largest pharmacy chain.

Overall, and while comparisons of pharmaceutical sectors between countries can be problematic, a clear trend of industry consolidation has been observed in countries that have relaxed their pharmacy ownership rules. In some countries, this has been a gradual and ongoing process, in others (such as Norway and Iceland) the industry landscape changed very rapidly. The empirical evidence suggests that deregulation has not delivered the expected results, nor has it produced the competitive market environment that may be said to be in the long-term interests of consumers. These are trends that are difficult or impossible to reverse once they have been set in motion. Given the relatively small size of the market and existing concerns about market power in retailing, the consequences of ownership deregulation in Australia would therefore need to be carefully assessed.

These effects are all the more important as ownership structures will have an impact on the terms on which the Commonwealth, as operator of the PBS, procures dispensing services. Thus, in practice, the ownership rules limit concentration in the supply of dispensing services. This provides crucial benefits to Government, as it both facilitates benchmarking and prevents a situation emerging where the Government, to meet its objectives, would have to purchase distribution services from suppliers with substantial market power. For example, the geo-spatial data shows that to obtain the same level of access community pharmacy provides through supermarkets, the Government would need agreements with both Coles and Woolworths, as well as with independents. It is inevitable – and consistent with any economic theory of bargaining – that Coles and Woolworths would have a high degree of bargaining power in this situation and would hence be able to secure monopoly rents at taxpayers' expense. By avoiding this outcome, the ownership rules have material public benefits. **This point is demonstrated formally in Appendix D.**

5.2 Economics of location rules

For reasons that have been extensively canvassed in the economics of location, unrestricted choice of locations may not result in the efficient geographical distribution of pharmacy outlets. Indeed, that is an important reason why private sector entities such as franchisors often impose location restrictions on their franchise outlets, as do producers of complex goods such as motor vehicles, even in highly competitive markets. As well as thus seeking to achieve a more efficient distribution of outlets, it is common in these relationships for behavioural and other requirements to be imposed on dealers. These comprise an integrated package of measures to achieve efficient outcomes.

In this section we explain the logic that underpins location (and other) requirements and show that it is wrong to presume they make consumers worse off. We then explain why similar factors apply, but with even greater strength, in the case of pharmacy services.

Box 5-2 Locational outcomes under free entry

There is a large literature on the economics of location that is associated with the seminal contribution of Harold Hotelling (1929). Much of it concerns the conditions under which *laissez-faire* would generate the optimal geographical distribution of outlets like pharmacies.

Hotelling famously showed that free supplier choice of location could generate a pattern of supply points that is less than optimal. Hotelling started with the simplest model of a market in which the customers, who are uniformly dispersed along a line of limited length, each buy the same number of units of an homogenous product or service from one of two sellers. As is demonstrated in Appendix C, when the sellers can locate where best for their business—which is next to each other in the centre of the market—then consumers incur greater average travel time than if each seller were required to locate at distance of one-quarter from the respective ends of the linear market.

However, the economics gets complicated when there are more than two sellers, when the market is not linear, when demand is a function of the full price (money plus travel cost) of the product, and when sellers can make differentiated offerings (for example, different waiting times for service).

What the literature shows is that free locational choice is very unlikely to produce a socially efficient distribution of supply points: economists need to employ rather stringent assumptions in the modelling, of a kind unlikely to be met in reality, in order to ensure that free locational choice achieves social efficiency.

Therefore, it seems reasonable to suggest that, if the social objective of the Government puts more weight on the net benefits of specific groups, like those over 65 or with low socio-economic capabilities, then free locational choice is likely to generate outcomes that fall even further from the Government's optimum (further, that is, than they fall short of an efficiency objective that does not impose different weights on the outcomes for different groups within society).

5.2.1 Unrestricted location of (pharmacy) outlets

The fundamental reason why location rules are imposed on pharmacies – and similar restrictions on retail outlets in many commercial contexts – is because outlets would not locate ‘optimally’ in their absence. This phenomenon (also referred to as ‘Hotelling’s law’, the principle of minimum differentiation, or Hotelling’s ‘linear city model’) accounts for why outlets selling similar or identical products (such as gasoline or hamburgers) are often located in close proximity to one another.²⁴ The basic intuition is that rival sellers gravitate towards each other because they would otherwise risk losing customers. In the classic example of two ice cream vendors who are initially located at different ends of a beach, for instance, each would attract half the potential customers who are assumed to be spread out evenly along the beach. However, each ice cream vendor has an incentive to move slightly towards the other because they could increase their market share by encroaching on the ‘territory’ of the other. Eventually (in equilibrium and assuming prices are exogenous), the two ice cream sellers will end up next to each other at the centre of the beach.

From the point of view of individual retail outlets, locating close to one another is a profit-maximising (and therefore efficient) response, but from a broader welfare perspective, which takes into account consumers’ travel costs, it is not. From that perspective, outlets should be evenly distributed in order to minimise travel and associated opportunity costs for consumers. In many franchise relationships, franchisors have a similar perspective. Rather than, say, having multiple dealerships in close proximity in an urban centre, an automobile manufacturer may instead prefer that the brand is reasonably represented across the region or the country. In contrast, left to their own devices, outlets tend to cluster together and are located ‘too close’ to one another, forcing consumers to travel greater distances than they need to, which in turn increases the ‘full price’ of the goods and services they consume.²⁵

In the context of the pharmacy sector, the Commonwealth is the upstream entity that contracts with pharmacists for a range of distribution services. One of the Government’s key objectives under the NMP, as reaffirmed in the Fifth Agreement, is to ensure that all Australians have access to PBS medicines. In the course of furthering its health policy objectives, the Australian Government, on behalf of consumers, acts as an upstream purchaser of dispensing or pharmacy services from downstream chemists. Given its objective of ensuring timely access to affordable medicines and meeting the broader needs of the community, the Government has a legitimate interest in structuring the rules it imposes on the supply of those services so as to maximise efficiency, both in the location of the services and in their delivery. In the absence of the location rules, community pharmacies would prefer to locate (or relocate) ‘too close’ to one another, perhaps in shopping centres or malls where they can expect to attract a larger number of customers. In contrast, locations with fewer people, for instance, in suburbs or smaller towns would be relatively underserved. The Government’s broader public policy objectives are mirrored in the statutory framework in which pharmacies operate, specifically the location rules provided for in the Act and the Fifth Agreement.

²⁴ Hotelling’s ‘linear city model’ is derived in Appendix C.

²⁵ The ‘full price’ adds to the money price the cost consumers pay for example in travel time and other forms of inconvenience.

The prediction that unrestricted locational decisions for community pharmacies leads to urban clustering is borne out by the experience when location restrictions on community pharmacies were lifted in Europe. Location rules apply in Austria, Denmark, Finland, and Spain; such rules were removed in England (although some were reintroduced in 2012), Ireland, the Netherlands, Norway and Sweden (Vogler et al. 2012).²⁶ Based on a comparison of these countries, Vogler et al. (2012) concluded that, while more new pharmacies opened after the liberalisation of establishment rules, they tended to be established at attractive locations (urban clustering) and not in places where no pharmacy had existed before, such as in rural, sparsely populated areas. Vogler (2014) finds that:

- In Sweden, 67 per cent of new pharmacies are located in areas of very high accessibility (urban areas of at least 60,000 inhabitants), 28 per cent in areas of high accessibility (at least 30,000 inhabitants), 6 per cent in areas of medium accessibility (at least 3,000 inhabitants) and no pharmacies in areas of low and very low accessibility (at least 1,000 (200) inhabitants).
- In England, new pharmacies have tended to cluster around existing pharmacies. Before the 2005 reforms, 54 per cent of the openings occurred in a distance of more than 1 kilometre to the nearest pharmacy; in 2012, the corresponding share was 14 per cent. These developments might have led to the change in September 2012 with the removal of some of the exemptions for the 'control of entry' test.
- In Sweden, only 4 per cent of new OTC retailers are located in areas of low or very low accessibility.

Anell (2005) notes that in Iceland, pharmacy numbers have increased by 40 per cent since deregulation, mainly in the main urban centre of Reykjavik, and that there has been a pattern of parallel closures of rural pharmacies. These changes follow general population trends, but are perceived as a problem by the Department of Health. In Norway, new pharmacies also opened in urban areas but deregulation did little to improve the availability of pharmacies in rural areas.

5.2.2 A broader perspective on location restrictions

There are obvious parallels between the current pharmacy location restrictions and privately designed location restrictions. In franchising relationships a number of effects can arise which might reduce sales or quality, or which might otherwise damage the value of the brand. If monitoring and contractual enforcement were costless, the manufacturer could assure that dealers supply the desired level of dealer services and allow competition to occur among dealers, but in real life, this is not the case. So-called 'vertical restraints' – conditions that one party in a vertical chain imposes on the other(s) – are therefore written into many franchise contracts to counteract the incentive that dealers may have to skimp on quality or to otherwise encourage dealers to undertake quality-enhancing investment. Vertical restraints arise most often in the context of distribution and in retail settings, with the upstream firm or manufacturer restricting its downstream distributors or retailers' choices (Lafontaine Slade 2013). Locational restraints, also referred to as 'exclusive territories', whereby a minimum distance is

²⁶ Austria and Spain require a minimum distance of 500 metres and 250 metres to the next pharmacy, respectively, and a minimum number of 5,50 and 2,800 supplied persons, respectively. In Denmark and Finland, licensing systems apply that require the authorities to conduct a needs assessment.

preserved between dealers of the same franchise – are one such form of vertical restraint.

The setting in which these occur, and the precise objectives they pursue, obviously differ from those directly applicable to community pharmacy: the goal of Government is to maximise welfare, not profits. However, it is important for the Review Panel to understand these restraints, which have been extensively studied in the literature on industrial organisation, as they show first, that controls on location can and do occur in competitive contexts; and second, that they more often than not enhance efficiency.

In effect, franchises where location restrictions are applied and franchisees are awarded 'exclusive territories' are common across all industry sectors in modern economies, for instance, in the United States (Table 5-1). As set out in the following, the efficiency rationale for exclusive territories fall into the following distinct categories:

- the organisation of distribution systems to save transaction costs;²⁷
- to prevent 'free-rider' issues from arising; and
- to support investment on the part of the franchisee.

²⁷ In economics, there are usually three types of transaction costs: (i) search costs (the costs of locating information about opportunities for exchange); (ii) negotiation costs (costs of negotiating the terms of the exchange); and (iii) enforcement costs (costs of enforcing the contract).

Table 5-1. Exclusive territories, by industry sector

Sector	Number of franchisors	Number with exclusive territories	Per cent
Automotive	89	62	70
Baked goods	39	28	72
Building & construction	70	61	87
Business services	57	42	74
Children products & services	27	24	89
Education products & services	21	20	95
Fast food	197	136	69
Lodging	39	13	33
Maintenance services	77	49	64
Personnel services	35	33	94
Printing	21	14	67
Real estate	39	26	67
Restaurants	99	79	80
Retail food	60	27	45
Retail non-food	130	101	78
Service businesses	105	90	86
Sports & recreation	37	31	85
Travel	14	8	57
Total	1,156	844	73

Notes: Any form of exclusive territory, described by geography, population, miles, or number of vehicles, is counted as a yes.

Source: Lafontaine and Slade 2013.

5.2.2.1 Transactions cost savings

All things equal, by limiting the number of pharmacies, the Government can substantially reduce its 'transaction costs'. This occurs through at least two channels.

First, the Government can reduce the total cost of dispensing PBS-funded medicine by restricting the number of pharmacies and, therefore, allowing existing pharmacies to secure economies of scale. The PBS price paid to community pharmacies consists of the (wholesale) cost to the pharmacist, but also a mark-up by the pharmacist, dispensing fees, and other fees the pharmacist may be entitled to (for instance, for dispensing highly specialised or dangerous drugs). A significant component of these payments is structured in a way that creates an incentive for the pharmacy to lower their costs by attaining greater economies of scale. To the extent that there is a feed-back between the Commonwealth price for PBS medicines and services and trends in average pharmacy costs over time, the costs to the Government will also decline. The

role of location restrictions in the reduction of dispensing costs has also been recognised by the Productivity Commission:

“In the absence of widespread price competition between pharmacies for scheduled medicines, and given a continuation of the current ownership controls and the average cost basis for remunerating pharmacists for dispensing PBS drugs, there may well be a case for the Commonwealth to limit new pharmacy approvals. In essence, the limits on the total number of approved pharmacies are a way of exerting downward pressure on average dispensing costs.” Productivity Commission, Submission to the National Review of Pharmacy, p. 62, November 1999.

Second, the creation of location rents can also reduce the cost of implementing the regulatory framework. To the extent that exclusive territories confer above normal returns on dealers, exclusive territories work as a quality enforcement mechanism. Such rents, in combination with ongoing quality or service monitoring and the threat of termination, entices the dealers to provide the desired level of quality or service. Exclusive territories (whether they generate locational rents or address free-ridership issues, as discussed below) are generally thought to be welfare enhancing, since the quality and service levels in question are valued by customers; quantities sold and customer satisfaction are enhanced (Lafontaine and Slade 2013).

In the absence of location restrictions, unless there is close and frequent monitoring (and associated penalties for not providing the services), pharmacists will opt to not provide some or all of the services that are ‘free’ to consumers, (eg free advice on medicines or health issues). Because they limit new entry and somewhat weaken price competition (to the extent to which this is relevant), location restrictions create ‘rents’ (profits above a ‘normal’ rate of return), which allows pharmacists to offer a higher quality and larger range of services than would otherwise be the case, to the extent that the pharmacy remains viable. These rents are costly for a pharmacist to lose, given the human and physical capital invested. In the absence of location restrictions, a more complex monitoring system – involving more frequent monitoring of whether pharmacies are in fact providing the services the community desires – would have to be developed and deployed.

It should be noted that when economic conditions deteriorate and profits are eroded, as is the current experience in pharmacy, the tendency will be to pare back any free services offered to the public that are over and above their core dispensing function. That is, while the restrictions create rents, free services will only be provided if the viability of the pharmacy is assured.

