Quantification of facilitators to accelerate uptake of cognitive pharmaceutical services (CPS) in community pharmacy (2003-007)

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Executive Summary

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Project team

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Advisory committee

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1 Ms Alison Roberts was the primary author of this report
EXECUTIVE SUMMARY
The Third Community Pharmacy Agreement is at the forefront and is indicative of the international trend towards the delivery of cognitive pharmaceutical services (CPS) in community pharmacy. The Agreement included remuneration for the delivery of such services as Home Medicines Review (HMR) and Medicines Information to Consumers (MIC), reflecting the opinion that pharmacy’s “long-term function doesn’t lie in [supply function and price]. It lies in cognitive services” (Grist 2002). Funding was also obtained for the Quality Care Pharmacy Program (QCPP), the platform to which remuneration for HMR and MIC delivery has subsequently been linked. While this represented a shift in thinking within professional pharmacy groups, for community pharmacies, these programs have presented certain challenges.

A need was identified for research to determine evidence-based facilitators of practice change in relation to the implementation of CPS, as the research in this area is limited, both internationally and in the Australian setting. New programs have been developed and disseminated one by one, without an integrated framework for their implementation in community pharmacy.

The aims of this project, therefore, were to:

- Determine the relative importance of business and professional facilitators of practice change for pharmacists and pharmacies with different values and at different stages of the change process;
- Promote the inclusion of such facilitators in future cognitive pharmaceutical services and related programs;
- Inform the development of a change management model for the integration of CPS in community pharmacy; and
- Identify some preliminary factors affecting financial investment in practice change in community pharmacy, in relation to the implementation of CPS.

To address these aims, a structured questionnaire was developed based on results from the earlier qualitative study and the literature, with five domains:

1. Adoption of innovation, based on involvement with Third Agreement Programs;
2. Facilitators of program implementation – 74 items based on 13 constructs were measured using a 5-point Likert scale, from Strongly Disagree to Strongly Agree;
3. Values in relation to practice change – 25 items based on 5 constructs were measured using a 5-point Likert scale, from Strongly Disagree to Strongly Agree;
4. Individual demographics; and
5. Pharmacy demographics.

Specific objectives were also determined, shown as headings of the following sections.

**Validating evidence-based facilitators of practice change**

**Pilot study**

The validity and reliability of the questionnaire were established in a mail survey of a random sample of Australian community pharmacies (n=100) conducted in November 2003 and confirmed in the main study.

The conceptual framework for this study followed from the previous study undertaken by this group (Roberts et al. 2003a), and was based on organisational theory (Roberts et al. 2003b). This meant that each pharmacy received 3 questionnaires: one each for the pharmacy owner, an employed pharmacist, and a pharmacy assistant. Factor analyses were performed on the data from the two attitude scales, and univariate analyses were performed to test hypotheses. The results of these analyses allowed changes to be made to the research instrument and a sample size to be calculated for the main study.

**Main study**

The amended questionnaire was sent to a random sample of 2000 Australian community pharmacies in June 2004. Five hundred and sixty-three pharmacies responded by the end of the data collection period (18th August 2004), giving a response rate of 28% per pharmacy, while 1005 individual responses were received. The sample was determined to be representative, based on comparisons of the key individual and pharmacy demographic characteristics with related data sources (Australian Institute of Health and Welfare 2003; Berbatis et al. 2003)

Factor analysis yielded 2 factors on the values scale and 7 on the facilitators scale, explaining 43.0% and 49.5% of the total variance, respectively. These results are detailed in the tables below. Each factor gives a label to a single underlying concept or idea, and allows this concept to be quantified.
<table>
<thead>
<tr>
<th>Factor</th>
<th>Values</th>
<th>No. items</th>
<th>Cronbach’s α</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Professional and business advantage</td>
<td>9</td>
<td>0.86</td>
</tr>
<tr>
<td>2</td>
<td>Altruism</td>
<td>4</td>
<td>0.76</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Factor</th>
<th>Facilitators</th>
<th>No. items</th>
<th>Cronbach’s α</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Relationship with doctors</td>
<td>5</td>
<td>0.90</td>
</tr>
<tr>
<td>2</td>
<td>Remuneration</td>
<td>6</td>
<td>0.82</td>
</tr>
<tr>
<td>3</td>
<td>Patient expectation</td>
<td>5</td>
<td>0.84</td>
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<tr>
<td>4</td>
<td>Pharmacy layout</td>
<td>5</td>
<td>0.82</td>
</tr>
<tr>
<td>5</td>
<td>Manpower/staff</td>
<td>5</td>
<td>0.81</td>
</tr>
<tr>
<td>6</td>
<td>Communication/teamwork</td>
<td>6</td>
<td>0.78</td>
</tr>
<tr>
<td>7</td>
<td>External support/assistance</td>
<td>4</td>
<td>0.74</td>
</tr>
</tbody>
</table>

A number of recommendations arose from the identification of these facilitators:

**Recommendation One:** A funded change management program for community pharmacies, which includes the 7 identified facilitators, is required as a matter of priority.

