Response to the section of the AMA's submission to the Productivity Commission's Review of National Competition Policy Arrangements that comments on NECG's July 2004 report on Pharmacy Ownership Arrangements.

Submitted to

Pharmacy Guild of Australia

Prepared by:

Charles River Associates (Asia Pacific) Pty Ltd
Level 7, 107 Pitt Street
Sydney, NSW, Australia
Tel: + 61 2 8233 4000 Fax: + 61 2 9223 5187

March 2005

DISCLAIMER

Charles River Associates (Asia Pacific) Ltd and its authors make no representation or warranty as to the accuracy or completeness of the material contained in this document and shall have, and accept, no liability for any statements, opinions, information or matters (expressed or implied) arising out of, contained in or derived from this document or any omissions from this document, or any other written or oral communication transmitted or made available to any other party in relation to the subject matter of this document.

TABLE OF CONTENTS

1. INTRODUCTION

Charles River Associates (CRA) has been retained by the Pharmacy Guild of Australia (PGA) to respond to a submission made by the Australian Medical Association (AMA) to the Productivity Commission's Review of National Competition Policy Arrangements. Among other things, that submission comments on a July 2004 report (the NECG report) by the Network Economics Consulting Group (NECG), prepared for the PGA, that contained an economic rationale for the maintenance of current ownership arrangements in the community pharmacy sector. CRA urges the PGA and interested readers to consider this current report in conjunction with the earlier NECG report.

NECG was acquired by CRA in November 2004.

This report starts by summarising the earlier NECG report. CRA then responds to the AMA's critique of the NECG report. Having considered the AMA's comments, CRA stands by the analysis and findings of the NECG report.

2. SUMMARY OF NECG REPORT

The NECG report's main premise is that the services provided by pharmacists are an effective way to address market failures associated with medicine usage. These services include the provision of counselling, advice (including advising consumers against acquiring drugs), monitoring the use of medicines and medication reviews. 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' programmes.

The existing pharmacy ownership arrangements are an effective way to facilitate the provision of pharmacy services. Furthermore, those ownership arrangements help to achieve distributional outcomes that are consistent with government policies and promote an effective regulatory scheme for pharmacists' professional conduct.

2.1. EFFECTIVE WAY TO ADDRESS MARKET FAILURES

High levels of pharmacy services are desirable because they help to address market failures associated with the use of medicines. Market failure occurs when unregulated markets do not efficiently allocate resources. National Competition Policy recognises that regulation or government intervention may be justified if there is market failure.

Market failure associated with medicine usage arises from:

- *Imperfect information*.

  Most consumers do not know enough about pharmaceutical products to make a decision that best meets their health requirements. Pharmacists play a crucial role, supplementing the role of doctors, in addressing this source of market failure, by providing pharmacy services which help to ensure that medicines consumers purchase are appropriate for their medical condition;

- *Externalities.*

  There are externalities[1] (or 'spill-over effects') associated with the production and consumption of medicines. The NECG report focuses on consumption externalities. Inappropriate consumption of medicines generates negative externalities by imposing health-related costs on the wider community. These may include reduced efficacy of medicines and increased rates of substance addiction. It follows that well-managed consumption of medicines can generate positive externalities in the form of better health outcomes and associated lower public expenditure on health and pharmaceuticals;

- *Moral hazard*.[2]

  Health insurance (both private and Medicare) and the Pharmaceuticals Benefits Scheme (PBS) and Repatriation Pharmaceuticals Benefits Scheme (RPBS) create a 'moral hazard' problem insofar as they change consumers' incentives to take preventative actions to avoid having to purchase medicines in the first place, or to economise on purchases of medicines.

  Moral hazard is thus likely to promote over-consumption of medicines. This may have adverse consequences for society as a whole and may exacerbate the externality problems associated with the misuse of medicines.

  The provision of pharmacy services can facilitate a reduction in the negative consequences of moral hazard by helping to ensure that consumption of medicines is necessary and appropriate for the patient's medical condition; and

---

1 Externalities are spill-over effects on third parties arising from production or consumption for which appropriate compensation is not paid. Externalities create a divergence between the private costs and benefits of consumption or production and the associated social costs or benefits. Externalities may be positive, whereby the social benefits exceed the private benefits; i.e. there are positive spill-over effects. Alternatively, externalities may be negative if the social costs of production or consumption exceed the associated private costs; i.e. there are negative spill-over effects. The presence of externalities can result in inefficiently high or low production and/or consumption of the relevant product and thus market failure.

2 Moral hazard occurs when a contract exists between two parties and it is possible for one of the parties to change their behaviour to the detriment of the other party once the contract has been entered into.54 As the party changing its behaviour does not face the full consequences associated with that change, moral hazard involves a form of externality.

- *Principal-agent problems.*

  Principal-agent problems may exist in health care markets because consumers generally do not know which treatment or medication will generate the greatest improvements to their health and must rely on health professionals to advise them.[3] Principal-agent effects can give rise to market failure because the principal's lack of information enables the agent to violate, or in other ways exploit, the implicit or explicit contract that exists between the two parties.

  In the doctor-patient relationship, principal-agent problems, if they arise, may either take the form of over-prescription of drugs (and over-servicing in general) or under-prescription of drugs (and general under-servicing).

  Adherence by doctors to professional ethics and the enforcement of professional standards help to limit the extent of principal-agent (and moral hazard) problems between doctors and patients. However, pharmacists serve as an additional check on the prescribing practices of doctors. The detection and correction of inappropriate prescriptions can obviously yield significant community benefits.