5.2.2.2 Free-rider issues

Concerns about ‘free-riding’ are a key justification for the granting of exclusive territories in franchise relationships (Lafontaine and Slade 2013). Free-riding occurs when one party takes actions that benefit another without being able to charge for such benefits. For instance, automakers want their dealers to advertise the brand locally and spend effort in persuading customers to purchase automobiles by displaying automobiles in clean and well-designed showrooms, providing technical information to prospective buyers, and offering free trials. Because most of these services are received by consumers before a purchase, the positive impact of a dealer’s effort on sales is shared among closely located dealers of the same manufacturer, who then have an incentive to

free ride on the other dealer's services and compete on price instead. Exclusive territories then force dealers to focus on their own pools of customers.

Parallel considerations could apply in the case of community pharmacies. Absent location restrictions, a pharmacy might relocate next to another pharmacy that provides advice and other unrecompensed services, not provide that advice and those services, and offer discounts on prices for non-PBS medicines. In effect, this (discounting) pharmacy (and its customers) would act as free riders, benefiting from the free services offered by the rival pharmacy without incurring the costs providing those services entails.

5.2.2.3 Investment incentives

A final reason for the use of exclusive territories relates to franchisee's incentives to invest (Lafontaine and Slade 2008, 2013). In circumstances where the manufacturer wants the dealer to invest ex ante in specific facilities or human capital in order to provide better service to consumers, exclusive territories to provide some security to franchisees, or at least clarify how the manufacturer (or franchisor's) future plans might affect the franchisee. Unless the franchisee can be assured that his investments are protected, the franchisee will underinvest or not invest at all.

Azoulay and Shane (2001) offer empirical evidence for the relationship between exclusive territories and investment incentives. They found that exclusive territories significantly increase the likelihood that new franchised chains survive beyond their first few years in business. Based on a statistical analysis of 170 (non-traditional, business format) franchise contracts and interviews with franchisees, they conclude that this result reflects a mix of factors:

- slower growth that prevents chains from reaching minimum efficient scale, and which in turn reflects concerns about encroachment (given the absence of exclusive territories) and the consequent reluctance of franchisees to invest sufficiently;
- relatedly, an increased probability of costly hold-up conflicts between franchisees and franchisors, again, because of encroachment-related problems; and
- a 'self-selection' effect, whereby high-quality franchisees choose not to enter into franchise contracts that did not provide territorial exclusivity in the first place.

In the case of community pharmacies, the Government similarly wishes pharmacies to invest in their facilities and human capital to provide high quality services. For instance, standards for pharmacy premises are regulated by jurisdictional regulators in all states and territories of Australia.

5.2.3 Competitive effects of location restrictions

Exclusive territories that arise in commercial settings have at times been viewed with suspicion by antitrust authorities because they 'soften' intra-brand competition, and thereby permit dealers to earn additional rents. Thus, a dealer who has an exclusive territory might exercise market power in that region, with the result that prices are too high and quantities sold too low.

In the European Union, Article 81 of the EC Treaty prohibits agreements which have as their object or effect the prevention, restriction or distortion of competition. While there is

a 'block exemption' that creates a 'safe harbour' for many vertical agreements under Article 81(3), territorial restrictions are not included in the block exemption. However, while vertical restraints of this type may have anti-competitive effects (in the presence of market power), competition authorities will weigh up these effects against the economic benefits identified in the economic literature and discussed above, namely the promotion of (Office of Fair Trading 2004):

- efficiencies from reduced transactions costs;
- increased non-price competition because free-rider effects are eliminated; and
- investment and innovation.

In the United States, a 'rule-of-reason' approach has been adopted towards most non-price vertical restraints since the late 1970s (Lafontaine and Slade 2008). In *Continental T.V., Inc. v. GTE Sylvania, Inc.* (433 U.S. 36 (1977)), the Supreme Court found that while specific vertical restrictions can have anticompetitive effects, it had not been shown that, in general, vertical restrictions have a 'pernicious effect on competition'. The Court instead observed that exclusive territories had the potential to 'induce competent and aggressive retailers to make the kind of investment of capital and labor that is often required in the distribution of products unknown to the consumer'. The Court therefore concluded that such restrictions should be judged under a rule-of-reason.

One of the most cited papers of how vertical restraints such as exclusive territories should be treated under anti-trust law was published in 2004 by members of the Federal Trade Commission (FTC, Cooper et al. 2004). Cooper et al. argue that no general conclusion can be drawn about the welfare effects of vertical restraints. They argue that, as a matter of economic theory:

- the conditions necessary for exclusive territories to harm welfare are generally the same under which they increase consumer welfare; and
- models that show anti-competitive impacts from exclusive territories effects are 'fragile', in the sense that they depend on a number of quite specific assumptions, including in relation to the form of (oligopolistic) competition.

Coopers et al. (2004) conclude that there is little support for the proposition that vertical restraints (such as exclusive territories) harm consumers. Empirical analyses of vertical integration and control have failed to find compelling evidence that these practices have harmed competition. A far greater number of studies have found that the use of vertical restraints in the particular context studied improved welfare unambiguously (i.e., resulted in lower prices and increased output). Some studies find evidence consistent with both pro- and anticompetitive effects; but virtually no studies can claim to have identified instances where vertical practices were likely to have harmed competition.

5.3 Conclusions

The Review Panel recommended removing ownership and location restrictions on community pharmacies. However, the competition analysis on which it relied is not an adequate representation of the role of pharmacies. From a public policy perspective, the role of pharmacies is one of agents who provide dispensing and advisory services to consumers on behalf of the Government. This industry structure is akin to the

franchisor-franchisee relationship in which the commercial framework is designed to achieve both efficiency and quality objectives.

Ownership and location restrictions help achieve the Government's overall economic and social policy goals. Specifically, those restrictions need to be seen in the context of the Government's interest in solving the principal-agent problem it faces in structuring the supply of dispensing services. The Government has an interest in ensuring that dispensing and advisory services are provided efficiently, and in a manner that achieves broader quality and equity objectives:

- (1) Given its broader policy objectives, the Government acts to maximise overall economic welfare in a situation in which there may be significant positive externalities from improved health outcomes.
- (2) Health policy objectives and actual policy outcomes are heavily influenced by distributional (i.e. equity) objectives. The Government has an interest in ensuring access to high quality pharmaceutical services across the Australian population.
- (3) In the context of community pharmacies, quality of service provision takes on additional importance, given the pervasive ex-ante informational asymmetries that characterise the market for pharmaceutical products. Consumers are not perfectly informed about medicines, may face high costs in acquiring good quality information and could incur significant health costs from inappropriate use of medicines. The Government therefore has a strong interest in doing what it can to respond to those asymmetries, and inducing pharmacists to provide a high level of service can provide significant economic benefits.
- (4) There are a number of important side-constraints that the Government faces, including the fact that co-payments may constrain price competition for a large proportion of pharmaceutical products dispensed.

Important implications follow once these considerations are taken into account.

First, a commercial system of incentives is required to induce pharmacists to offer the dispensing and advisory services purchased by the Government on behalf of consumers. At the same time, the social losses from dispensing errors are likely to be high (as they are from the inappropriate issuing of restricted drugs and other forms of medicine misuse or abuse) and the social gains from checking that consumers make proper use of medicines are also potentially high. In other words, there are likely to be significant benefits from reducing the cost of errors and from enforcing appropriate use through the provision of ancillary advice. As a result, the Government wants pharmacists to provide services, such as information and verification, but it would be costly to rely on intrusive monitoring to ensure they do so. The Government therefore needs to structure incentives so that it is essentially self-enforcing for pharmacists to fully comply with the goals of community pharmacy agreements.²⁸ Restrictions on community pharmacy ownership achieve these aims.

Second, in the absence of pharmacy location rules, free entry - combined with partially regulated prices – will result in ‘excess clustering’ of pharmacies, imposing costs on consumers. To avoid this excess clustering, when the Government purchases

²⁸ In economics, a contract is ‘self-enforcing’ if the incentives it creates are such that it is in the interest of each party to act consistently with the contract.

dispensing services it imposes location rules. These are likely less than fully optimal (i.e. they are not the 'perfect' location restriction that the Government would choose if it had complete information and complete benevolence), but they are effective in preventing the 'excess clustering', which would likely otherwise prevail.

Third, the restrictions on ownership and location are parts of the package of measures that enable Government to achieve its objectives in an efficient way, via a 'self-enforcing' contract. The restrictions create what economists call a 'rent', a return in excess of what would arise under free entry. Deregistration wipes out not only the value of the pharmacist's human capital, but also the rent.

More generally, the material covered in this section highlights that both commercially determined franchise areas and exclusive territories can generate efficiency gains that outweigh any anticompetitive effects. The efficiency gains associated with the location rules for pharmacies are likely to be even more significant given the high social value of the health services provided by pharmacies.

6. Cost benefit appraisal of removing location and ownership rules

This section describes the detailed methodology and results of a cost benefit analysis of removing current pharmacy ownership and location rules.

The ultimate goal of a CBA is to inform policymakers, by quantifying the effects on overall economic welfare (consumer surplus and producer profits) of changing a particular policy or set of policies. A standard CBA begins by defining baseline and policy change scenarios in order to measure incremental changes, and takes into account all possible welfare effects, including effects on consumers and producers as well as the Government's budget.

In the long run, changing the current community pharmacy rules is likely to have demand and supply side effects. On the supply side, the market for medicines is limited and cannot be materially expanded by more vigorous competition alone, as it is determined by doctors' prescribing patterns, the prevalence of illness and the registration of new medicines. A number of existing pharmacies are likely to close, with supermarket chains opening pharmacies in existing supermarket locations. This change will lead to changes in welfare on the production side, namely changes in the share of wages and profits for existing pharmacies and for supermarkets which offer pharmacies. Supermarkets which choose not to offer pharmacies could also lose sales and profits.

Whilst these supply side effects are important, competition policy reforms tend to place less weight on producer profits and instead focus upon and emphasise the effects on consumer behaviour and consumer welfare. This is especially so in regulated industries, where long run prices will reflect average costs. Hence, for the purposes of the present analysis, the effects of altering location and ownership rules on the pattern of producer profits are not taken into account.

Nor does the analysis take account of the possible public health consequences of changes that might occur in the quality of provision. For example, were the quality of dispensing to decline, this would affect consumers directly but it would also impose added costs on the Government (for example, in terms of MBS and hospital costs). To that extent, there is a likely material fiscal externality which is not reflected in the results set out below.

In other words, the analysis that follows focuses exclusively upon the likely effect of policy changes on the demand side and consumers' surplus. In this context, it is important to note that on the demand side the market effects described in the previous paragraph could occur for two broad reasons: (i) the attributes of existing pharmacies remain the same, but supermarkets offer a superior service; or (ii) the attributes of some existing pharmacies decline, and supermarkets also offer a low quality service - to which some customers switch because of the resulting changes in relative overall service offerings. In the first case, consumers' surplus improves, but in the second case it declines. The scenarios analysed below in effect consider a combination of each case, with attributes in each market segment changing along different margins, so that in principle the consumer welfare effects are *a priori* ambiguous.

6.1 Using the modelling results in the CBA

Section 6 sets out the methodology used in the willingness to pay and qualitative data analysis. This quantitative and qualitative data provides a rich set of information, which can be used to analyse the effects on consumer welfare of various policy scenarios. In the analysis that follows, the qualitative survey data is used to inform and calibrate the quantitative baseline scenario for a range of parameters in a typical Australian consumer's indirect utility function, including distance, speed of service and pharmacy ownership arrangements. The qualitative results are also used as an input into the policy change scenarios where supermarkets are assumed to provide pharmacy services.

Conceptually, the consumer choice modelling exercise estimates the parameters of a probabilistic indirect utility function, where the consumer makes choices according to the underlying attributes of various pharmacy establishments (subject to a random error term). These parameter estimates can then be used to compute the marginal value that consumers place on each underlying attribute. Given these parameter and marginal value estimates, different assumptions regarding the independent variables (such as distance, quality of service, ownership, etc.) can be altered by the CBA researcher and the model can be used to make a prediction or forecast of how the consumer's choices would change if there were changes to the market. Finally, the resulting behavioural change can be fed into the estimated indirect utility function to obtain an estimate of changes in the consumer's net benefit (consumer surplus). In this way, the model's results are used to construct estimates of changes in consumer welfare as a result of policy changes.

6.2 Baseline and policy change scenarios

The qualitative and quantitative survey yield a comprehensive set of inputs that can be employed in the CBA. The breadth of the survey results enables a rigorous and thorough examination of policy changes, across a wide range of welfare-relevant dimensions, including the following aspects of the typical consumer's indirect utility function.

The following parameters were examined.

Distance to Pharmacy/Travel Time

The removal of location rules is likely to result in a number of community pharmacies closing, as well as a likely (sub-optimal) clustering of pharmacies in urban areas as standard location theory suggests. Both effects will impact upon travel times for some consumers. In practice, supermarket locations will be constrained by local planning laws, which may in turn unduly limit the number of shopping malls and hence the number of supermarket pharmacies. Some states have had requirements to take account of impacts on existing businesses before allowing new shopping malls to open. Hence, in the absence of current pharmacy location rules, the location of new pharmacies would still be subject to regulation by local authorities and planning rules affecting large surface stores, rather than by Commonwealth regulation under current arrangements.

Speed of service

The removal of ownership rules and the entry of supermarkets may impact waiting times for scripts. Since supermarkets serve a significantly larger volume of customers, pharmacy services are more likely to be subject to congestion externalities and longer waiting times.

Ownership

As a result of the removal of ownership rules, it is unlikely that supermarket pharmacies would be owned by pharmacists. In addition, existing pharmacies may also transfer ownership to non-pharmacists which are likely to be large corporations with the financial capacity to outbid smaller rivals for the right to own a pharmacy.