**Recommendation Two:** The 7 identified facilitators should be included in Guild negotiations for new programs and services. A “facilitator checklist” should be created for future CPS-related projects and services, to ensure that proposed programs will include all of the key elements and reduce the gap between policy and practice.

**Recommendation Three:** Further research is required to determine additional factors that are affecting the implementation of new programs in community pharmacy. This should occur on an ongoing basis as the factors may change in the future.

*Determining the relative importance of facilitators of practice change for pharmacists and pharmacies with different values and at different stages of the change process*

When the values were correlated with the facilitators, it appeared that many of the facilitators (relationship with doctors, patient expectation, and layout) matter more to
those with professional and business advantage as their predominant value than those who are altruistic. For the altruistic respondents, communication and teamwork appeared to be the key facilitating factor.

Pharmacies were also divided into Rogers’ (1995) adopter categories according to their uptake of the Third Agreement Programs: Quality Care Pharmacy Program and Home Medicines Review: innovator, early adopter, early majority, late majority, and laggard. These categories were correlated with the facilitators, and the findings suggest that the innovators and early adopters - those with the most experience of change – place a greater amount of emphasis on the facilitating effects of sufficient manpower, and communicating and working together as a team, than do their later-adopting counterparts.

The practical implication of these findings is outlined in the following recommendation.

**Recommendation Four:** Future programs intended for implementation in community pharmacy must not only offer some perceived benefits from both a professional and business perspective, but must also provide mechanisms for engaging the whole team in the pharmacy in the change process.

Further research is also needed in this area, however, as trying to divide pharmacists into distinct business versus professional categories does not appear workable, and therefore other mechanisms for investigating the values or motivators of pharmacists are needed.

From these analyses, however, one can start to build a profile of the pharmacies and individuals who should be the initial targets of the industry’s change efforts. The results of this study show, for example, that pharmacies which adopt innovations earliest have a larger turnover and larger number of pharmacists and pharmacy assistants that the later adopters. From an individual perspective, employee pharmacists, and those who are younger in age, focus more on aspects of a program such as remuneration, and the layout of the pharmacy being conducive to service delivery. Efforts to disseminate future programs could specifically target these individual and pharmacy characteristics.
Recommendation Five: A complete business framework is required for the implementation of current and future professional services. It should not address the services in isolation, but as an integrated part of the total pharmacy business.

**Identification of factors affecting the financial investment in practice change**

The final project aim was to identify some preliminary factors affecting the financial investment in practice change. There are costs associated with many of the facilitators, such as manpower, communication and teamwork, external support/assistance, and pharmacy layout. Community pharmacy’s engagement in the areas which have been shown to facilitate change but which often require significant investment should be incentivised as part of a change management strategy. Further research is also required in this area, however, and an in-depth qualitative investigation should be undertaken to specifically explore the values that may predispose pharmacists to invest in CPS. It should also clarify the relationship between business and professional facilitators, thus ensuring that practice change is sustainable.

Recommendation Six: Factors which have been shown to facilitate change in community pharmacy, but which often require significant investment, should be incentivised as part of a change management strategy.

Recommendation Seven: An in-depth qualitative investigation should be undertaken to specifically explore the values that may predispose pharmacists to invest in CPS. It should also clarify the relationship between business and professional facilitators, thus ensuring that practice change is sustainable.

Recommendation Eight: The business case for all the current and future programs needs to be strengthened if pharmacists are not only going to be attracted by what is on offer, but will also be able to deliver the programs in a sustainable manner.

**Identification of facilitators to be promulgated to community pharmacies, professional organisations and trainers, to increase uptake of QCPP, HMR, CMI and future programs as part of an integrated business framework.**

While the findings of this study are significant and are supported by the previous
qualitative study and the literature on change, the identified facilitators only account for approximately half the variance. Further research is required to determine additional factors that are affecting the implementation of new programs in community pharmacy. Notwithstanding this, the identified facilitators can and should be disseminated to community pharmacies, professional organisations and trainers, to increase uptake of current and future programs in an integrated business framework. The framework should not address the services in isolation, but as one part of the total pharmacy business.

**Recommendation Nine:** Undergraduate education needs to prepare pharmacy students for coping with change in practice by including consideration of the identified facilitators in the curriculum.

**Recommendation Ten:** At the postgraduate education and continuing education/training level, education providers should also take these factors into account during development of programs associated with practice innovation and Guild Government Agreement programs.

Finally, the findings of this study will be integrated into the *Change Management and Community Pharmacy* project (Dunphy et al 2004), so that an overarching strategy for change, which incorporates the elements identified here, can be developed and disseminated to the profession.

**References**