

Rural and Remote Pharmacy Workforce Development Program

Rural and Remote Infrastructure Grants Program (Infrastructure Grant 2004/949)

Supporting the Health Promotion Role of a Pharmacist in a Small Town Setting – A Preliminary Project Design

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Executive Summary

- Many authors have commented upon the potential of pharmacies as a health promotion setting due to their ease of accessibility for the public, high level of use, and respected position of pharmacists.
- Research has demonstrated that pharmacist led health promotion can be successful in assisting people to make lifestyle changes around smoking, diet, and more specifically, lipid management. There is also preliminary evidence to suggest that pharmacists can provide physical activity and alcohol consumption recommendations to their customers.
- Presently pharmacists have mainly been involved in information provision and screening activities. This forms one component of a health promotion approach and particularly in rural regions, community pharmacies could be performing a greater role in community health promotion activities.
- A model was piloted in four rural pharmacies with each pharmacy provided with a small grant to cover community activities and in store health promotion advice provision. The primary researcher on the project offered consultation support to the pharmacies as well as conducting the literature review and project evaluation.
- Needs analyses were conducted in the pharmacies and feedback revealed a low level of interest in health behaviour topics although some customers mentioned an interest in receiving dietary advice. This reflected the lower use of the in-store component of the project with few customers utilising the free dietary checks. Falls prevention screening and diabetes screening were more popular.
- The pharmacies were able to organise and sponsor a wide range of health promotion community activities. These included workshops on health topics, physical activity programs, home reviews for falls prevention, and early years and school health promotion programs. These programs reached over 500 people across the four communities.

- The results showed the considerable potential for community pharmacies in rural areas to organise community health promotion activities. As well as the direct benefit to the people involved in these activities, having the pharmacy sponsor and organise the events contributes to changing the perceptions of the general public to realise the broad health expertise of pharmacies roles.
- Based on the literature review and findings of the project a model has been developed in the recommendations section to imbed health promotion within rural community pharmacies. Important aspects of this model are health promotion training for pharmacists and pharmacy assistants, provision of grant money support, consultation support from a health promotion worker and promotional material to advertise using the pharmacy for health promotion advice.

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Introduction

Pharmacies are being increasingly recognised as highly suitable health promotion sites. The advantages of high accessibility, respected position of pharmacies within the community, and their strong health knowledge, place pharmacies as one of the key settings through which health promotion can take place. Initiatives such as the Pharmacy Self Care program and various educational promotions have attempted to capitalise on this potential. However, there are few pharmacy based health promotion programs that have been published. The few published studies have concentrated on education provision / counselling and screening. While these are valid health promotion approaches, this underplays the potential of a pharmacist within a rural setting.

Health promotion theory and practice is focusing more on the physical and social environments in which people live. While not denying the importance of behavioural modification programs, current health promotion practice recognises the need for a comprehensive approach addressing personal and environmental factors. A pharmacist in a rural setting has the opportunity to address many health issues in a more holistic manner than is currently being portrayed. This project piloted a health promotion delivery model for rural pharmacy based on the health promotion and rural pharmacy literature. The model incorporated in store health promotion and sponsorship and / or organisation of health promotion community activities.

Supporting the pharmacies was a monetary grant and a health promotion worker who provided training and consultation support. The model was then implemented in four rural pharmacies and evaluated using process indicators. This reports provides the literature background, initial health promotion rural pharmacy model, needs analysis, outline of projects conducted, and discussion. Based on these findings and experiences during the year a refined rural pharmacy health promotion model is proposed in the recommendations section.

Health Promotion Approach

Health promotion in Australia has produced a number of successes most noticeably in the areas of reducing smoking rates, decreasing road fatalities, decreasing rates of cardiovascular disease and reducing rates of skin cancer (Moodie, 2004). The strength lies in a multidisciplinary approach incorporating economic, organisational, policy and education interventions (Howat et al., 2003). Educational interventions on their own have not yielded behavioural change but can support and augment other interventions. Thus while increasing education may not directly alter behaviour it may improve attitudes and knowledge and lead to increased support for economic, organisational and policy interventions that would be more effective in driving change. Pharmacy based health promotion has largely been education and information provision based which limits the health promotion role of pharmacists. This section will summarise some of the main tenets of health promotion to provide a platform for discussing the health promotion role of rural community pharmacists.

The field of public health and within that domain, health promotion, have adopted a social model of health which emphasises responding to the broader environmental determinants of health that support and promote well-being (Wass, 1994). According to Wass (1994) this sets wide parameters in which health promotion can operate and affords the opportunity to address the root causes of ill health. Central also to this approach is active consumer involvement where the agendas and actions are centred on the needs and views of those intended to benefit from any program (Wass, 1994). Growing evidence demonstrates the importance of economic and social conditions in influencing states of health and illness (Marmot & Wilkinson, 1999). This approach is well captured by the well referenced Ottawa Charter (WHO, 1986) and Jakarta Declaration (WHO, 1997) on health promotion:

Ottawa Charter for Health Promotion

“Prerequisites for health: The fundamental conditions and resources for health are peace, shelter, education, food, income, a stable ecosystem, sustainable resources,

social justice and equity. Improvement in health requires a secure foundation in these basic prerequisites.