Prescription and OTC medicine prices

To the extent that supermarkets enjoy economies of scale and scope and logistical network advantages, there may be a fall in unit costs of supplying prescription and OTC medicines. However, the extent to which any such cost reductions would in fact be passed on to consumers is unclear at best. Under the PBS, there is little opportunity for establishments to reduce subsidised retail prices, particularly for concessional patients (who face a fixed payment of \$6 per script). Indeed, a recent study of pharmacy liberalisation in the European Union found that (Vogler p.2):

“In the European countries with publicly funded health care, liberalization in community pharmacy is not likely to impact prices of medicines that are (co-) funded by public payers because prices of these medicines continue to be regulated at all levels. Lower prices could therefore only be expected for non-regulated non-reimbursable OTC medicines but no reduction in OTC medicine prices was confirmed by empirical evidence.”

Moreover, to the extent that changes to ownership rules lead to higher ownership concentration and an increase in margins, prices for some over the counter medicines may actually rise.

Trust

The qualitative survey results suggest that consumers place less trust in supermarket pharmacies than shopping centre/street pharmacies.

Access to health advice and additional services

In supermarket pharmacies there is likely to be limited availability of health advice and additional services (such as advice regarding minor ailments, chronic pain relief, chronic conditions and over the counter and complementary medications).

Product range

Supermarket pharmacies may have only a basic range of medicines and focus on over-the-counter medicines.

Opening hours

Supermarkets may open longer hours than existing pharmacies. However, the qualitative survey results show that most current chemists are already open 7 days a week, and many already offer late night trading. In the analysis that follows, it is important to note that existing pharmacy laws require pharmacy services to be conducted under the personal supervision of a pharmacist. Although many existing supermarkets operate on extended daily trading hours (including some instances of 24 hour trading) in a number of States and Territories, this practice is by no means uniform or indeed even the most common practice in many areas. Moreover, even if pharmacies open in existing supermarkets that offer extended trading hours, it is unlikely there would be a pharmacist on duty during every hour that that supermarket traded.

The baseline and policy change scenarios below consider a range of assumptions around these parameters.

6.3 The baseline scenario

The baseline scenario assumes that location and ownership rules are retained, and that there are no supermarket pharmacies. The parameter values are calibrated from the qualitative data and are discussed below.

Distance to pharmacy

The qualitative survey data (see Section 4) show that 50.9 per cent of respondents enjoy a travel time of less than 5 minutes to their preferred pharmacy, with 28.9 per cent taking between 6 to 10 minutes; section 4.1.2 above reports that 95 per cent of urban customers are less than 2.5km from a pharmacy. The baseline scenario conservatively assumes a travel time of 7 minutes.

Table 6-1. Travel times to preferred pharmacy

Travel time	Share of respondents
Up to 5 mins	50.9%
6-10 mins	28.9%
11-15 mins	9.9%
16-20 mins	3.9%
Greater than 20 mins	6.4%
Not sure	0.0%

Source: Institute for Choice 2014.

Speed of service

The survey results indicate that 36.1 per cent of respondents wait 5 minutes or less to have their script filled, whilst slightly more (40 per cent) wait between 6-10 minutes. The baseline scenario therefore assumes a speed of service of 7 minutes.

Table 6-2. Waiting times for filling script at preferred pharmacy

Waiting time	Share of respondents
Up to 5 mins	36.1%
6-10 mins	40.8%
11-15 mins	14.5%
16-20 mins	5.2%
Greater than 20 mins	3.4%
Not sure	0.0%

Source: Institute for Choice 2014.

Trust

The qualitative survey data show that 52.1 per cent of respondents have the highest level of trust (a 5 rating in a 1-5 scale) in their current preferred pharmacy, with 36.7 per cent giving their preferred pharmacy a rating of 4. The baseline scenario therefore assumes a trust rating of 4.

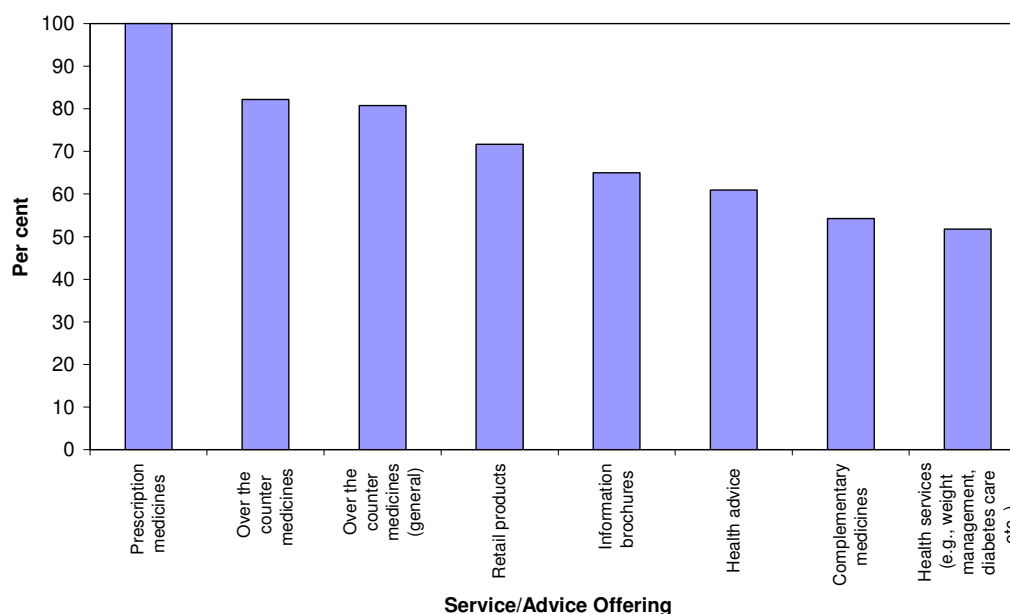
Table 6-3. Trust rating for preferred pharmacy

Trust Rating	Share of Respondents
I don't trust them at all (1)	0.3%
2	1.3%
3	9.6%
4	36.7%
I trust them completely (5)	52.1%

Source: Institute for Choice 2014.

Product Range

Community pharmacies supply a wide range of medical and prescription products, and the survey data shows that most consumers also purchase retail products from their community pharmacy. The baseline scenario therefore assumes that pharmacies supply the full range of medicines, plus basic health and beauty products.

Figure 6-1. Survey data on service and advice offerings

Source: Institute for Choice 2014.

Opening hours

The qualitative survey data shows that 54.4 per cent of respondents shop at a pharmacy that is open 7 days, with a further 31.5 per cent shopping at a pharmacy that is open on Monday to Saturday but closed on Sunday. The baseline scenario assumes that pharmacies are open 7 days a week.

Table 6-4. Opening hours for preferred pharmacy

Opening hours	Share of respondents
Open on Monday – Friday, closed weekends	3.8%
Open on Monday – Saturday, closed Sunday	31.5%
Open 7 days	54.4%
Other (Please specify)	0.3%
Don't know	3.5%

Source: Institute for Choice 2014.

Ownership

By definition, the baseline scenario assumes no policy change. The survey data shows that most respondents' preferred pharmacy is part of a banner group. Therefore, the baseline scenario employs this assumption.

Table 6-5. Type of preferred pharmacy

Type of Pharmacy	Share of Respondents
Independent (not part of a banner group or chain)	32.4%
Part of a banner group or chain (Please specify)	63.8%
Other	3.9%

Source: Institute for Choice 2014.

Additional services and access to health advice

The survey discussed above shows that the majority of consumers shop at pharmacies which offer additional services and access to health advice. Therefore, the baseline scenario assumes that this is the case.

Other assumptions

The most recent data available shows that community pharmacies dispensed 286 million prescriptions in 2011-12.²⁹ For the purposes of this analysis, we assume that 300 million scripts are written each year. In addition, consistent with the current pattern, the analysis assumes a concessional/general patient split of 70-30.

6.4 Policy change scenarios

The following describes the scenarios that have been modelled.

6.4.1 Scenario A

Scenario A assumes that location rules are removed, but ownership rules are retained. As a result, no supermarkets provide pharmacy services, but there is clustering of community pharmacies, and there is an increase in travel time, from 7 minutes to 10 minutes.

6.4.2 Scenario B

Scenario B assumes that ownership rules are removed, but location rules are retained. Supermarkets now provide pharmacy services, and some community pharmacies shut down. All pharmacies are assumed to be owned by a company, with pharmacist management. As a result of these changes, trust in existing pharmacies falls by a single rating point, to a rating of 3. Supermarket pharmacies are assumed to offer a basic range of medical products but a full range of health and beauty products. In addition, travel time to community pharmacies is assumed to increase to 8 minutes, while prices in supermarkets are assumed to be 10 per cent lower than in street pharmacies. Travel time to supermarkets remains at 7 minutes (as suggested by the qualitative survey data), but the waiting time for a script in a supermarket is assumed to be 8 minutes, slightly higher than in street pharmacies.

²⁹ Guild Digest 2013

6.4.3 Scenario C

Scenario C assumes that both ownership and location rules are removed. As a result of clustering, there is an increase in travel time to 10 minutes for street pharmacies. Removing ownership rules leads to change in ownership structures for street/shopping centre pharmacies, as well as a reduction in trust in both street/shopping centre pharmacies and supermarket pharmacies. On the other hand, supermarkets are assumed to operate with a lower cost base and hence this scenario assumes a 10 per cent fall in prices (including for concessional card holders) in supermarket pharmacies.

6.4.4 Scenario D

Scenario D is similar to Scenario C but takes a more optimistic view of the removal of location and ownership rules. Notwithstanding the lack of evidence that such an outcome is likely, the scenario assumes significant reduction of 25 per cent in script prices, and that travelling times to street/shopping centre pharmacies and supermarket pharmacies remain as they are at present (7 minutes). The scenario also assumes that scripts continue to be filled in 7 minutes, and that trust in existing pharmacies only declines by a single rating point, to a rating of 3. The scenario also assumes that supermarkets offer a full range of medicines, plus a full range of health and beauty products. However, the scenario assumes that these more favourable outcomes of lower prices and greater product range can only be only secured if both street/shopping centre pharmacies and supermarket pharmacies are owned by companies with no pharmacist management.

6.5 Results of the CBA

The results of the analysis are summarised below. Some noteworthy features of the results are:

- In each scenario, each type of consumer suffers welfare losses, with general and concessional consumers least affected in Scenario A, where only location rules are removed.
- Since the econometric results indicate that trust and pharmacist ownership are highly valued by both types of consumers, both types are significantly negatively affected in scenarios B and C, where ownership restrictions are removed.
- In scenarios C and D, the assumption of significant price reductions by supermarkets does little to affect the overall results – consumers still experience significant welfare losses.
- In scenario D, the negative welfare effects of company ownership without pharmacist management more than offsets the positive effects of assumed lower prices, product range, and so on. As a result, in scenario D there are significant welfare losses (although the overall loss is lower than in scenarios B and C).

Table 6-6. Results of the CBA – Annual net benefits (\$ per year)

	Baseline	CBA scenarios			
		A (Location)	B (Ownership)	C (Both)	D (Both)
Concession (\$ per patient)	0	-\$15.59	-\$77.75	-\$86.83	-\$78.53
General (\$ per patient)	0	-\$2.03	-\$38.51	-\$39.55	-\$12.91
Total (\$ million)	0	-\$115.25 million	-\$659.83 million	-\$726.50 million	-\$588.48 million

The results are ongoing, yearly absolute dollar changes in consumer surplus, relative to the baseline scenario. To place these numbers in perspective, aggregate value added by Australian pharmacies in 2012 (measured as the sum of industry wages and salaries plus profits), was approximately \$3.2 billion, with a total value of sales of \$15.8 billion.³⁰ Hence, the annual losses computed in scenario C are equivalent to an annual, ongoing loss of approximately 6.6 per cent of current pharmacy prescription sales, or an annual ongoing loss equivalent to 23 per cent of total industry value added.

Alternatively, the losses can be accumulated and expressed in present value terms. For example, assuming a 20 year horizon and annual growth rate of losses of 3 per cent, and applying a discount rate of 10 per cent, the present value of the accumulated annual losses in scenario C amounts to \$8.6 billion. With a discount rate of 5 per cent the present value of the accumulated consumer losses is \$12.5 billion.

³⁰ These calculations use 2012 industry data from pages 15 and 16 Tables 1 and 2 of the *2013 Guild Digest*.

6.6 Sensitivity Analysis

Sensitivity analysis was conducted for scenario C by varying individual parameters in each direction for both street/shopping centre pharmacies and supermarket pharmacies.

For example, the sensitivity of the travel time assumptions in scenario C were tested by holding all other assumptions fixed, and then varying the travel time to street/shopping centre pharmacies around the central assumption of 10 minutes (that is, by assuming travel time is either 9 minutes or 11 minutes, instead of the assumed 10 minutes in the main scenario). A similar exercise is performed for travel time to supermarket pharmacies.

Since scenario C represents the combined welfare effect of changes to both location rules and ownership rules, sensitivity analysis was carried out for the three main variables that would likely be most affected by this change: travel time, trust rating, and ownership structure.

The results are reported in table 6-8 below.

Table 6-7: Sensitivity Analysis of Scenario C (\$ million)

Variable	Lower Bound	Upper Bound
Travel Time to Street Pharmacy (11 mins - 9 mins)	-759.45	-693.3
Travel Time to Supermarket Pharmacy (8 minutes – 6 minutes)	-730.82	-721.93
Trust Rating for Street Pharmacy (1 to 3)	-968.31	-470.55
Trust Rating for Supermarket Pharmacy (1 to 3)	-778.94	-654.15
Ownership for Street Pharmacy*	-966.85	-556.05
Ownership for Supermarket Pharmacy*	-803.65	-724.75

*Scenario C assumes company ownership with pharmacist management for both street pharmacies and supermarkets. The sensitivity analysis varies this by assuming that the relevant pharmacy is either (i) owned by a company without pharmacist management or (ii) owned by a pharmacist and is part of a banner group.