  There is also a principal-agent relationship between pharmacists and consumers and the potential for pharmacists to act in their own interests to the detriment of consumers. While it is expected that most pharmacists would act ethically in the best interests of their customers, regulation to ensure compliance with professional standards is also necessary to sanction those who do not.

  The current ownership arrangements help to address principal-agent problems between pharmacists and their customers by facilitating an effective and relatively low-cost regulatory regime.

---

3 Principal-agent effects arise when one party ('the agent') is appointed to act in the best interests of another party ('the principal'), but:

- ♦ the principal and agent have different incentives; and
- ♦ the agent has an informational advantage over the principal.

Because of this information asymmetry, the principal is not able to monitor efficiently the agent's performance, and specifically does not know if the agent has acted in the principal's best interests.

2.2. WHY IS INTERVENTION NECESSARY?

As noted above, the presence of market failure may justify government intervention. In this instance government intervention to facilitate the provision of pharmacy services is justified because pharmacy services tend to be under-valued by consumers. In addition, it is not easy to prevent free-riding on the provision of pharmacy services – particularly for over-the-counter medicines that are purchased repeatedly. Consequently it may not be possible to charge explicitly for many pharmacy services. Furthermore, it may not be desirable for many pharmacy services to be provided in that manner because of the positive externalities that are associated with the consumption of pharmacy services. These features suggest that in an unregulated market, there would tend to be too little consumption of pharmacy services. This provides a rationale for government intervention to promote the provision and consumption of pharmacy services above levels that would otherwise prevail. The NECG report argues that the existing ownership arrangements are an effective way to promote this outcome.

2.3. OTHER BENEFITS OF CURRENT OWNERSHIP ARRANGEMENTS

As well as addressing market failures, the existing ownership arrangements facilitate:

- Nationwide distribution of pharmacy services to all Australians consistent with government health policies and objectives; and
- An effective regulatory system that helps to ensure that pharmacies operate according to professionally acceptable standards.

2.4. HOW THE CURRENT OWNERSHIP ARRANGEMENTS FACILITATE THE PROVISION OF PHARMACY SERVICES

Existing ownership restrictions provide greater incentives for pharmacists to provide pharmacy services compared with more deregulated arrangements. Those pharmacy services, in turn, help to address the various sources of market failure associated with the use of medicines.

Non-pharmacist owners have fewer incentives to provide pharmacy services compared with owner-pharmacists because:

- Non-pharmacist owners are more likely to engage in price competition rather than service-based competition. Thus, non-pharmacist owners are likely to offer a lower level of service than owner-pharmacists because:
  - Corporate owners would typically face more commercial pressures to maximise financial profits than owner-pharmacists;

- By contrast, an owner-pharmacist will probably not place as much value on narrow pecuniary benefits as shareholders of public companies; and

- Pharmacists are educated in professional ethics and obligations as part of their training and socialisation into the profession. Those social obligations include the provision of services that may not be immediately profitable.

- Ownership restrictions encourage the growth of good-will which is built up by developing long-term customer relationships cultivated by the provision of pharmacy services. An owner-pharmacist has a greater incentive to build up this good-will than an employee-pharmacist because the latter would have less of a stake in any goodwill built up by the business.

In a deregulated ownership environment, these factors will tend to reinforce each other in reducing the level of pharmacy services.

Of course, non-pharmacist owned pharmacies would continue to have some incentive to provide pharmacy services if ownership restrictions were removed. However, as there would be less incentive it follows that there would likely be less service overall.

2.5. COSTS OF OWNERSHIP ARRANGEMENTS

The NECG report acknowledges that the existing ownership arrangements may impose costs on society. For example, existing ownership arrangements restrict competition by limiting ownership of pharmacies to registered pharmacists. Restrictions on competition usually result in lower levels of output, lower quality of service and/or higher prices. However, the NECG report notes that a large part of the sales volume of pharmacies is demand-driven and depends on the general health of the public and the prescribing practices of doctors. Thus it seems unlikely that the existing ownership arrangements substantially constrain 'output'. Furthermore, only 19 per cent of pharmacy sales, representing scheduled over-the-counter (OTC) and private prescriptions, are potentially subject to greater price competition than is currently the case.

In addition, current high levels of concentration in Australian grocery retailing, which is the sector that seems most likely to take advantage of liberalisation of ownership arrangements, cast doubt on whether short-term price competition by large retailers entering the pharmacy sector would be sustained in the longer run. Consequently, there is a possibility that the ultimate outcome for consumers of removing existing ownership arrangements could be a lower service offering and potentially similar (or not substantially lower) prices than currently prevail.

Proponents of deregulation argue that current ownership restrictions can deter pharmacies from achieving cost-minimising scale and allow pharmacists to earn sustainable excessive profits. However, the NECG report concludes that costs arising from inefficiently small scale are likely to be lower than proponents argue. This is because the proponents' argument is based on work done by the Bureau of Industry Economics (BIE) nearly 20 years ago.[4] The BIE's work does not take account of the changes to the structure and efficiency of the community pharmacy sector that have taken place since then. For example, the number of pharmacies has fallen from a peak of 5,625 in 1989-90 to around 5,000 currently despite real growth in community expenditure on pharmaceuticals by at least 60 per cent. This suggests that the average size of community pharmacies has increased since the BIE study. Furthermore, the introduction of computers has streamlined the dispensing process.