Building healthy public policy – legislation, fiscal measures, taxation and organizational change

Creating supportive environments for health – conservation of natural resources, work and living conditions that are safe, stimulating, satisfying and enjoyable.

Strengthening community action – enabling communities to have control over their endeavours and destinies.

Developing personal skills – information, education and life skills in settings such as school, home, work and community settings

Reorienting health services – moving the health service in a health promotion direction.”

The Jakarta Declaration on leading health promotion into the 21st century.

“Increasingly, health promotion is being recognized as an essential element of health development. It is a process of enabling people to increase control over, and to improve, their health.

Priorities for the 21st century:

Promote social responsibility for health – public and private sectors need policies that protect the health of the individual and environment.

Increase investments for health development – for sectors such as health, education and housing, focusing on particular groups.

Consolidate and expand partnerships for health – ‘between different sectors at all levels of governance and society.

Increase community capacity and empower the individual – is to be carried out with people rather than for people.

Secure an infrastructure for health promotion – develop the appropriate political, legal, educational, social and economic environments required to support health promotion.”

This emphasis on environmental determinants of health does not preclude individual and behavioural approaches. Rather that such approaches need to be supported by an appropriate economic and social infrastructure that supports positive health.

Pharmacies are well placed as central health providers in rural areas to take an active role at both an individual and community level to support the health of their communities and thus move their service in a health promotion direction.

Health Promotion and Pharmacy

A constant theme in the emerging literature is the accessibility of pharmacies as a health promotion site (Anderson, 2000; Krass, Hourihan, & Chen, 2003; Mayer et al., 1998). Common reasons given are their respected position within the community and the high volume of people that frequent their service during the year. Blenkinsopp et al. (2000) point out that pharmacies are well patronised by healthy and sick people thus having access to a large percentage of the population, potentially, before major illness or disease. Pharmacists may also be placed to capture populations which are not motivated to use other health services (McGlynn, Reid, McAnaw, Chinwong, & Hudson, 2000). Pharmacies are well recognised as the most accessible health care service (Benrimoj & Frommer, 2004) with over 90% of the population visiting during one year (Anderson, 2000). Anderson (2000) comments that due to their accessibility and high level of health and medicinal knowledge, the Health Education Authority chose pharmacies as the setting for its 1996 national folic acid campaign.

The movement towards health promoting pharmacies is evident in the recent release of a book for pharmacists on how they can incorporate health promotion into their pharmacy practices (Blenkinsopp et al., 2000). Their framework for health is based on a social model of health using the WHO definition of health (WHO, 1948).

Blenkinsopp et al. cite the substantial body of evidence implicating lifestyle and broader social and environmental forces in disease progression. They also provide evidence for successful environmental and behavioural strategies that have improved morbidity and mortality outcomes. From such a broad perspective the options of

intervention for pharmacists are numerous and the skills required diverse. Thus pharmacists would need to be selective in the issues and strategies they address based on their expertise and health needs of the community. Although the possibilities are broad, to date the projects undertaken by pharmacists have not strayed too far from their counselling / support roles.

The UK have taken somewhat of a lead in pharmacy involvement in public health. A public health guide for community pharmacists has been produced (Pharmaceutical Services Negotiating Committee, National Pharmaceutical Association, Royal Pharmaceutical Society of Great Britain, & Pharmacy HealthLink, 2004) and transferring some primary care work from general medical practitioners to pharmacists has been discussed (Blenkinsopp, Anderson, & Armstrong, 2003). The guide recognises the important public health role that pharmacists perform in their daily consultations with the public and provides information and recommendations on how this role can be expanded. There is a section summarising evidence for the role of pharmacists in public health areas such as smoking cessation and a section on the public health roles that pharmacists could perform. This includes surveying and assessing the health needs of a specific community or group, working collaboratively with other health professionals and communities, and developing and implementing programs and policies. Included within this guide is a list of resources links for specific health areas and government priority papers. This resource guide is a clear example of the direction that community pharmacy is heading with respect to its health promotion role.

Community perceptions also support pharmacies as a health promotion site. Teh, Chen and Krass (2001) acknowledge the movement towards health promotion and the potential of pharmacists to contribute significantly to health promotion, particularly screening and information provision. Despite the potential for this role, community perceptions of the role of the pharmacist often do not incorporate health screening and information. Teh et al. were interested in whether community perceptions of the role of the pharmacist had changed from 1994 to 2000 since the introduction of the Pharmacy Self Care Program. They also tested whether a sample of participants in a rural screening project (Hourihan, Krass & Chen, 2003) had more favourable attitudes towards pharmacy involvement in screening and health information provision.