Recall that in Scenario C the estimate for the change in consumer surplus relative to the baseline scenario was -\$726.5 million. The results of the sensitivity analysis in Table 6-8 above suggests that this result is robust to changes in assumptions regarding the main variables of interest, with all outcomes in the sensitivity analysis continuing to suggest a loss in consumer surplus. The table also suggests that the exact value of the estimate is more sensitive to assumptions regarding trust ratings and ownership structure for existing pharmacies.

6.7 Conclusions

The empirical analysis commissioned by the Guild has been applied to undertake a robust and transparent cost-benefit assessment of the Review Panel's Draft Recommendation to remove the ownership and location rules that currently apply to community pharmacies. The CBA aimed to evaluate the implications of the proposed changes on consumers with reference to a number of key parameters that would be affected as a result of these changes, namely: distance to pharmacy, speed of service, trust, product range, opening hours, ownership, and additional services and access to health advice.

The results of the CBA show that consumers – particularly concession card holders – would consistently suffer a loss in consumer surplus and would therefore be worse off as a result of the Panel's proposed changes:

- Given consumer preferences, as revealed in the consumer survey, even a small loss of trust or increase in travel time represents a significant loss in consumer surplus. Individually or in combination, the removal of the location and ownership rules would therefore harm consumers.
- Consumers value trust and travel time more than they do price reductions, so that even a hypothesised significant fall in prescription and OTC medicine prices would not offset the consequent loss in consumer surplus.

However, it is important to note that these results do not cover the full range of likely adverse impacts. For example, as noted above, were the major supermarket chains to become substantial providers of pharmacy services, the competitive context in which the Government procures those services would be significantly changed. From the standpoint of each of the chains, pharmacy services would be a very small share of its turnover; as a result, it would incur only small losses were it to exit the business. However, from the point of view of the Government, its access objectives could not be met without all the major chains being involved.

There would, as a result, be an asymmetry in 'outside options' and hence in bargaining power. As any conventional economic model of bargaining would show, that asymmetry would translate into an agreement that was more adverse to the Government, and hence to consumers and taxpayers. However, these costs have not been brought to account in the CBA. Nor, importantly, have the broader community health consequences of any decline that might occur in the quality of the services pharmacies provided in the policy change scenarios.

To proceed on the grounds of a broad-brush economic competition theory may expose the Australian public to a significant potential for harm and result in unforeseen consequences including negative health outcomes, in particular in those populations most at risk or already disadvantaged.

The CBA should therefore be viewed as a conservative benchmark, both in terms of the range of impacts covered and the specific assumptions made.

7. Conclusions and recommendations

The Review Panel recommends that location and ownership rules on community pharmacies be removed. However, the Panel's recommendation is based on an erroneous public interest test. The public interest test proposed by the Panel incorporates an unqualified requirement that the objectives of legislation or policy can 'only' be achieved by means that do not restrict competition. As formulated, the public interest test would not lead to efficient outcomes, nor does it correspond to the practice of microeconomic reform in Australia.

A revised test that is consistent with welfare maximising objectives should instead read: *that restricting competition is the most efficient (or least inefficient) of all feasible ways of achieving the policy objectives*. This formulation focuses the test on an assessment of the balance of costs and benefits arising in the pursuit of defined policy objectives. Applied to the community pharmacy sector, the revised public interest test would require the Panel to take into consideration the public (health and social) policy objectives that the community pharmacy rules are intended to achieve.

Contrary to what is proposed by the Review Panel, the burden of proof for making policy changes rests with policy makers who have ultimate responsibility for any decision. This requires:

- articulating an alternative that would better meet government policy objectives, or would do so at a lower cost, or both; and
- demonstrating the merits of a proposed alternative, particularly where large, sunk investments have been made in reliance on the policy and adjustment costs are likely to be high.

The Review Panel has not published the evidence it has relied on to develop its draft recommendation. The Panel has also not identified an effective alternative to the pharmacy regulations as a means of achieving equity of access and quality objectives at an acceptable cost to the budget.

The empirical and cost benefit analysis presented in this report highlights that the community pharmacy model is effective in achieving a number of key policy outcomes:

- First, pharmacies are highly accessible, both in absolute terms and relative to other services. This result holds both on a strictly geographical definition for urban and rural areas, as well as for access by elderly (less mobile) and low socio-economic communities. Moreover, the excellent accessibility of pharmacy services in regional areas does not compromise access, competition and choice in urban areas.
- Second, the consumer survey data clearly shows that consumers trust their local pharmacist to deliver high quality health services and are wary of supermarkets operating pharmacies.

The CBA that was undertaken accordingly shows that moving away from the community pharmacy model towards a deregulated environment where supermarkets would take a significant share of the pharmacy market is likely to lead to large welfare losses for consumers.

These positive findings about the effectiveness of the community pharmacy model contrast sharply with statements made by the Review Panel and in submissions by proponents of removing restrictions on community pharmacies:

- Contrary to what is suggested by the Panel, the absence of locational regulations for GPs has clearly not enabled equitable access to health care services for all Australians. The fact that different incentive programs have not encouraged sufficient medical professionals to move to regional and remote Australia suggests that devising effective mechanisms to achieve this objective is problematic.
- The empirical evidence from overseas shows that removing location and ownership restrictions entails significant risks, inter alia, in terms of accessibility of medicines, particularly to those who most require them, and horizontal and vertical industry consolidation trends that raise fresh concerns about barriers to entry and market power. The experience in those countries in Europe where such rules have been removed highlight the complexity of reforms that fundamentally influence competitive behaviour.

Any serious failure of pharmacy deregulation would, besides causing damage to those who are badly serviced as a result, would almost inevitably lead to remedial policy, whether budget-based or regulatory. The Review Panel cannot properly evaluate the desirability or otherwise of the current structure without examining the likely alternative policies that would be applied and assessing their costs. Given what is at stake from a public policy point of view, the standard of proof that should be applied by policy makers should therefore be higher than usual.

In summary, the Review Panel's recommendation in relation to the regulatory framework that should apply to community pharmacy:

- is based on a poorly formulated public interest test;
- is not based on a robust and transparent evidentiary standard;
- does not recognise that community pharmacy regulations are effective in achieving the social and health policy objectives intended by government, and are valued highly by consumers; and
- has been developed without a clear understanding or formulation of the alternatives.

Recommendation 52 should therefore be removed.

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Appendix A. Panel recommendations and the structure of the Australian Federation

A.1 The Australian Council for Competition Policy

The Review Panel said (Draft Report, p.6):

We recommend replacing the National Competition Council (NCC) with a new national competition body, the Australian Council for Competition Policy (ACCP). This should be an independent entity and truly 'national' in scope, established and funded under a co-operative legislative scheme involving the Commonwealth, States and Territories.

It is to be presumed support for the new Council will, like its predecessor, be drawn substantially from Australia's treasuries.

The Draft Report then suggests (p.6):

Where competition reforms result in disproportionate effects across jurisdictions, competition policy payments should be made to ensure that revenue gains flowing from reform accrue to the jurisdictions undertaking the reform. The ACCP would be responsible for administering payments, based on actual implementation of reforms.

This is because (Draft Report, p.278):

The Panel met with representatives of the States and Territories which all argued that competition payments contributed positively to their ability to implement reform. While the quantum of the payments was not large compared to total state and territory revenues, it was consistently argued that the payments provided an additional argument that could be used to support reform.

This was undoubtedly encouraged by the National Competition Assessment of competition payments that (Draft Report, p.279):

[i]n several cases [competition payments] stiffened Governments' resolve to undertake reform. Fiscal penalties, in particular, focused attention on failed or excessively delayed reforms.

The message from all those making submissions to the Panel on the issue of competition payments is that they assisted Governments in delivering on their reform agendas ...

The Panel finally said (Draft Report, p.279):

It is the focus on sharing the benefits which is a crucial feature of the NCP payments and that should be reinstated in any future arrangements. The payments should not be represented as an 'incentive' or a 'bribe' for the states and territories to undertake reform. Such an approach has the potential to direct the focus away from the benefits of reform.

The Guild is concerned that vesting this type of power in an unelected technocratic body, possessing only one set of professional skills and a fixed agenda could give rise to regulatory failure.

This is a particular concern where a wish for competition perfection may lead to outcomes that do not provide net public benefit – particularly if the Panel's 'only' test is to be applied.

One such example that gives rise to the Guild's concern can be found in the publication *Injecting the Public Interest Into Legislative Reviews Conducted Under the National Reform Agenda*, published in 2007 by the Fair Trading Coalition, an informal grouping of 29 small business organisations, collectively representing 300,000 small businesses. They wrote (Fair Trading Coalition 2007, p. 14):

In 2004, the Northern Territory Government acted to completely overhaul its liquor legislation.

One of the big issues in this exercise was to ensure that harm caused by alcohol to members of the Territory community was minimised.

NT liquor legislation previously only permitted the granting of a liquor license if a 'needs test' was satisfied – whether or not there was a community need for an additional liquor license.

The NCC has consistently criticised such discretionary grounds for the granting of licences, such as on the basis of 'need', as being anti-competitive.

As part of the overhaul, the Territory removed the needs test from legislation. However, whilst the overhaul continues, a restriction on take-away sales from liquor shops (although not clubs and taverns) on Sundays remains. This is to minimise the harm to the community caused by alcohol during the overhaul.

The NCC said (NCC 2005, pp.14.30-31):

In August 2004, the Government reaffirmed its decision to retain the Sunday trading restriction. For the 2004 NCP assessment, the Territory provided a public benefit case supporting the restriction on packaged liquor sales. The Council, however, found that the Territory had not provided a credible justification to restricting packaged liquor sales in a manner that discriminates between types of liquor outlet. The Council recommended that the public interest assessment should also have considered a range of alternative approaches, including:

- banning all packaged liquor sales on Sundays, regardless of outlet type;*
- instituting bans on particular beverages considered to cause harm;*
- instituting a roster system that retains the current number of sellers on Sundays but allows all incumbents the opportunity to trade, and;*
- allowing all liquor outlets to trade on Sundays but for a more restricted period in the current 12 hours.*

Alternatively, the Council requested the Northern Territory Government to develop additional policy options that promote harm minimisation objectives in a non-

discriminatory manner, or to provide an analysis demonstrating why the suggested options are inconsistent with public benefit objectives.

However, the Northern Territory continued to discriminate between sellers in relation to Sunday trading hours, without providing a convincing public interest case. As a result, the NCC recommended that 5 per cent of the Northern Territory's competition payments be deducted for not complying with competition policy.

The Northern Territory submission to the Productivity Commission's review of NCP appears to make a very good point when it argues (Fair Trading Coalition 2007, pp. 14-15):

(With respect to liquor regulation) the substantial intractable social impacts associated with the consumption of alcohol in the Northern Territory, relative to other jurisdictions, and the comprehensive measures being developed by the Territory Government to ameliorate these effects, was not adequately recognised (by the NCC). (Footnote omitted)

This appears to be a classic case in which an economist's wish for market efficiency has overridden a bona fide attempt to limit the effect alcohol has on the socially disparate Northern Territory community in the way that best suits that community – that is, to the public benefit of the people of the Northern Territory.

More recently, the States and Territories entered into an Intergovernmental Agreement for a National Licensing System for Specified Occupations.³¹ This was designed to harmonise the licensing rules for occupations ranging from real estate agents to refrigeration mechanics.

As the Real Estate Institute of Australia observed (2013, p.8):

.. that until all states and territories sign up to the process, a committee of officers from State and Territory Treasuries (the Committee) will be advising the COAG Standing Council on Federal Financial Relations how to proceed.

This means economists are reporting to ministers advised by more economists with little practical experience in property (or the electrical trades, refrigeration or any other first wave NOLA professions). It became apparent at Information Sessions the mindset of the regulators is to implement the minimum amount of regulation thought necessary to protect consumers rather than the necessary level of regulation to protect consumer interests.

They went on to say (Real Estate Institute of Australia 2012, p.11):

The primary responsibility of SCFFR is the overarching framework for the Commonwealth's financial relations with the States and Territories.

It is not unreasonable to think that the licensing of vocations ranging from real estate agents to refrigeration mechanics does not rate highly given this agenda.

Moreover, the Treasury officers supporting SCFFR as well as those comprising the Deputy Senior Officials' Meeting (comprising Deputy Senior Officials of First Ministers' Departments and chaired by the Commonwealth) designed to solve

³¹ https://www.coag.gov.au/sites/default/files/National_Licensing_System_IGA.pdf

jurisdictional disputes, simply don't have the background to make decisions on regulatory schemes that are designed to protect consumers.

That is why issues relating to the regulation of vocations should be overseen by Government agencies with a suitable technical background.

This absence of genuine knowledge of the relevant industry subject to regulation led to the collapse of support for reform, as illustrated by the following:

MEDIA RELEASE³²

23 July 2013

Public safety ignored in National Electrical Licensing

Electrical installations in homes, and other buildings, will become less safe if the current plan to introduce a lowest-common-denominator national licence for people working in the electrical industry goes ahead as proposed by the Federal Government and overseen by the National Occupational and Licensing Authority (NOLA).

The National Electrical and Communications Association (NECA), and other industry parties, unanimously agree that the current proposals fail the community in every way possible. It lowers the basic standards and forces all electrical contractors into a one-size-fits-all model. And as a result, NECA cannot support the proposed national licensing model and will seek to lobby the Federal Government to have it modified.

“At NECA we have long sought a national licensing system for both electricians and electrical contractor licences, to replace the current long-standing state-based systems,” says James Tinslay, CEO. “We can drive anywhere in Australia with a state-based driver’s licence and there is a single national cabling licensing system. So we have long been questioning why there isn’t a national electrical licensing system,” he adds.

NECA has been deeply involved for over three years in the National Occupational Licensing Scheme advisory groups and has consistently over that time provided advice at odds with the content of this final proposal. These are in some cases issues of detail but also there are high level issues that undermine longstanding industry performance and safety standards. The proposals will result in lower levels of safety and technical expertise available to households and the Australian community.

For electrical contractor licensing, the proposed removal of all existing additional competencies is inexplicable given that such additional skills add to employee safety and some level of assurance for consumers.