Research conducted by KPMG in 1999 noted that most of the economies of scale in pharmacy are pecuniary rather than technological.[5] Pecuniary economies of scale are associated with the greater purchasing power of large-scale operations which allows larger businesses to negotiate volume discounts with suppliers and hence obtain some inputs more cheaply than smaller businesses. However, pecuniary economies of scale do not imply that existing labour and capital resources are being used inefficiently or that associated resource savings could be realised if the scale of the business was expanded. Regardless, even smaller community pharmacies are able to take advantage of pecuniary economies of scale by joining banner groups and other group buying ventures entered into with one of the full-line wholesalers. Hence, it seems unlikely that substantial efficiencies would be realised if ownership restrictions were removed.

KPMG found that technological economies of scale in dispensing are exhausted at annual prescription volumes of around 25,000. Around 70 per cent of community pharmacies are already operating at this volume or greater, implying that economies of scale are typically being exhausted under current industry structures.

The NECG report concludes that it is difficult to accept arguments that pharmacy returns would be significantly lower if more diverse ownership arrangements were permitted. This issue is considered in more detail in Table 1 below.

---

4 Bureau of Industry Economics 1985, Retail pharmacy in Australia — an economic appraisal, Research report 17, AusInfo, Canberra.

5 KPMG was commissioned by the PGA and Pharmaceutical Society of Australia (PSA) to undertake this research as part of the PGA and PSA's joint submission to the NCP Review of Legislation. The results of the KPMG research are reported in *Volume 7: Assessing the Costs of Legislation: Economies of Scale* of that joint submission.

2.6. CONCLUSIONS

The NECG report concludes that existing ownership arrangements are an effective way to promote high levels of pharmacy services. More diverse ownership arrangements are likely to reduce incentives to provide pharmacy services; therefore, it is possible that under alternative arrangements the level of such services would not be sufficient to address market failures and to deliver outcomes consistent with government health policies. Consequently, some kind of subsidy would have to be provided to either consumers or pharmacists to induce appropriate supply and consumption of such services. The report questioned the effectiveness of subsidies in this instance.

Changing ownership arrangements may exacerbate the existing difficulties in attracting pharmacy services to rural and regional areas by making it more difficult for pharmacies to remain viable in those areas. This may increase the need for government programmes and expenditure to ensure desired health outcomes are achieved.

In addition, deregulating ownership arrangements would likely necessitate the redesign of the pharmacy regulatory regimes. As well as the one-off legislative costs associated with regulatory change it seems likely that ongoing regulatory costs would be higher under alternative ownership arrangements than under current ownership rules. These additional costs might be incurred because the costs of detecting, deterring and enforcing regulatory rules could be higher under alternative ownership arrangements than under owner-pharmacist arrangements. The task would be made even more difficult because there would be more parties to regulate and less clear lines of accountability, as well as possibly greater litigation costs.

Thus, the NECG report concludes that it seems unlikely that there are viable alternatives to existing ownership arrangements that would deliver the same benefits to society without the need for increased government spending to induce higher levels of pharmacy services, achieve desired distributional outcomes and provide an effective regulatory regime.

3. CRA'S RESPONSE TO THE AMA'S COMMENTS ON THE NECG REPORT

Following the AMA's tabular form, CRA's responses to the AMA's comments on the NECG report are contained in Table 1. The first and second column of Table 1 reproduces the first and second columns respectively of the table shown on page 15 of the AMA's submission. For ease of cross-reference with CRA's responses, CRA has added numbers in Table 1 to each of the AMA's main contentions. CRA's responses to those contentions are shown in the third column of Table 1.

In general, CRA considers that the AMA's comments reflect selective, rather than thorough, reading of the NECG report as well as misunderstanding of some of the key concepts and points made in that report. Further, the AMA attempts to draw spurious correlations between the pharmacy and medical sectors without apparent regard for, or recognition of, the substantial differences between those sectors and the impact that those differences may have for government policy that restricts competition in those sectors.

Having considered the AMA's comments, CRA stands by the analysis and findings of the NECG report.

Table 1: CRA's response to AMA Comments on NECG Report

NECG Assessment[6]	AMA Response	NECG/CRA response
1. Existing ownership arrangements facilitate higher levels of service than would prevail if ownership arrangements were deregulated (p. 27).	1a. No evidence whatsoever is tendered in support of the contention. 1b. There is, however, evidence that the full suite of arrangements for community pharmacy support higher profitability than would be the case in competitive markets and this, in turn, is reflected in the very high goodwill value of a pharmacy.	1a. The NECG report contains discussion of a substantial body of evidence that ownership restrictions encourage higher levels of service. These are listed at Appendix A. 1b. CRA contends that the relevant issue is not whether the 'full suite' of arrangements for community pharmacy support higher profitability than would be the case in competitive markets. Indeed such an outcome is likely to be a result of any regulation that is intended to address market failures and achieve particular distributional outcomes. The relevant issue is whether the existing ownership arrangements are more effective than alternatives, including deregulated markets, at facilitating the provision of pharmacy services that are necessary to overcome market failures associated with the usage of medicines, facilitate nationwide community access to pharmaceuticals and pharmacy services and facilitate an effective regulatory system that helps to ensure that pharmacists operate according to acceptable standards. The NECG report sets out a comprehensive argument as to why the existing arrangements, while not necessarily perfect, are likely to be more effective than alternatives at achieving those outcomes. The AMA appears to believe that high levels of goodwill can only exist in markets that are less than competitive. This belief is wrong as a simple

6 This column is reproduced from p. 15 of the AMA's submission. Its reproduction does not imply that CRA accepts that the column contains an accurate reproduction of NECG/CRA's assessment.