“Last week’s announcement is yet another example of where the Federal Government is not listening to industry,” points out Tinslay. “And considering the recent debacle with the pink batts/insulation program – where four young people died unnecessarily, simply because the Government did not heed the advice it received from industry prior to launching the initiative. It is very worrying to see the same thing potentially happening again. Understanding how to manage projects involving electricity is a highly skilled profession and any attempt to undermine that skill is putting people’s lives at risk. We don’t believe the Government should be allowed to make this mistake again,” Tinslay concluded.

If the concerns affecting safety are not addressed, NECA will call to have the national licensing initiative abandoned.

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http://neca.asn.au/sites/default/files/media/state_wa/Membership/News%20&%20Views/Media%20Releases/wa-media-release-public-safety-ignored-in-national-electrical-licensing-24-07-2013.pdf

Ultimately, the reform was not pursued after States identified a number of concerns regarding the proposed model, deciding instead to develop alternative proposals through the Council for the Australian Federation.

These two examples illustrate how the net public interest is not necessarily served by a group of policy specialists with a common set of skills applying narrow criteria when considering the structure of regulations.

A final observation is that adding an additional body to Australia's public administration structure would be curious given that many of these bodies are being rationalised.

For example, the COAG Reform Council had as one of its roles the monitoring of COAG reform agenda outcomes. It was abolished, in part as it was characterised as being 'red tape' (Australian Government 2014-15, p.25). There is no specific advantage to commence re-adding red tape just to consider 'competition issues'.

The Guild does not support either the proposal for either the creation of an Australian Council for Competition Policy or a proposal to develop a system of competition payments to 'encourage' jurisdictions to amend legislation to meet a particular outcome, a view confirmed by the nature of the review of the Australian federation currently on foot.

A.2 The Australian Federation

The High Court has made clear the Australian *Constitution* creates a scheme where there is a distribution of legislative powers between the Parliaments of the constituent elements of the federation and does not create on the Commonwealth a general power to manage the national economy.³³

Moreover, the Prime Minister has also recently confirmed that the proposed federation white paper process is designed to make each level of Government 'sovereign in its own sphere'.³⁴

This policy preference is another reason why, in the context of the Australia federation, it is incompatible for 'competition payments' to be used to 'persuade' jurisdictions to change laws that they otherwise consider to be in the public interest.

It is clear that in Australia the safe provision of health services to Australians is the responsibility of the States.

With that in mind, the *Intergovernmental Agreement for a National Registration and Accreditation Scheme for the Health Professions* makes clear pharmacy licensing and ownership matters are to be dealt with by the States.³⁵

³³ *Pape v. Commissioner of Taxation and ors.* [2009] HCA 23 para 132 and 133 and cases cited therein. Williams

³⁴ Hon T Abbott *Sir Henry Parkes Commemorative Dinner*, Tenterfield 25 October 2014: <https://www.pm.gov.au/media/2014-10-25/sir-henry-parkes-commemorative-dinner-tenterfield>

³⁵ Paragraph 1.33 of the Agreement

It is noteworthy that when implementing the national registration and accreditation scheme for health professionals each Australian jurisdiction reconfirmed the community pharmacy model as the best model to ensure the safe and ethical provision of pharmacy services to Australians.

In particular, the Guild notes that when moving to have the Legal and Social Issues Legislation Committee inquire into the role and opportunities for community pharmacy in primary and preventative care in Victoria, the Health Minister said:³⁶

I note that the Victorian Pharmacy Authority provides regulatory arrangements relating to premises. It is not my intention that this inquiry be fundamentally focused on the question of the role of premises and so forth and the ownership of pharmacies.

*There are longstanding debates about this. The Productivity Commission has had things to say about those matters and I am not, through this reference, seeking to relitigate or redebate those **points that I regard as currently settled in the Victorian context.** (emphasis added)*

with the relevant Committee reporting that:³⁷

Community pharmacists form an integral part of Victoria's health care system through their dispensing of medications, provision of expert advice, referral of patients to doctors or allied health professionals when necessary, as well as through primary and preventative health services provided within and outside the pharmacy setting. Pharmacists are highly trained and trusted and can be better utilised, particularly in rural and regional Victoria, where it can be more difficult to access various forms of health care.

Victoria faces a range of significant health care challenges including increased rates of chronic disease and disability and an ageing and growing population. This Inquiry enabled the Committee to review the role of community pharmacies and their potential, with appropriate training and support, to take pressure off general practice, the aged care sector, Victoria's hospital system and emergency departments.

The Committee then went on to make recommendations as to how pharmacy can further enhance the service it offers Victorians.

States and territories are jurisdictions that are politically responsible to their electors to ensure that the services provided to citizens are appropriately delivered.

Whilst there may be some grounds for the development of intergovernmental agreements to deliver some outcomes that are in the public interest (for example, mutual recognition of qualifications), the concept of subsidiarity means otherwise jurisdictions should be free to design regulatory systems that best suits the needs of that jurisdiction.

³⁶ Victorian Legislative Council *Hansard* 27 May 2014: 1580-1581

³⁷ Victorian Legislative Council Legal and Social Issues Legislation Committee Report 3 *Inquiry Into Community Pharmacy in Victoria* (2014): vii

Appendix B. Qualitative Survey and WTP analysis

See attached *Institute for Choice Summary Report*.

Appendix C. Efficient spatial distribution of stores in a linear city

Consider the following simple example. There is a continuum of customers on the unit interval $[0,1]$. Each customer z is identified by his location $z \in [0,1]$. Transport costs are a simple linear function of the Euclidean distance between a customer and the closest store. Each consumer has the same valuation v for the good, and each customer faces a price of p . Assume that the good can be produced at a constant marginal cost of $c < p < v$.

Suppose that there are two firms, 1 and 2. We find the (non-cooperative) profit maximising choice of locations, and then compare this with the socially optimal pattern of locations.

The non-cooperative equilibrium is straightforward to characterise. Consider firm 1. Suppose that firm 2 has located at z_2 , which we assume to be greater than $1/2$. Since transportation costs are increasing in distance, firm 1 could locate slightly to the left of firm 2 (say at $z_2 - \epsilon$) and gain profits of $(p-c)(z_2 - \epsilon)$, with firm 2 getting $(p-c)(1-z_2)$ in profits. But this cannot be an equilibrium, since firm 2 would then have an incentive to move slightly to the left of firm 1, and get more profits. Such an opportunity exists as long as either of the firms locate at $z_1, z_2 \neq 1/2$.

So any pattern of locations with $z_1, z_2 \neq 1/2$ cannot be an equilibrium. On the other hand, suppose that $z_1 = z_2 = 1/2$ and each firm earns profits of $(p-c)/2$. Then neither firm has an incentive to relocate since their profit from doing so must be less than this. Hence $z_1 = z_2 = 1/2$ is the unique equilibrium.

However, this equilibrium is not efficient. To see this, note that if we assume that all customers are served, then aggregate profits for the firms will not depend on their location – efficiency is determined by the aggregate transportation costs faced by consumers. To find the efficient spatial distribution of firms, we therefore simply have to compute the aggregate transportation costs of an arbitrary pattern of locations and find the location pattern that minimises the sum of these costs across consumers. We are able to show that this social optimum differs from the outcome in the non-cooperative equilibrium.

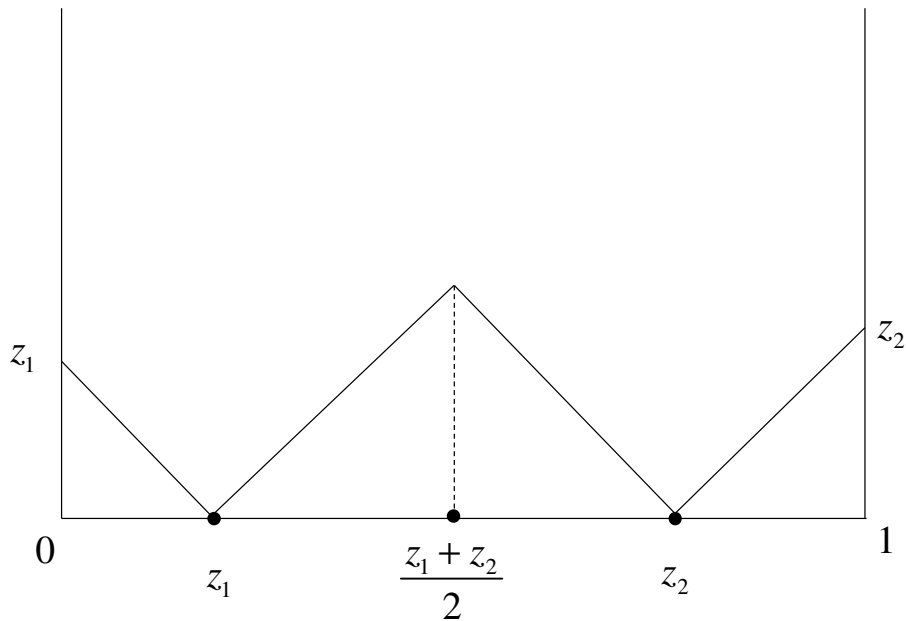
An expression for aggregate transportation costs can be found by examining the diagram below, where we have assumed (without loss of generality) that firm 1 locates at $z_1 < 1/2$ and firm 2 locates at $z_2 > 1/2$. The total transportation costs are:

$$\begin{aligned} T &= \frac{1}{2}(z_1)^2 + \frac{1}{2}\left(\frac{z_1 + z_2}{2} - z_1\right)^2 + \frac{1}{2}\left(z_2 - \frac{z_1 + z_2}{2}\right)^2 + \frac{1}{2}(1 - z_2)^2 \\ &= \frac{1}{2}(z_1)^2 + \frac{1}{4}(z_2 - z_1)^2 + \frac{1}{2}(1 - z_2)^2 \end{aligned} \quad (0.1)$$

Taking the partial derivatives of T with respect to z_1 and z_2 and setting to zero yields:

$$\frac{\partial T}{\partial z_1} = z_1 - \frac{1}{2}(z_2 - z_1) = 0 \quad (0.2)$$

$$\frac{\partial T}{\partial z_2} = \frac{1}{2}(z_2 - z_1) - (1 - z_2) = 0 \quad (0.3)$$



which gives:

$$z_1 = 1 - z_2 \quad (0.4)$$

So that

$$z_1 - \frac{1}{2}(1 - 2z_1) = 0$$

Or:

$$z_1 = \frac{1}{4}, \quad z_2 = \frac{3}{4}$$

If firms locate at $z_1 = \frac{1}{4}$, $z_2 = \frac{3}{4}$, then aggregate transportation costs are $T^* = 0.125$, whereas if they locate at the equilibrium points $z_1 = z_2 = \frac{1}{2}$, then aggregate transportation costs are $T^e = 0.25$ i.e. exactly double. In fact, if we restrict attention to location patterns in which stores cannot locate on the same side of the city, then the non-cooperative equilibrium location pattern actually **maximises** transportation costs in this example, and gives the same total transportation cost as if the firms were to locate at the (opposite) extreme edges of the city.

Appendix D. The Supply of Dispensing Services by Duopoly Retailers with Bargaining Power

Section 5.1.3 of the text argues that to obtain the same level of access community pharmacy provides through supermarkets, the Government would need agreements with both Coles and Woolworths, as well as with independents. This appendix presents a simple model to illustrate the potential negative welfare effects of that counterfactual arrangement.

Consider a duopoly pair of sellers of pharmacy dispensing services, labelled 1 and 2, each of whom the Government must engage in order to fulfil its policy objective of providing those services to a large portion of the population. Note that the Government faces the constraint that it must engage both firms - there is no option of entering an agreement with just one of them. In other words, each firm effectively has a veto right over any agreement (i.e. each firm effectively has the right to exclude the Government and its competitor from any agreement).

The Government must therefore pay a fee per unit of services of P_1 to firm 1, and a fee of P_2 to firm 2. The total quantity of services demanded is a function of the total fee paid, so:

$$Q = Q(P_1 + P_2) \quad Q' < 0$$

Assume that each firm can provide services at a constant marginal cost of $c > 0$. The profit of each firm is:

$$\pi_i = (P_i - c)Q(P_1 + P_2)$$

Each firm chooses its price non-cooperatively, taking the fee charged by the other firm as given. We find the Nash equilibrium choices of prices for each firm. The first order condition for each firm is:

$$\frac{\partial \pi_i}{\partial P_i} = (P_i - c)Q'(P_1 + P_2) + Q(P_1 + P_2) = 0 \quad i = 1, 2$$

Summing this expression across the two firms yields the Nash equilibrium condition:

$$(P_1 + P_2 - c)Q'(P_1 + P_2) = -2Q(P_1 + P_2) \quad i = 1, 2$$

Letting $P_{duop} = P_1 + P_2$ be the total fee paid, the Nash equilibrium can be written as:

$$\frac{P_{duop}}{c} = \frac{1}{1 - \frac{2}{\varepsilon}} > 1$$

where $\varepsilon = -\frac{Q'(P)P}{Q}$ is the Government's elasticity of demand.

In contrast, if the Government negotiates with a number n of small providers of dispensing services, none of whom have veto power over any agreement that is reached, then the price paid obeys the well known condition:

$$\frac{P}{c} = \frac{1}{1 - \frac{1}{n\varepsilon}} < \frac{1}{1 - \frac{2}{\varepsilon}}$$

In other words, the price paid by the Government is higher with two firms with veto power than with many firms, none of whom have veto power.

This result is driven by the fact that in the counterfactual arrangement the Government must engage two firms, each of which has veto power over any agreement. This means that there is effectively a form of simultaneous “piggyback monopoly” or double marginalisation occurring. When one of the veto duopoly firms decides to increase its price under these circumstances, it imposes a negative externality on the other firm, reducing the other firm's profit. As is the usual in situations where actions create negative externalities, the equilibrium variable of interest – in this case, the aggregate fee paid – ends up being inefficiently high.