		matter of economics. Goodwill can accrue whenever a business provides superior products or services to its customers. Nevertheless, the NECG report considers on pp.53-54 whether existing *ownership arrangements*[7] may allow pharmacies to earn 'monopoly rents'. Such rents are associated with restrictions on competition and should be distinguished from, and not confused with, profits that are earned as a result of superior products or service. The arguments that support the contention that pharmacists earn monopoly rents tend to be couched with reference to general retail margins. CRA assumes that such comparisons are the basis of the AMA's assertions. However, CRA considers that there are a number of problems with comparing general retail margins with pharmacy margins. First, pharmacists invest in tertiary training over several years. Profits earned by pharmacists overall will generally need to include a return on this investment in human capital in order to induce entry to the profession. General retailers as a group, in contrast, have probably not made large investments in human capital or participate in ongoing professional development. Thus it is inappropriate, to compare margins earned by general retailers with margins earned by professional pharmacists; Secondly, a large part of pharmacists' income is derived from prescribing price-regulated medicines. Per-unit remuneration, and implicitly margins,

7 CRA reiterates that the relevant issue is the impact of ownership restrictions, not the full suite of restrictions as suggested by the AMA.

8 Lane C., Wilkinson F., Littek W., Heisig U., Browne J., Burchell B., Mankelow R., Potton M. and R. Tutscher 2004., *The Future of Professionalised Work. UK and Germany Compared*, Anglo-German Foundation for the Study of Industrial Society,; and Lane C., Wilkinson F., Littek W., Heisig U., Browne J., Burchell B., Mankelow R., Potton M. and R. Tutscher 2003, The Future of Professionalised Work in Britain and Germany, Pharmacists, Anglo-GermanFoundation for the Study of Industrial Society.

	1b. There is evidence from the UK that the quality of advice from super-market owned pharmacies is as good or better than that from independently owned pharmacies.	for prescribing is funded by the Australian Government under agreements negotiated between the Government and the PGA. The total remuneration earned by pharmacists for dispensing is essentially derived from the prescribing practices of doctors and the general demand for medical services; there is little scope, therefore, for the total remuneration available to pharmacists as a group to be affected by competition. As it seems unlikely that the manner of remunerating pharmacists would substantially change under alternative ownership arrangements, there would seem to be little scope for competition to *lower* the margin built into dispensing fees. Rather, competition would primarily occur for the *share* of the total dispensing remuneration. 1b. The AMA does not provide a reference to this UK 'evidence' therefore CRA is not able to assess whether the AMA's claims are supported by that 'evidence'. Nevertheless, some of the literature reviewed in the NECG report suggests that there is evidence from the UK that refutes the AMA's claim. ♦ Cancrinus-Matthijsse, Lindenberg, Bakker and Groenewegen (1996) found that UK pharmacists were frustrated at the limited time they had available for professional activities relative to pharmacists in Europe where ownership was generally more heavily regulated; and ♦ A recent UK study[8] has examined the impact on professionalised work, including pharmacy, in the UK and Germany of rises in intra- and inter-professional competition, technological change, EU regulation and internationalisation of business, more demanding clients and new forms of service provision. The study found that these developments have had different effects in Britain and Germany because of differences in their institutional and regulatory

		environments. Among other things, the report examined professional interests and loyalties. The report recognised that many professional services are no longer provided by independent professional practices. Furthermore, as the size of organisations increase and become more hierarchical, different interest groupings develop, including those of managers, employees and colleagues. To explore the relative importance of these different interest groupings, the report's authors asked respondents where their greatest loyalties lie. While loyalty to clients was the most important category for both British and German pharmacists, the report indicated that German pharmacists were far more likely to prioritise their clients' needs over their own needs. The report noted that inter-country differences in the pattern of loyalties could, to some extent, be related to the differences in the size of employing organisations and to differing employment status. In particular, in Britain, where organisations employing pharmacists are larger, more complex and consequently have a wider range of possible interest groupings, the pattern of loyalties is more diverse. There was also evidence that German firms have a stronger client focus and, because of their small size, have managed to stay closer to the clients.
2....the restrictions help to correct market failure associated with the use of medicines. In the absence of regulation, market failure may arise in the pharmacy sector as a result of ...imperfect information... (p. 27-28).	2a. The AMA agrees that doctors and pharmacists both play an important role in giving patients high quality information about the use of medicines. However, to imply that pharmacists will only provide high quality information if they own the pharmacy would seem to be a remarkable slur on the professionalism of	2a. The AMA substantially misrepresents the arguments presented in the NECG report. Nowhere does that report claim, and CRA does not contend, that pharmacists will only provide 'high quality' information if they own the pharmacy. Rather the issue is one of relativities. As noted on p.36 of the NECG report, existing ownership restrictions provide greater incentives for

	pharmacists. 2b. If the argument had any sway, then it would follow that the quality of primary care would be immediately improved by regulations to restrict the ownership of GP practices to the GPs themselves. 2c. A true professional will act in a fully professional manner regardless of the nature of his or her employment or business structure.	pharmacists to provide pharmacy services compared with the corporate-ownership model. These services help to address market failures associated with imperfect information, among other things. 2b. CRA considers that the question of ownership restrictions applicable to GPs is irrelevant to whether ownership restrictions should apply to pharmacists. Examination of whether restrictions on competition are appropriate should proceed on a case-by case basis having regard to the costs and benefits of the particular regulations. It does not necessarily follow, and indeed it is unlikely, that the costs and benefits of ownership restrictions on GP practices would be the same as those applicable to pharmacies. 2c. CRA again considers that the AMA has misconstrued the key issue. The argument set out in the NECG report, and supported by CRA, is that ownership restrictions can help reinforce an ethos of professionalism both by increasing incentives for pharmacists to provide pharmacist services (pp. 36-40 of the NECG report) and by increasing the effectiveness of regulation (pp. 47-51 of the NECG report). The NECG reports sets out the reasons why corporate owners have fewer incentives to provide pharmacy services than owner-pharmacists: ♦ Ownership restrictions encourage non-price competition; and ♦ Ownership restrictions encourage the cultivation of good-will. CRA agrees that there is no *a priori* reason to not expect a pharmacist-employee to wish to adhere to the same professional standards and ethics as an owner-pharmacist and thus have similar incentives to provide

		pharmacy services. However, there are also likely to be incentives for an employee-pharmacist to act in the interests of his or her employer. The incentives confronting a corporate owner to provide pharmacy services are likely to be lower than those of an owner-pharmacist. These conflicting incentives make it likely that an employee-pharmacist would deliver fewer pharmacy services when employed by a corporate owner than when employed by an owner-pharmacist. This assertion seems to be supported by overseas evidence which is presented in footnote 64 of the NECG report. The NECG report notes that most pharmacists will act professionally in the best interests of their patients (a view that the AMA seems to disagree with – see below). However, unfortunately this is not always the case and there is a need for a regulatory regime to deter, detect and sanction inappropriate conduct. CRA considers that current ownership arrangements help to ensure that pharmacists comply with their professional obligations without the need for high administrative and compliance costs to be incurred. The NECG report details a body of empirical evidence for the link between ownership restrictions and a stronger ethos of professionalism. These are listed in Appendix B.
3....externalities (pp.28-32)	3a. NECG argues that inappropriate use of medicines will generate negative externalities (higher health costs and poorer health outcomes) and that intervention (subsidy of pharmacy services) can promote appropriate use of medicines. _____ 3b. The report fails to forge any connection	3a. NECG/CRA agrees that externalities apply to many aspects of health services. It is important to examine the sources, and implications of negative externalities and possible ways to address those externalities on a case-by-case basis. _____ 3b. The issue of the link between ownership restrictions and the quality of

	between ownership restrictions and the quality of pharmacy services. Externalities apply to many aspects of health and the NECG arguments are not pharmacy specific.	pharmacy services has been addressed above. Contrary to the AMA's assertions, there are numerous examples of pharmacy-specific externalities documented throughout the NECG report from Australia and other countries. These are listed in Appendix C.
.4...moral hazard leading to over-consumption of pharmaceutical products (pp. 32-33).	4a. The [NECG] report claims that "The provision of pharmacy services can facilitate a reduction in the negative consequences of demand-side moral hazard by helping to ensure that consumption of medicines is necessary and appropriate for the patient's medical condition." Yet all the economic incentives, whether in relation to PBS or over-the-counter sales, are for pharmacists to sell the more expensive medicines. NECG concedes the incentive to over-dispense.	4a. CRA considers that the AMA has misunderstood the concept of moral hazard and is equating any resulting increase in consumption of medicines to the debate about the cost of those medicines. CRA contends that these are separate and generally unrelated issues. Only the former issue is directly relevant to the assessment of ownership restrictions. Moral hazard occurs when a contract exists between two parties and it is possible for one of the parties to change their behaviour to the detriment of the other party once the contract has been entered into. As the party changing its behaviour does not face the full consequences associated with that change, moral hazard involves a form of externality. Moral hazard is highly relevant to the pharmacy sector because of the impact of health insurance and subsidised medicines on the behaviour of consumers of medicines. Specifically, health insurance and subsidised medicines create a moral hazard problem insofar as they change consumers' incentives to take preventative actions to avoid having to purchase medicines in the first place, or to economise on purchases of medicines. Moral hazard is thus likely to promote over-consumption of medicines. This may have adverse consequences for society as a whole and exacerbate the externality problems associated with the misuse of medicines. By attempting to link moral hazard with any incentives that pharmacists may have to sell more expensive brand name pharmaceuticals instead of cheaper generic products, the AMA is missing the point. The issue of generic substitution and whether there are incentives to undertake such

		substitution are not related to any particular ownership arrangements. If there are problems with existing government policies in that regard then it is those policies that need to be addressed, not the existing ownership arrangements. CRA contends that existing ownership restrictions facilitate the provision of pharmacy services that may address moral hazard problems by helping to ensure that medicines are necessary and appropriate for the patient's medical condition. This can reduce the need to resort to the use of expensive medicines and can increase the effectiveness of medicines that are consumed. Of course, a pharmacist may prefer that his or her customers purchase the more expensive (i.e. higher price per unit) medicine insofar as this is linked to remuneration. However the extent to which he or she will 'push' more expensive medicines on the customer and ignore the genuine pharmaceutical needs of the customer will tend to be reduced by other constraints: e.g. a desire to build and maintain a good reputation and legal sanctions against misconduct. Nevertheless, the NECG report did recognise that linking pharmacists' remuneration to dispensing may weaken the incentive to address over-prescription by doctors. However, the report contended that the existing ownership arrangements provide greater incentives to provide pharmacy services compared with alternative arrangements (see p. 33). However, this issue is more relevant to the discussion of supplier-induced demand than it is to the problems associated with moral hazard. The preceding discussion highlights the point that pharmacists, and other health professionals, often face varied and conflicting incentives. A thorough economic analysis of alternative ownership arrangements requires a full assessment of the incentives faced by individuals and an assessment of how these incentives 'net out' in each case. Indeed, it is precisely because the NECG report is aware of these potential conflicts of