Note that even in the case where the Government negotiates with a single entity with veto power (so that $n=1$ in the above expression on the left hand side), this is still preferable to having to negotiate with two firms each of whom possess veto power. Moreover, this outcome is even more likely if the single provider represents the interests of many small providers, so that the single entity effectively negotiates on the basis of maximising the payoff of the median provider. In that case, the relevant elasticity in the expression on the left hand side of the above expression is the individual elasticity of the median provider. This elasticity is likely to be significantly higher than the overall market elasticity (following the general principle that the demand elasticity for a single firm is higher than the market elasticity). Hence the price paid by the Government in the duopoly situation would be even higher relative to current arrangements. By avoiding this outcome, current ownership rules result in a substantial public benefit.

Appendix E. Geo-Spatial Maps

Accessibility Tables.

Geo-Spatial Maps will be provided separately.

Appendix B

SUMMARY REPORT

CONSUMER SURVEY – VALUE OF PHARMACY ENVIRONMENT

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Introduction

- A recent competition review panel report, commissioned by government (chaired by Ian Harper 2014), has recommended the pharmacy industry be deregulated.
- The Pharmacy Guild of Australia would like to use the results from this study to support a response to the competition review panel in defense of pharmacy regulation.
- It was determined that Discrete Choice modelling represents one approach to quantify the value of the current pharmacy environment.
 - Discrete choice modelling based on Discrete Choice Experiments (DCEs) requires decisions makers to select their preferred option from a set of competing alternatives (which collectively form choice tasks).
 - Respondents are shown multiple choice tasks, over which the features of the alternatives are systematically varied, allowing for a determination of how each of the features impacts upon the preferences of a sampled population.
 - DCEs were first developed in the 1930s (Thurstone 1931) allowing for comparisons of two alternatives, and later extended to multinomial choices in the 1980s (Louviere and Hensher 1982) and (Louviere and Woodworth 1983).
 - DCEs are now used by many fields to understand and model the tradeoffs and preferences revealed by the choices that people make.
 - They are widely used for modelling and forecasting the demand for new products/services and/or changes to existing products/services.
- The Pharmacy Guild of Australia contracted The Institute for Choice (I4C) at the University of South Australia to conduct the research.
- I4C are world experts in studying human decision making and choice behaviour.

Objectives

- The key objectives of this study are to explore how much consumers value the current pharmacy environment and understand what is most important to these consumers when choosing a pharmacy.
 - How much do consumers value the current pharmacy market structure (e.g., availability, location and number of different types of pharmacies)?
 - How much do consumer value aspects of trust and service when it comes to pharmacy choice?

Sample Methodology

- A quantitative online survey (15-20 mins) was conducted with Australian consumers.
- Participants had to have filled a script in a pharmacy in the last 12 months.
- Data was collected in October 2014 (n = 947).
- The sample was stratified by state, location and age. The following table shows the final numbers achieved by quota segment.

		Under 65		65+	
		Count	Pecent	Count	Pecent
NSW	Rural / Regional	31	6%	42	9%
	City / Metro	32	6%	43	10%
ACT	Total	54	11%	34	8%
VIC	Rural / Regional	35	7%	40	9%
	City / Metro	40	8%	33	7%
QLD	Rural / Regional	33	7%	38	9%
	City / Metro	38	8%	40	9%
SA	Rural / Regional	38	8%	27	6%
	City / Metro	38	8%	40	9%
WA	Rural / Regional	32	6%	24	5%
	City / Metro	36	7%	36	8%
TAS	Rural / Regional	32	6%	23	5%
	City / Metro	31	6%	18	4%
NT	Total	34	7%	5	1%
Total		504	100%	443	100%

- The majority of the sample was sourced from two online panel providers. Online panels are a cost effective and efficient way to recruit respondents for online projects.
 - GMI / Lightspeed (n=474)
 - NineRewards (n=473)
- Additional recruitment (telephone recruitment to online completion) was undertaken to compare and contrast the quality and representativeness of the online panel data.
 - SurveyTalk (n=480)
 - There were minimal differences on key questions between the online and telephone samples

Survey structure

Section 1: Screeners (1-2 mins)

Section 2: Current pharmacy usage

- Approximately 6-8 mins to complete.
- Contained background questions on current pharmacy usage habits.

Section 3: Choice Task

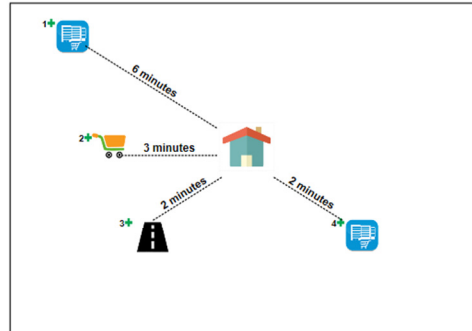
- Approximately 8 -10 mins to complete.
- Participants were presented a number of different market scenarios and asked to choose which pharmacy they would prefer to purchase their medications from in each scenario. Market scenarios were described by the availability and number of different store types and distance (time) of each store from the home. Example shown below.
- The task was designed to capture consumer preferences for store type, location and features.
- Each participant completed 6 scenarios.





Section 4: Attitudes towards Pharmacy (3-4 mins)

Section 5: Socio-demographics (1-2 mins)

Set 1 of 6

Please take a moment to review the information presented below for each pharmacy. Assuming that you are looking for a pharmacy to have a script filled, which pharmacy would you prefer?



	Pharmacy 1 	Pharmacy 2 	Pharmacy 3 	Pharmacy 4 
Location	In a shopping centre / medical centre	In a supermarket	On the street	In a shopping centre / medical centre
Travel time from home	6 minutes	3 minutes	2 minutes	2 minutes
Trust rating	★★★★★	★★★★★	★★★★★	★★★★★
Product range	Basic range of medicines, plus basic health and beauty products	Full range of medicines only	Full range of medicines only	Basic range of medicines only
Additional services	Does not offer additional services	Does not offer additional services	Offers additional services (e.g. weight management, diabetes care)	Offers additional services (e.g. weight management, diabetes care)
Access to health advice	No access to health advice	No access to health advice	Access to health advice	Access to health advice
Cost per script	\$53.55	\$25.85	\$31.40	\$53.55
Waiting time for script	20 mins	15 mins	10 mins	20 mins
Pharmacy ownership	Owned by a pharmacist (part of a banner group)	Owned by a pharmacist (part of a banner group)	Owned by a company (without pharmacist management)	Owned by a pharmacist (part of a banner group)
Opening hours	Standard business hours (9am-6pm) - Monday to Friday, closed weekends	Standard business hours (9am-6pm) - Monday to Friday, closed weekends	Extended hours (8am - 11pm) - 7 days a week	Standard business hours (9am-6pm) - Monday to Saturday, closed Sunday
Which pharmacy would you most prefer?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Which pharmacy would you least prefer?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Design

- The combinations of levels of each feature in the DCE were designed using the latest experimental techniques developed by Rose and Bliemer (2009) and implemented in NGene, the software developed by Rose, Bliemer, Collins and Hensher.
- A D-efficient design was used to structure the choice experiment.

Model Background

- Choice experiments are based on Random Utility Theory (RUT). RUT is derived from the work of Thurstone (1927) and states that decision makers compare the alternative goods and services within a market, whether real or hypothetical, and selects the bundle of attributes or goods that yield the maximum utility (i.e., the respondent is a utility maximiser).
- RUT assumes the existence of an error term resulting from the analyst being unable to observe the true choice processes of the individual respondents being modelled and hence they apply (poor) approximations of these processes (see McFadden 1974 and Manski 1977).

From a psychological perspective, the error term may also represent errors on behalf of decision makers.

- RUT proposes that overall utility U_{nsj} can be written as the sum of the observable component¹, V_{nsj} , expressed as a function of the attributes presented and a random or unexplained component, ε_{nsj} as shown in the equation below

$$U_{nsj} = V_{nsj} + \varepsilon_{nsj}.$$

where:

U_{nsj} is the overall utility of alternative j by respondent n in choice situation s ,

V_{nsj} is the observed or explained component of utility (for alternative j by respondent n in choice set s),

ε_{nsj} are randomly distributed error terms which vary over the population of respondents.

- The systematic component of utility is typically assumed to be a linear relationship of observed feature levels, x , of each alternative j and their corresponding weights (parameters), β , such that

$$U_{nsj} = \sum_{k=1}^K \beta_k x_{nsjk} + \varepsilon_{nsj},$$

where β_k represents the marginal utility or parameter weight associated with feature k .

- The random error terms, ε_{nsj} are unobserved by the analyst, and therefore assumptions are made about the form of these terms associated with each alternative, j .
- The most common assumption is that they are independently and identically distributed (IID) extreme value type 1 (EV1). This assumption is used extensively in discrete choice modelling and leads to the formulation of all logit models (McFadden 1974).
- The simplest discrete choice model is called the Multinomial Logit model (MNL).
Assumptions of the MNL model
 - Errors are IID (Independently and identically distributed)
 - Independence of observed choices (i.e., all observations are treated as independent even if they are from the same respondent)
 - Homogeneity of preferences (i.e., all respondents have the same preferences or parameter weights)

¹ Otherwise referred to as the systematic component.

Modelling Approach

- More advanced discrete choice models allow for the relaxation of one or more of the assumptions underlying the MNL model.
- In this study, we made use of a latent class model (LCM) to analyse the data.
- The LCM allows for preference heterogeneity (i.e., different respondents can have different marginal utility or parameter weights for each of the features), which is handled via discrete distributions
 - These discrete distributions are referred to as 'classes'.
- According to the model, each individual resides up to a probability in each 'latent' class, c .
- In estimating the model, there exist a fixed number of classes, C , where the number of classes is defined a priori by the analyst.
- Estimates consist of the class specific parameters and for each respondent, a set of probabilities defined over the classes.
- Within each class, the parameters and choice probabilities are assumed to be generated by Multinomial Logit (MNL) models.
- The LCM relaxes some or all of the assumptions of the MNL model
 - IID – relaxed via different classes
 - Independence of observed choices – through the classification of pseudo-individuals in estimation of the panel effects to allow for differences within individuals
 - Homogeneity of preferences – through the different parameter weights by class

Model Results

- A latent class model with two classes was estimated for concession patients and general patients.
- The model results are shown in the tables below. The model fit results illustrate that both models provide a superior fit to a constant only model.

Concession patient, Class 1

		Class 1, 39%					
		Street		Shopping Centre		Supermarket	
Attributes		Parameter	WTP ratio	Parameter	WTP ratio	Parameter	WTP ratio
CONSTANT		0.000	\$0.00	0.000	\$0.00	0.000	\$0.00
TIME	Distance to pharmacy (minutes)	0.000	\$0.00	0.000	\$0.00	0.000	\$0.00
COST	Cost per script (dollars)	-0.792	\$1.00	-0.823	\$1.00	-0.741	\$1.00
SPEED	Waiting time to fill script (minutes)	-0.073	\$0.09	-0.035	\$0.04	-0.077	\$0.10
TRUST	Trust scale (5 stars)	0.000	\$0.00	0.426	\$0.52	0.487	\$0.66
PRODUCT RANGE	Basic range of medicines only	(reference)	(reference)	(reference)	(reference)	(reference)	(reference)
	Basic range of medicines, plus basic health and beauty products	0.492	\$0.62	0.000	\$0.00	0.000	\$0.00
	Basic range of medicines, plus full range of health and beauty products	0.000	\$0.00	0.848	\$1.03	0.000	\$0.00
	Full range of medicines only	0.000	\$0.00	0.000	\$0.00	0.000	\$0.00
	Full range of medicines, plus basic health and beauty products	0.000	\$0.00	0.723	\$0.88	0.000	\$0.00
	Full range of medicines, plus full range of health and beauty products	0.592	\$0.75	0.908	\$1.10	0.000	\$0.00
ADDITIONAL SERVICES	Offers additional services	0.350	\$0.44	0.000	\$0.00	0.000	\$0.00
	Does not offer additional services	(reference)	(reference)	(reference)	(reference)	(reference)	(reference)
ACCESS TO HEALTH ADVICE	Access to health advice	0.315	\$0.40	0.000	\$0.00	0.564	\$0.76
	No access to health advice	(reference)	(reference)	(reference)	(reference)	(reference)	(reference)
PHARMACY OWNERSHIP	Owned by a company (without pharmacist management)	0.000	\$0.00	-0.405	\$0.49	0.000	\$0.00
	Owned by a company (with pharmacist management)	0.522	\$0.66	0.000	\$0.00	-0.724	\$0.98
	Owned by a pharmacist (part of a banner group)	0.000	\$0.00	0.000	\$0.00	0.000	\$0.00
	Owned by a pharmacist (not part of a banner group)	(reference)	(reference)	(reference)	(reference)	(reference)	(reference)
OPENING HOURS	Standard business hours (9am-6pm) - Monday to Friday, closed weekends	(reference)	(reference)	(reference)	(reference)	(reference)	(reference)
	Standard business hours (9am-6pm) - Monday to Saturday, closed Sunday	0.000	\$0.00	0.509	\$0.62	0.573	\$0.77
	Standard business hours (9am-6pm) - 7 days a week	0.000	\$0.00	0.000	\$0.00	0.000	\$0.00
	Extended hours (8am - 11pm) - Monday to Saturday, closed Sunday	0.000	\$0.00	0.000	\$0.00	0.864	\$1.17
	Extended hours (8am - 11pm) - 7 days a week	0.000	\$0.00	0.619	\$0.75	0.000	\$0.00
	Open 24 hours - 7 days a week	0.000	\$0.00	0.670	\$0.81	0.530	\$0.72