	4b. Again, no link is forged between the quality of pharmacy and ownership restrictions.	interests that it contends that existing ownership restrictions may be more effective than alternatives at mitigating the negative consequences of these conflicting incentives. These points were made on page 33 of the NECG report: *'**However, some gap between the remuneration and marginal costs is likely to arise in any workable scheme of paying pharmacists for dispensing.** As a result, the issue is how the incentives created by that gap interact with other features of the environment in which pharmacists operate to determine their behaviour. **... it is likely that the current arrangements mitigate, if they do not entirely offset, the incentives to over-dispense in a way that would not occur in a more deregulated environment**.'* The issue is not about absolute levels of 'over-dispensing' or 'mitigating conduct' but relative magnitudes. This involves a comparison between the world with existing ownership restrictions and the world without them. 4b. See preceding discussion
5...principal-agent problems (p.34-35).	5a. NECG misconstrues "supplier-induced demand" theories to argue that it may lead to over-prescribing of drugs (whereas proponents of SID argue that it leads to doctor over-servicing).	5a. CRA understands that the concept of supplier-induced demand (SID) is controversial and that there is not a generally accepted definition of SID. A general view of SID is the notion that doctors, acting as agents for their patients, can use their discretionary power to engage in demand

		shifting or inducement activities such that their recommended care differs from that which an informed patient would deem appropriate.[9] Over-servicing and over-prescription would both fall within that general view. Further, over-prescribing may be one facet of over-servicing. The NECG report did not equate the two concepts, but rather implied causality running from the over-servicing caused by supplier induced demand to over-prescription (p. 34 of NECG report): *'The information asymmetries between the doctor and patients provide the means for doctors to pursue their own self-interest to the detriment of patients as patients are usually not able to assess whether the doctor is acting in their best interest. This may either take the form of over-prescription of drugs (**and over-servicing in general**) or under prescription of drugs (and general under-servicing). In the economics literature, the former outcome is known as 'supplier-induced demand'.*
	5b. .. and then goes on to make the extraordinary claim "it is expected that most pharmacists would act ethically in the best interests of their customers". But only if they own the pharmacy apparently!	5b. The reference to the expectation that most pharmacists would act ethically in the best interests of their customers is contained on p. 35 of the NECG report. CRA considers that the statement should be read in the context of the paragraph in which it is contained: *'… there is also a principal-agent relationship between pharmacists and consumers and the potential for pharmacists to act in their own interests to the detriment of consumers. **It is expected that most pharmacists would act ethically in the best***

9 See for example, Bickerdyke I, Dolamore R., Monday I., and R Preston, 2002, *Supplier-induced demand for medical services*, Productivity Commission, Staff Working Paper, Canberra, November.

		interests of their customers. However, regulation to ensure compliance with professional standards is also necessary to sanction those who do not.' Contrary to the AMA's assertion, CRA sees nothing extraordinary in the claim that it could be assumed that 'most' pharmacists would act ethically. Nevertheless, regulation is still needed to sanction those who do not. Such regulation would be needed regardless of ownership arrangements. Also contrary to the AMA's assertion, the NECG report does not link ethical behaviour to ownership restrictions but does note that the potential for conflicting incentives tends to be less under existing ownership arrangements. The NECG report also contends that existing arrangements help to facilitate a low cost regulatory regime compared with alternative arrangements.
6. The central tenet is that pharmacy services are an effective way to address market failures associated with medicine usage. However, these services tend to be under-valued by consumers and it is not easy to prevent free-riding on the provision of those services. Hence, in an unregulated market, there would be too little consumption of pharmacy services. This provides a rationale for government intervention to promote the provision and consumption of pharmacy services above levels that would otherwise prevail. This	6. This central tenet boils down to an argument that ownership restrictions help to sustain a higher rate of return than would be expected where other players could contest the market. Were we to assume, for the sake of the argument, that pharmacy services do generate the high social value claimed (and yes, the medical profession does value pharmacy services) and that the subsidies to evoke a higher provision of service were fully justified, the argument still falls down because the clear international evidence is that unrestricted ownership of pharmacy does not impair the quality of	6. The question of the impact of regulation of an industry's rate of return has been dealt with above. To reiterate, it will generally be the case that regulation will increase the rates of return of the regulated industry. The relevant issue, however, is whether the benefits of the regulation exceed the costs of the regulation, including the impact of restrictions on competition. Furthermore, as discussed above, there appears to be little clear evidence that pharmacy returns are indeed excessive. The evidence is clear that some degree of pharmacy services are provided under all ownership arrangements that were examined in the literature review presented in the NECG report. The relevant issue is the relative differences in service provision across various ownership arrangements. This determines the degree to which externalities associated with the use

section of the report argues that the existing ownership arrangements are an effective, though not necessarily perfect, way to promote this outcome (p. 36).	pharmacy services. On the contrary, additional competition is more likely to lift quality.[10]	of medicines are addressed. As the NECG report argued on p. 40: *'… **community and corporate pharmacies would continue to have some incentive to provide pharmacy services if ownership restrictions were removed**. However, as there would be less incentive, it follows that there would be less service overall.'* In contrast to the NECG report, the AMA appears to base its conclusion that unrestricted ownership raises the quality of pharmacy services by considering only one piece of evidence; a 2003 report by the UK Office of Fair Trading (OFT). However, that report does not deal directly with the question of ownership restrictions. Indeed, as noted on page 22 of the OFT report, the UK has relatively liberal ownership arrangements that require that if a non-pharmacist owns a pharmacy then a qualified pharmacist must be employed in the role of superintendent pharmacist. Rather, the OFT report considers the implications of the so-called 'control of entry regulations' on competition in UK pharmacy. Those regulations require a new pharmacy to pass a 'local needs test' in order to obtain a contract with the local Primary Care Trust to dispense NHS prescriptions. Without such a contract, entry to pharmacy in the UK is effectively blocked. As the OFT findings relate to a different set of entry restrictions to those under consideration here (restrictions on ownership arrangements), the findings would seem to have little direct relevance to consideration of the impact of removing Australia's ownership arrangements. As stressed previously, this must be done having regard to the overall costs and