Concession patient, Class 2

		Class 2, 61%					
		Street		Shopping Centre		Supermarket	
Attributes		Parameter	WTP ratio	Parameter	WTP ratio	Parameter	WTP ratio
CONSTANT		0.000	\$0.00	0.000	N/A	0.000	\$0.00
TIME	Distance to pharmacy (minutes)	-0.068	\$0.44	-0.062	N/A	-0.063	\$0.40
COST	Cost per script (dollars)	-0.155	\$1.00	0.000	N/A	-0.160	\$1.00
SPEED	Waiting time to fill script (minutes)	0.000	\$0.00	-0.026	N/A	-0.033	\$0.21
TRUST	Trust scale (5 stars)	0.429	\$2.77	0.282	N/A	0.421	\$2.62
PRODUCT RANGE	Basic range of medicines only	(reference)	(reference)	(reference)	(reference)	(reference)	(reference)
	Basic range of medicines, plus basic health and beauty products	0.000	\$0.00	0.000	N/A	0.000	\$0.00
	Basic range of medicines, plus full range of health and beauty products	0.387	\$2.49	0.312	N/A	0.531	\$3.31
	Full range of medicines only	0.587	\$3.78	0.000	N/A	0.000	\$0.00
	Full range of medicines, plus basic health and beauty products	0.586	\$3.78	0.426	N/A	0.925	\$5.77
	Full range of medicines, plus full range of health and beauty products	0.670	\$4.32	0.452	N/A	1.186	\$7.39
ADDITIONAL SERVICES	Offers additional services	0.260	\$1.67	0.410	N/A	0.605	\$3.77
	Does not offer additional services	(reference)	(reference)	(reference)	(reference)	(reference)	(reference)
ACCESS TO HEALTH ADVICE	Access to health advice	0.454	\$2.93	0.496	N/A	0.582	\$3.63
	No access to health advice	(reference)	(reference)	(reference)	(reference)	(reference)	(reference)
PHARMACY OWNERSHIP	Owned by a company (without pharmacist management)	-0.615	\$3.97	-0.837	N/A	-0.966	\$6.02
	Owned by a company (with pharmacist management)	-0.315	\$2.03	-0.353	N/A	0.000	\$0.00
	Owned by a pharmacist (part of a banner group)	0.000	\$0.00	0.000	N/A	0.000	\$0.00
	Owned by a pharmacist (not part of a banner group)	(reference)	(reference)	(reference)	(reference)	(reference)	(reference)
OPENING HOURS	Standard business hours (9am-6pm) - Monday to Friday, closed weekends	(reference)	(reference)	(reference)	(reference)	(reference)	(reference)
	Standard business hours (9am-6pm) - Monday to Saturday, closed Sunday	0.000	\$0.00	0.522	N/A	0.000	\$0.00
	Standard business hours (9am-6pm) - 7 days a week	0.489	\$3.15	0.554	N/A	0.000	\$0.00
	Extended hours (8am - 11pm) - Monday to Saturday, closed Sunday	0.000	\$0.00	0.364	N/A	0.000	\$0.00
	Extended hours (8am - 11pm) - 7 days a week	0.603	\$3.89	0.655	N/A	0.875	\$5.45
	Open 24 hours - 7 days a week	0.394	\$2.54	0.000	N/A	0.522	\$3.25

General patients, Class 1

		Class 1, 33%					
		Street		Shopping Centre		Supermarket	
Attributes		Parameter	WTP ratio	Parameter	WTP ratio	Parameter	WTP ratio
CONSTANT		0.000	\$0.00	0.000	\$0.00	0.000	\$0.00
TIME	Distance to pharmacy (minutes)	-0.177	\$0.34	-0.235	\$0.40	-0.199	\$0.37
COST	Cost per script (dollars)	-0.519	\$1.00	-0.588	\$1.00	-0.538	\$1.00
SPEED	Waiting time to fill script (minutes)	-0.078	\$0.15	-0.125	\$0.21	-0.148	\$0.28
TRUST	Trust scale (5 stars)	0.493	\$0.95	0.000	\$0.00	0.349	\$0.65
PRODUCT RANGE	Basic range of medicines only	(reference)	(reference)	(reference)	(reference)	(reference)	(reference)
	Basic range of medicines, plus basic health and beauty products	0.000	\$0.00	0.000	\$0.00	0.000	\$0.00
	Basic range of medicines, plus full range of health and beauty products	0.000	\$0.00	1.152	\$1.96	0.000	\$0.00
	Full range of medicines only	0.000	\$0.00	1.981	\$3.37	1.094	\$2.03
	Full range of medicines, plus basic health and beauty products	0.000	\$0.00	1.469	\$2.50	0.000	\$0.00
	Full range of medicines, plus full range of health and beauty products	0.000	\$0.00	0.000	\$0.00	0.000	\$0.00
ADDITIONAL SERVICES	Offers additional services	0.000	\$0.00	0.000	\$0.00	0.000	\$0.00
	Does not offer additional services	(reference)	(reference)	(reference)	(reference)	(reference)	(reference)
ACCESS TO HEALTH ADVICE	Access to health advice	0.000	\$0.00	0.000	\$0.00	0.914	\$1.70
	No access to health advice	(reference)	(reference)	(reference)	(reference)	(reference)	(reference)
PHARMACY OWNERSHIP	Owned by a company (without pharmacist management)	0.000	\$0.00	0.000	\$0.00	0.000	\$0.00
	Owned by a company (with pharmacist management)	0.000	\$0.00	0.000	\$0.00	0.000	\$0.00
	Owned by a pharmacist (part of a banner group)	0.000	\$0.00	0.000	\$0.00	0.000	\$0.00
	Owned by a pharmacist (not part of a banner group)	(reference)	(reference)	(reference)	(reference)	(reference)	(reference)
OPENING HOURS	Standard business hours (9am-6pm) - Monday to Friday, closed weekends	(reference)	(reference)	(reference)	(reference)	(reference)	(reference)
	Standard business hours (9am-6pm) - Monday to Saturday, closed Sunday	1.147	\$2.21	2.134	\$3.63	0.000	\$0.00
	Standard business hours (9am-6pm) - 7 days a week	0.000	\$0.00	0.000	\$0.00	1.368	\$2.54
	Extended hours (8am - 11pm) - Monday to Saturday, closed Sunday	0.000	\$0.00	1.313	\$2.23	0.000	\$0.00
	Extended hours (8am - 11pm) - 7 days a week	0.000	\$0.00	0.000	\$0.00	1.455	\$2.70
	Open 24 hours - 7 days a week	1.372	\$2.64	1.343	\$2.28	1.511	\$2.81

General patients, Class 2

		Class 2, 67%					
		Street		Shopping Centre		Supermarket	
Attributes		Parameter	WTP ratio	Parameter	WTP ratio	Parameter	WTP ratio
CONSTANT		0.000	\$0.00	1.187	\$20.10	0.000	\$0.00
TIME	Distance to pharmacy (minutes)	-0.010	\$0.27	0.000	\$0.00	0.000	\$0.00
COST	Cost per script (dollars)	-0.039	\$1.00	-0.059	\$1.00	-0.056	\$1.00
SPEED	Waiting time to fill script (minutes)	-0.014	\$0.35	-0.017	\$0.28	0.000	\$0.00
TRUST	Trust scale (5 stars)	0.265	\$6.88	0.244	\$4.13	0.352	\$6.28
PRODUCT RANGE	Basic range of medicines only	(reference)	(reference)	(reference)	(reference)	(reference)	(reference)
	Basic range of medicines, plus basic health and beauty products	0.000	\$0.00	0.000	\$0.00	0.000	\$0.00
	Basic range of medicines, plus full range of health and beauty products	0.000	\$0.00	0.000	\$0.00	0.000	\$0.00
	Full range of medicines only	0.000	\$0.00	0.406	\$6.88	0.000	\$0.00
	Full range of medicines, plus basic health and beauty products	0.533	\$13.82	0.000	\$0.00	0.439	\$7.82
	Full range of medicines, plus full range of health and beauty products	0.555	\$14.37	0.377	\$6.39	0.521	\$9.29
ADDITIONAL SERVICES	Offers additional services	0.000	\$0.00	0.000	\$0.00	0.000	\$0.00
	Does not offer additional services	(reference)	(reference)	(reference)	(reference)	(reference)	(reference)
ACCESS TO HEALTH ADVICE	Access to health advice	0.368	\$9.53	0.288	\$4.88	0.327	\$5.82
	No access to health advice	(reference)	(reference)	(reference)	(reference)	(reference)	(reference)
PHARMACY OWNERSHIP	Owned by a company (without pharmacist management)	-0.306	\$7.94	0.000	\$0.00	-0.462	\$8.23
	Owned by a company (with pharmacist management)	0.000	\$0.00	0.000	\$0.00	0.000	\$0.00
	Owned by a pharmacist (part of a banner group)	0.000	\$0.00	0.000	\$0.00	-0.346	\$6.16
	Owned by a pharmacist (not part of a banner group)	(reference)	(reference)	(reference)	(reference)	(reference)	(reference)
OPENING HOURS	Standard business hours (9am-6pm) - Monday to Friday, closed weekends	(reference)	(reference)	(reference)	(reference)	(reference)	(reference)
	Standard business hours (9am-6pm) - Monday to Saturday, closed Sunday	0.000	\$0.00	0.000	\$0.00	0.000	\$0.00
	Standard business hours (9am-6pm) - 7 days a week	0.000	\$0.00	0.332	\$5.61	0.495	\$8.82
	Extended hours (8am - 11pm) - Monday to Saturday, closed Sunday	0.000	\$0.00	0.000	\$0.00	0.448	\$7.98
	Extended hours (8am - 11pm) - 7 days a week	0.409	\$10.61	0.000	\$0.00	0.432	\$7.70
	Open 24 hours - 7 days a week	0.389	\$10.08	0.567	\$9.60	0.593	\$10.57

Outputs

Demand

- Predicted market uptake (demand) is calculated using the model probabilities.

Marginal Willingness to Pay (MWTP)

- MWTP measures the amount that the script price could be changed by that would leave a consumer indifferent between pharmacies with different attributes.
- MWTP is calculated as the ratio of the change in marginal utility of attribute k to the change in marginal utility for a cost attribute.
- MWTP describes how much the cost would be required to change given a change in a feature, such that the change in total utility will be zero. It therefore calculated using the derivatives of price and the feature of interest.

If price and the feature enter into utility in a linear fashion, then

$$\frac{\Delta x_k}{\Delta Cost} = \frac{\frac{d}{dx_k} \beta_k x_k}{\frac{d}{dx_c} \beta_c x_c} = \frac{\beta_k}{\beta_{Cost}}$$

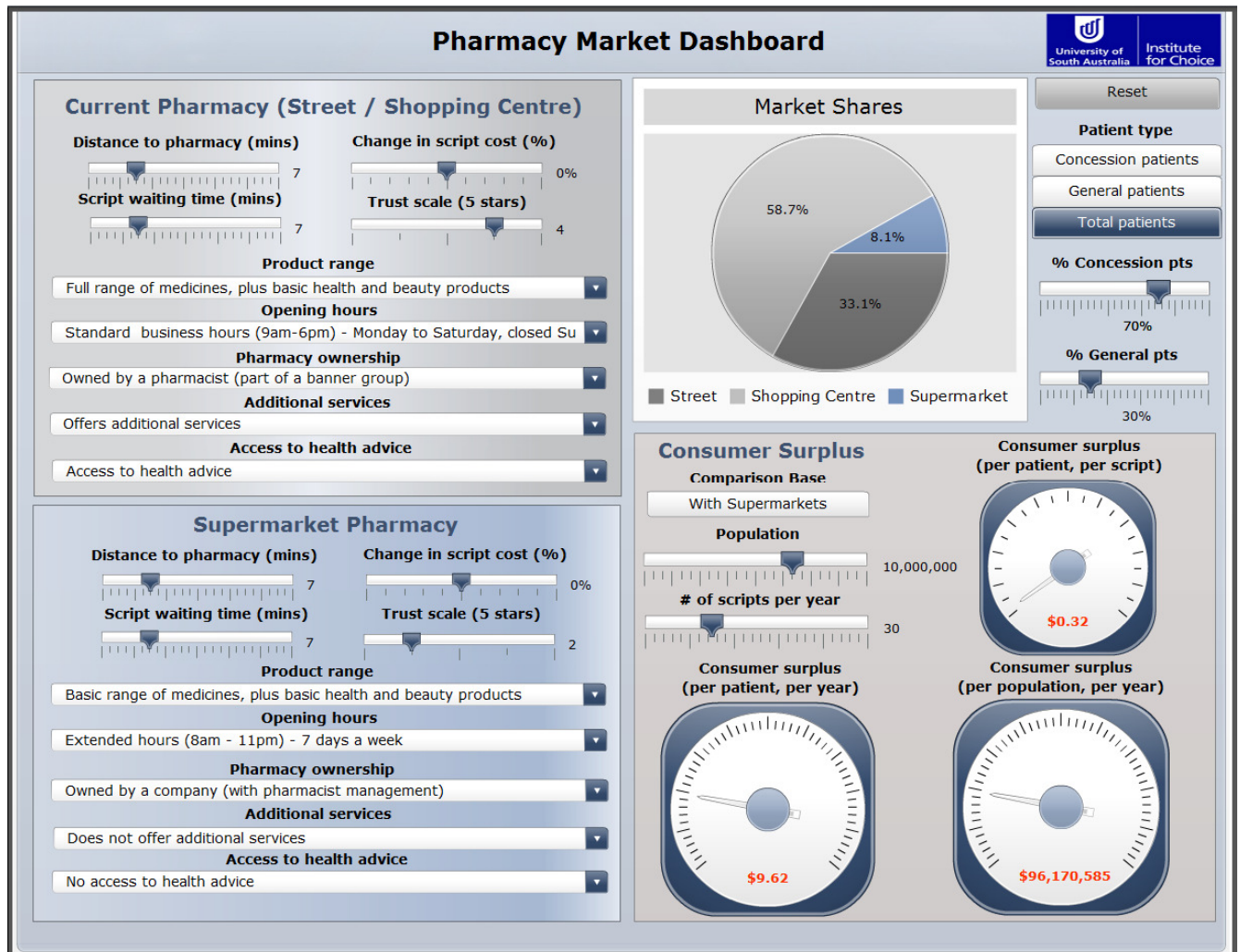
Consumer Surplus

- Consumer surplus is the monetary representation of the outcome in utility from a choice situation.
- Different scenarios can be evaluated by comparing a change in consumer surplus. The formula for consumer surplus is displayed in the equation below (Train, 2009).
- The change in consumer surplus is often referred to in the literature as Total Willingness to Pay (TWTP). In this study consumer surplus is calculated as the change between the current market (status quo) and the new market (availability of pharmacy in supermarkets).
- Consumer surplus is calculated using the latent class parameters, class probabilities and the data ($X's$) for the status quo and the new market scenario.

$$\Delta E (CS_n) = \frac{1}{-\beta_{Price}} \left[\ln \left(\sum_{j=1}^{J^{New}} e^{V^{New}_{nj}} \right) - \ln \left(\sum_{j=1}^{J^{Current}} e^{V^{Current}_{nj}} \right) \right]$$

Decision Support System (DSS)

- The Decision Support System (DSS) enables the visualisation of the model results and perform 'what if' scenarios based on hypothesised changes to the market.
- The DSS contains all the previously outlined key outputs.



Appendix E

Estimated Accessibility by Age Profile				
Average distance [*] (km) per person by age group				
State	Region**	Up to age 65	65 & over	Total
NSW	Sydney	0.8	0.8	0.8
	Rest of NSW	3.9	3.4	3.8
	Total	1.9	1.9	1.9
VIC	Melbourne	0.9	0.9	0.9
	Rest of VIC	4.0	3.6	3.9
	Total	1.7	1.7	1.7
QLD	Brisbane	1.2	1.2	1.2
	Rest of QLD	5.0	3.9	4.8
	Total	3.2	2.7	3.1
SA	Adelaide	0.9	0.8	0.9
	Rest of SA	9.8	5.3	9.0
	Total	2.9	2.0	2.8
WA	Perth	1.0	1.0	1.0
	Rest of WA	16.7	9.5	15.9
	Total	4.6	2.8	4.4
TAS	Hobart	1.6	1.3	1.6
	Rest of TAS	4.7	4.1	4.6
	Total	3.4	3.0	3.3
NT	Darwin	2.1	2.0	2.1
	Rest of NT	104.0	84.7	103.1
	Total	46.6	32.4	45.8
ACT	Total	1.0	0.9	0.9
Australia	Capital Cities	1.0	0.9	1.0
	Rest of Australia	6.9	4.3	6.5
	Total	3.1	2.3	3.0

Source: ABS Census of Population & Housing, 2011; MacroPlan Dimasi

** Greater Capital Cities Statistical Area (GCCSA), ASGS 2011 Edition (ABS cat. no. 1270.0.55.001)
boundaries are used for defining regions

Estimated Accessibility for Advantaged & Disadvantaged Areas*, 2011

*Average distance (km) per person by Regions***

State	Region**	Pharmacy		Supermarket		Medical Centre		Bank	
		Relative Disadvantage	Relative Advantage	Relative Disadvantage	Relative Advantage	Relative Disadvantage	Relative Advantage	Relative Disadvantage	Relative Advantage
NSW	Sydney	0.7	0.8	0.9	1.2	0.8	1.1	1.2	1.4
	Rest of NSW	2.8	3.6	4.9	4.7	3.8	4.7	4.8	5.9
	Total	1.8	1.3	3.0	1.8	2.4	1.7	3.1	2.1
VIC	Melbourne	0.8	1.0	1.1	1.2	0.8	0.9	1.3	1.4
	Rest of VIC	2.5	4.7	3.4	5.1	2.8	4.1	3.9	6.0
	Total	1.5	1.3	2.0	1.5	1.6	1.2	2.3	1.8
QLD	Brisbane	1.2	1.1	1.8	1.5	1.4	1.2	2.3	2.0
	Rest of QLD	6.9	3.2	13.7	4.6	6.1	3.4	10.5	5.1
	Total	4.9	1.8	9.4	2.6	4.4	2.0	7.6	3.1
SA	Adelaide	0.8	1.1	1.0	1.5	0.7	1.1	1.5	1.8
	Rest of SA	9.7	13.3	12.8	17.4	8.9	11.9	9.9	14.5
	Total	3.7	1.9	4.9	2.5	3.4	1.8	4.3	2.6
WA	Perth	0.9	1.0	1.0	1.3	1.0	1.2	1.6	1.9
	Rest of WA	23.3	17.0	37.3	23.5	25.4	18.8	39.0	23.4
	Total	9.2	2.8	14.5	3.8	10.1	3.2	15.5	4.3
TAS	Hobart	1.3	2.0	1.9	3.4	1.4	1.9	2.9	3.4
	Rest of TAS	4.3	3.0	7.0	3.8	5.4	3.4	6.6	4.4
	Total	3.4	2.2	5.4	3.5	4.1	2.2	5.4	3.6
NT	Darwin	2.9	1.3	3.4	2.0	2.9	1.3	3.8	2.1
	Rest of NT	149.3	58.2	136.7	51.0	47.9	29.4	114.8	29.0
	Total	114.5	11.8	105.1	11.1	37.2	6.5	88.5	7.1
ACT	Total	0.8	1.0	0.9	1.1	0.9	1.0	1.9	2.0
Australia	Capital Cities	0.8	1.0	1.2	1.3	0.9	1.1	1.5	1.6
	Rest of Australia	8.0	5.6	11.6	7.2	6.6	5.8	10.3	7.6
	Total	4.4	1.7	6.4	2.2	3.7	1.8	5.9	2.6

*Advantaged & Disadvantaged Areas are identified using SEIFA (ABS Cat. no. 2033.0.55.001 - ABS Census of Population & Housing: Socio-Economic Indexes for Areas, Australia, 2011)

** Greater Capital Cities Statistical Area (GCCSA), ASGS 2011 Edition (ABS cat. no. 1270.0.55.001) boundaries are used for defining regions

Grade 1a Accessibility*					
Accessibility within 2.5 km radius					
State	Region**	Supermarket Grade 1a accessibility	Bank Grade 1a accessibility	Medical Centre Grade 1a accessibility	Pharmacy Grade 1a accessibility
NSW	Sydney	94%	89%	90%	97%
	Rest of NSW	66%	54%	61%	74%
	Total	84%	77%	80%	89%
VIC	Melbourne	94%	89%	94%	96%
	Rest of VIC	67%	59%	56%	67%
	Total	88%	82%	85%	89%
QLD	Brisbane	87%	74%	88%	92%
	Rest of QLD	69%	60%	64%	78%
	Total	78%	66%	76%	85%
SA	Adelaide	94%	85%	94%	96%
	Rest of SA	56%	53%	40%	65%
	Total	85%	78%	82%	89%
WA	Perth	93%	80%	87%	95%
	Rest of WA	53%	44%	46%	60%
	Total	84%	72%	78%	87%
TAS	Hobart	69%	64%	66%	84%
	Rest of TAS	60%	53%	46%	65%
	Total	64%	58%	54%	73%
NT	Darwin	72%	73%	76%	77%
	Rest of NT	34%	32%	26%	32%
	Total	55%	55%	54%	57%
ACT	Total	99%	71%	96%	99%
Australia	Capital Cities	93%	84%	91%	95%
	Rest of Australia	65%	56%	58%	72%
	Total	83%	75%	80%	87%

Source: ABS Census of Population & Housing, 2011; Pharmacy Guild of Australia; MacroPlan Dimasi

*Note: Grade 1a Accessibility Methodology: Proportion of people having access to at least 1 supermarket/pharmacy/medical centres/banks; within 2.5 km radius in Metropolitan & Regional Areas

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Grade 1b Accessibility*					
Accessibility within 2.5 km radius in Metro Areas, 5 km in Regional Areas**					
State	Region**	Supermarket Grade 1b accessibility	Bank Grade 1b accessibility	Medical Centre Grade 1b accessibility	Pharmacy Grade 1b accessibility
NSW	Sydney	94%	89%	90%	97%
	Rest of NSW	78%	73%	84%	83%
	Total	88%	83%	88%	92%
VIC	Melbourne	94%	89%	94%	96%
	Rest of VIC	71%	68%	81%	77%
	Total	89%	84%	91%	91%
QLD	Brisbane	87%	74%	88%	92%
	Rest of QLD	83%	77%	88%	88%
	Total	85%	76%	88%	90%
SA	Adelaide	94%	85%	94%	96%
	Rest of SA	65%	88%	79%	74%
	Total	87%	86%	91%	91%
WA	Perth	93%	80%	87%	95%
	Rest of WA	65%	47%	75%	72%
	Total	87%	73%	84%	90%
TAS	Hobart	69%	64%	66%	84%
	Rest of TAS	70%	66%	80%	75%
	Total	70%	65%	74%	78%
NT	Darwin	72%	73%	76%	77%
	Rest of NT	42%	43%	54%	41%
	Total	59%	60%	66%	61%
ACT	Total	99%	71%	96%	99%
Australia	Capital Cities	93%	84%	91%	95%
	Rest of Australia	76%	72%	83%	81%
	Total	87%	80%	88%	91%

Source: ABS Census of Population & Housing, 2011; Pharmacy Guild of Australia; MacroPlan Dimasi

*Note: Grade 1b Accessibility Methodology: Proportion of people having access to at least 1 supermarket/pharmacy/medical centres/banks; within 2.5 km radius in Metropolitan Areas & 5 km Regional Areas

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Grade 2a Accessibility*					
Accessibility within 2.5 km radius					
State	Region**	Supermarket Grade 2a accessibility	Bank Grade 2a accessibility	Medical Centre Grade 2a accessibility	Pharmacy Grade 2a accessibility
NSW	Sydney	91%	85%	90%	94%
	Rest of NSW	53%	51%	61%	55%
	Total	78%	73%	80%	80%
VIC	Melbourne	91%	85%	94%	93%
	Rest of VIC	54%	53%	56%	58%
	Total	82%	78%	85%	84%
QLD	Brisbane	83%	68%	88%	89%
	Rest of QLD	58%	51%	64%	66%
	Total	70%	59%	76%	77%
SA	Adelaide	90%	82%	94%	92%
	Rest of SA	37%	47%	40%	44%
	Total	78%	74%	82%	81%
WA	Perth	89%	76%	87%	92%
	Rest of WA	31%	35%	46%	38%
	Total	76%	67%	78%	81%
TAS	Hobart	55%	64%	66%	67%
	Rest of TAS	43%	48%	46%	49%
	Total	48%	54%	54%	57%
NT	Darwin	59%	58%	76%	74%
	Rest of NT	20%	24%	26%	20%
	Total	42%	43%	54%	51%
ACT	Total	98%	68%	96%	90%
Australia	Capital Cities	89%	80%	91%	92%
	Rest of Australia	51%	50%	58%	56%
	Total	76%	70%	80%	80%

Source: ABS Census of Population & Housing, 2011; Pharmacy Guild of Australia; MacroPlan Dimasi

*Note: Grade 2a Accessibility Methodology: Proportion of people having access to at least 2 supermarket/pharmacy/medical centres/banks; within 2.5 km radius in Metropolitan & Regional Areas

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Grade 2b Accessibility*					
Accessibility within 2.5 km radius in Metro Areas, 5 km in Regional Areas**					
State	Region**	Supermarket Grade 2b accessibility	Bank Grade 2b accessibility	Medical Centre Grade 2b accessibility	Pharmacy Grade 2b accessibility
NSW	Sydney	91%	85%	90%	94%
	Rest of NSW	68%	68%	74%	73%
	Total	83%	79%	84%	87%
VIC	Melbourne	91%	85%	94%	93%
	Rest of VIC	61%	64%	62%	60%
	Total	84%	80%	86%	85%
QLD	Brisbane	83%	68%	88%	89%
	Rest of QLD	75%	72%	79%	79%
	Total	79%	70%	83%	84%
SA	Adelaide	90%	82%	94%	92%
	Rest of SA	45%	60%	54%	52%
	Total	80%	77%	85%	83%
WA	Perth	89%	76%	87%	92%
	Rest of WA	49%	56%	60%	52%
	Total	80%	72%	81%	84%
TAS	Hobart	55%	64%	66%	67%
	Rest of TAS	54%	59%	61%	57%
	Total	54%	61%	63%	61%
NT	Darwin	59%	58%	76%	74%
	Rest of NT	26%	36%	31%	26%
	Total	45%	48%	56%	53%
ACT	Total	98%	68%	96%	90%
Australia	Capital Cities	89%	80%	91%	92%
	Rest of Australia	65%	66%	70%	69%
	Total	81%	76%	84%	84%

Source: ABS Census of Population & Housing, 2011; Pharmacy Guild of Australia; MacroPlan Dimasi

*Note: Grade 2b Accessibility Methodology: Proportion of people having access to at least 2 supermarket/pharmacy/medical centres/banks; within 2.5 km radius in Metropolitan Areas & 5 km Regional Areas

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boundaries are used for defining regions

Provision of Supermarkets, Banks, Medical Centres & Pharmacies by Region					
State	Region	Supermarket	Bank	Medical Centre	Pharmacy
NSW	Sydney	511	1,272	1,465	1,199
	Rest of NSW	444	669	877	699
	Total	955	1,941	2,342	1,898
VIC	Melbourne	588	1,217	1,166	970
	Rest of VIC	291	405	447	337
	Total	879	1,622	1,613	1,307
QLD	Brisbane	314	574	538	505
	Rest of QLD	368	583	744	615
	Total	682	1,157	1,282	1,120
SA	Adelaide	205	351	403	335
	Rest of SA	81	168	146	129
	Total	286	519	549	464
WA	Perth	274	493	398	442
	Rest of WA	86	177	203	149
	Total	360	670	601	591
TAS	Hobart	24	76	67	73
	Rest of TAS	58	84	83	88
	Total	82	160	150	161
NT	Darwin	13	34	42	16
	Rest of NT	9	17	53	8
	Total	22	51	95	24
ACT	Total	61	84	79	73
Australia	Capital Cities	1,990	4,101	4,158	3,613
	Rest of Australia	1,337	2,103	2,553	2,025
	Total	3,327	6,204	6,711	5,638

Source: Pharmacy Guild of Australia; MacroPlan Dimasi