10 Office of Fair Trading, (2003), *The control of entry regulations and retail pharmacy services in the UK*, January, pp. 40-46.

		benefits of the existing arrangements and viable alternatives In addition, even if it is accepted for the sake of argument, that removing existing ownership restrictions would lead to an increase in price competition, is not clear that there would be a substantial lasting benefit. The debate about ownership restrictions has been given prominence by the desire by certain large supermarket chains to enter the pharmacy sector. However, page 6 of the NECG report notes that; 'current high levels of concentration in Australian grocery retailing cast doubt on whether short-term price competition by large retailers entering the pharmacy sector would be sustained in the longer run.' Finally, the AMA's submission focuses only on the impact of deregulation on competition. However, CRA considers that the existing ownership arrangements have an important distributional effect in terms of facilitating nationwide access to medicines and also facilitate an effective regulatory environment. These issues are not relevant to the OFT's study but are crucial to consideration of the restrictions on ownership in the Australian context.

APPENDIX A: LITERATURE DISCUSSED IN NECG REPORT LINKING OWNERSHIP ARRANGEMENTS TO LEVELS OF SERVICE

1. Fritsch, M. and K. Lamp 1997, Low pharmacist counselling rates in the Kansas City, Missouri metropolitan area, *The Annals of Pharmacotherapy*, 31: 984-991, cited on p. 40 of NECG report found that:

   - Independent pharmacists counselled a significantly higher percentage (44%) of patients than pharmacists in chain pharmacies (11%);
   - Thirty per cent of independent pharmacists reported that counselling required more than two minutes, while all chain pharmacists' interactions took less than two minutes.
   - Study concluded that '… independent pharmacists counselled more frequently and thoroughly than did the chain pharmacists'.

2. Briesacher, B. and R. Corey 1997, 'Patient satisfaction with pharmaceutical services at independent and chain pharmacies', *American Journal of Health Systems Pharmacy*, 54(5): 1079-2082, cited on p. 41 of NECG report found that patients rate the technical and explanatory skills of staff in independent pharmacies more highly than in chain pharmacies. Table 2 reproduced on p. 41 of NECG report has more details on these findings.

3. Roughhead, E., A. Gilbert, J. Primrose and L. Sansom 1998, 'Drug-related hospital admissions: A review of Australian studies published 1988-1996', *Medical Journal of Australia*, 168, cited on p. 30 of NECG report found that 2.4 to 3.6 per cent of Australian hospital admissions are pharmaceutical related, compared to 11 to 28 per cent of US hospital admissions.

APPENDIX B: EMPIRICAL EVIDENCE OF THE LINK BETWEEN OWNERSHIP RESTRICTIONS AND A STRONGER ETHOS OF PROFESSIONALISM

1. Lane C., Wilkinson F., Littek W., Heisig U., Browne J., Burchell B., Mankelow R., Potton M. and R. Tutscher 2004., *The Future of Professionalised Work. UK and Germany Compared*, Anglo-German Foundation for the Study of Industrial Society,; and Lane C., Wilkinson F., Littek W., Heisig U., Browne J., Burchell B., Mankelow R., Potton M. and R. Tutscher 2003, *The Future of Professionalised Work in Britain and Germany, Pharmacists*, Anglo-German Foundation for the Study of Industrial Society. See Table 3 on page 43 of NECG report. The authors find that in Germany where pharmacy ownership is more highly regulated, pharmacists were more likely to prioritise their clients' needs over their own than UK pharmacists even though loyalty to clients is still an important category for both (however the percentage of pharmacists expressing loyalty to their 'profession' as most important was higher in UK – but this is not necessarily to be confused with having a professional ethos);

2. Cancrinus-Matthijsse A. M., S. M. Lindenberg, A. Bakker and P. P. Groenewegen 1996, 'The quality of the professional practice of community pharmacists: what can still be improved in Europe?', *Pharmacy World and Science*, vol. 18, pp. 217-228. cited on pp. 41-42 of NECG report: UK pharmacists were frustrated at the limited time they had available for professional activities relative to pharmacists in Europe where ownership was more heavily regulated.

APPENDIX C: EXAMPLES OF PHARMACY-SPECIFIC EXTERNALITIES

1. Rupp, M., M. De Young and S. Schindlemeyer 1992, 'Prescribing problems and pharmacist intervention in community practice', *Medical Care* 30(10): 926-40, cited on p. 28 of NECG report, studied pharmacist interventions by 89 community pharmacists in 5 states in the US and found that in 20.6 per cent of cases where pharmacists intervened, lack of intervention would have led to adverse consequences by the patient. This finding implies that pharmacist intervention introduces an additional element of 'quality control' in use of medicines. Absent such intervention, there would be higher social costs for the community in terms of increased hospitalisation and resulting pressures on the hospital system;

2. Roughhead, E. 1998, 'Drug-related hospital admissions: A review of Australian studies published 1988-1996', *Medical Journal of Australia*, 168, cited on p. 30 of NECG report, found that 2.4 to 3.6 per cent of Australian hospital admissions are pharmaceutical related compared to 11 to 28 per cent of hospital admissions in the US;

3. A recent study by KPMG[11], cited on pp. 30-31 of the NECG report, concluded that Australia's lower comparable admission rate, and the quantifiable savings per foregone hospital admission and other cost offsets (such as workplace absenteeism and sick leave costs) could be attributed directly to differences between the pharmacist-owned Australian system and the largely chain dominated US. It quantified these benefits as in the range of around $640-$1365 million. By contrast it quantified the costs of the community pharmacy system in Australia at $93 million, which implies a huge net benefit.

4. Berbatis C. G., V. B. Sunderland, C. R. Mills and M. Bulsara, *National Pharmacy Database Project*, School of Pharmacy, Curtin University of Technology of Western Australia, June 2003, cited on pp.15-16 of NECG report found that 38.3 per cent of Australian community pharmacists do not charge for provision of asthma services, 38.1 per cent do not charge for provision of diabetes related services and 36.2 per cent do not charge for hypertension related services -

11 This research is discussed in Volume 1 of the Pharmacy Guild of Australia's Submission to the National Competition Policy Review of Legislation 1999.

5. Jameson J., G. Van Noord and K. Vanderwound 1995, 'The impact of pharmacotherapy consultation on the cost and outcome of medical therapy', *Journal of Family Practice* 41(5): 469-472, cited on pp. 16 of NECG report, presented findings of a study of 56 patients over a 6 month period and found that the cost of drugs fell in the intervention group that got a pharmacotherapy consultation and increased in the control group that did not

6. Bennett, A., C. Smith, T. Chen, S. Johnsen and R. Hurst 2000, 'A comparative study of two collaborative models for the provision of domiciliary based medication reviews', Final report, University of Sydney and St George division of general practice, cited on pp.16-17 of NECG report: A study of 362 patients that compared various models of provision of domiciliary based medication review found that average medication costs were significantly greater in the model that only included medication review compared with the model that included clinical audit by a pharmacist as well as medication review;

7. Nissen, L. and S. Tett 2001, 'Pharmacists assisting general practitioners and the health care team in the integration of care for complex needs patients in rural and remote areas', Final report, University of Queensland, cited on p. 17 of NECG report: Randomised controlled trials in 99 patients in rural and remote areas of Australia found that the total increase in PBS and Medicare costs for the intervention group was lower than that for the control group, leading to annual net cost savings of $87.21 per patient;

8. Zermansky, A. G., D. R. Petty, D. K. Raynor, N. Freemantle, A. Vail and C. J. Lowe 2001, 'Randomised controlled trial of clinical medication review by a pharmacist of elderly patients receiving repeat prescriptions in general practice', *British Medical Journal*, vol. 323, pp. 1340-1343, cited on p. 17 of NECG report: A randomised controlled trial which assessed the effectiveness of a pharmacist reviewing repeat prescriptions in the UK found that though monthly drug costs rose in both groups, the rise was lower in the intervention group

9. Bond, C., C. Matheson, S. Williams, P. Williams and P. Donnan 2000, 'Repeat prescribing: a role for community pharmacists in controlling and monitoring repeat prescriptions', *British Journal of General Practice*, vol. 50, pp. 271-275, cited on p. 17 of NECG report: Another randomised controlled trial which assessed the effectiveness of a pharmacist reviewing repeat prescriptions in the UK found that 66 per cent of patients in the intervention group did not need the full quota of prescribed drugs. This represented a saving of 18 per cent of the total prescribed cost -

10. Furniss L., A. Burns, S. K. L. Craig, S. Scobie, J. Cooke and B. Farragher 2000, 'Effects of a pharmacist's medication review in nursing homes. Randomised controlled trial', *British Journal of Psychiatry*, vol. 176, pp. 563-567; Burns A., L. Furniss, J. Cooke, S. Lloyd Craig and S. Scobie 2000, 'Pharmacist medication review in nursing homes: A cost analysis', *International Journal of Geriatric Psychopharmacology*, vol. 2, pp. 137-141, cited on p. 17 of NECG report: A randomised controlled trial conducted in the UK assessed the impact of pharmacist medication review in nursing homes on use of health care resources over two 4-month periods, one before and the other after intervention. Medication reviews were associated with a significant reduction in total costs.

11. Bonner, C. and M.S. Roberts 1995, Project to optimise the quality of drug use in the elderly in long term care facilities in Australia, final report to the Commonwealth Departments of Medicine, Pharmacy and Social and Preventative Medicine, University of Queensland, cited on p. 17 of NECG report: A randomised trial that assessed a clinical pharmacy intervention in 52 nursing homes in Australia found a 14.8 per cent reduction in drug use in the intervention group relative to the control group, associated with a fall in PBS drug costs of $64 per resident over one year;

12. Britton, M. and P. Lurvey 1991, 'Impact of medication profile review on prescribing in a general medicine clinic', *American Journal of Hospital Pharmacy*, vol. 48, pp. 265-270, cited on p. 18 of NECG report: A randomised controlled trial assessed the impact of medication review performed by a clinical pharmacist in a general medicine clinic. It found that the net result of a single medication review was a fall of 0.69 prescriptions per patient representing a monthly medication cost saving of $3.91;

13. Illett, K. et al 2000, 'Modification of general practitioner prescribing of antibiotics by use of a therapeutic adviser', *British Journal of Clinical Pharmacology*, 49: 168-173, cited on p. 18 of NECG report: A randomised controlled trial assessed the impact of academic detailing on cost of antibiotic prescriptions in WA. It found that the increase in prescriptions was smaller in the intervention group. The increase in prescriptions was smaller in the intervention group ($16,130 for 3 months savings). These lower prescribing rates accounted for 82 per cent of overall savings.