There were 98 participants interviewed in 1994 about their perceptions on whether pharmacists should be involved in screening tests and health promotion (Teh et al., 2001). Another cohort of 58 participants was given the same interview in 2000 and 159 participants from the rural screening project also received the same questionnaire. All participants came from rural areas. The mean scores for agreeing that pharmacies should be involved in health promotion activities was very high across all three groups. Although acknowledging that selection bias would have captured a sample more favourable to receiving health information, the data strongly indicated strong consumer support for pharmacists' involvement in health promotion. Similarly, Humphreys, Rolley and Weinand (1993) surveyed rural people about which source of health prevention information is most important and the doctor and pharmacist were the two standout responses.

Despite the potential for health promotion work, there are few pharmacists that have taken a more preventative approach. Paluck, Stratton and Godwin (1994) surveyed 581 pharmacists in British Columbia about the frequency with which they provide health education and disease prevention services and advice. Core practices, such as advice on medication and obtaining medical or an allergy history from clients, was performed daily by nearly all those surveyed. The participation in health education activities including obtaining information on smoking and participating in community health events or speaking to community groups, was much lower with only a third of respondents regularly participating in these style of activities. It was concluded by Paluck et al. that pharmacies need to promote their health education and disease prevention services so that clients make opportunity of the health knowledge and expertise that pharmacists' possess.

A similar study on pharmacy involvement in prevention activities was carried out in the province of Quebec (O'Loughlin, Masson, Dery, & Fagnan, 1999). Of the 455 pharmacists that completed the survey, 60% thought integrating prevention into their daily practice was very important and 31% thought it was important. Despite these high figures of acceptance, there were low participation rates in all the prevention activities questioned including CVD screening, smoking cessation and initiating discussions about health with no more than a third of pharmacists regularly undertaking such work. The major barriers identified were lack of time, space,

skills/instrumentation, personnel and no remuneration. It was concluded that pharmacists have a strong role in prevention activities and given the high rates of acceptance and that participation was related to job satisfaction, there is potential for much greater prevention work. According to the authors it is important to understand the importance of these barriers and ways to overcome them. As there was more interest in prevention activities related to medication use (hypertension, diabetes, dyslipidemias) than behavioural factors (smoking, diet, physical activity), overcoming barriers will be even more important if pharmacists are to have a greater role in targeting behavioural factors.

Given the strong reasons for pharmacy involvement in health promotion a study was conducted in Somerset, England, evaluating the role of a pharmacist delivering advice on a range of health promotion topics (Ghalamkari, Rees, Saltrese-Taylor, & Ramsden, 1997c). The project addressed two of the key barriers to undertaking health promotion work of remuneration and training. The four intervention pharmacists received a three day training program and the pharmacy assistants received a half a day of training. There were four pharmacists intent on delivering this program subsequent to the test period which acted as controls and five other pharmacists who did not volunteer to participate as intervention pharmacies that acted as controls. All three groups of pharmacists undertook a log book of consultation and a client questionnaire of satisfaction with advice received and a follow up questionnaire on behaviour related to that advice was administered.

The six health promotion topics that the pharmacists provided consultation on were smoking cessation, blood pressure, pregnancy testing, sun and skin protection, peak flow measurement, and infestations (Ghalamkari et al., 1997c). Overall the intervention pharmacists provided more health promotion consultations than the control pharmacists although this only reached significance levels for blood pressure and peak flow measurements. The intervention pharmacists were more likely to offer longer consultations and longer consultations were associated with less likelihood of a sale relative to shorter consultations. According to the authors, this strengthened the case for needing to offer remuneration for pharmacists delivering health promotion messages. Despite the problems in log book analysis, for instance when activity levels were at their peak it might have been difficult to fill in the log book, the data did show

that training led to increased health promotion activity. Further the control pharmacists were engaging in these activities to a lesser extent and with training and remuneration they could increase their health promotion work.

Customers who received advice were invited to complete a questionnaire on their satisfaction with the advice received (Ghalamkari, Rees, & Saltrese-Taylor, 1997a). Of the 390 clients that completed the questionnaire, 78% were either satisfied or very satisfied with the advice they received and 95% said they would visit a pharmacy again to ask for advice. From these participants, 145 agreed to be contacted in four weeks and 105 of these completed a questionnaire assessing satisfaction and use of that advice (Ghalamkari, Rees, & Saltrese-Taylor, 1997b). According to their self perception, 69% followed through with the advice received. It was interesting that if they had not received advice from the pharmacist 58% indicated that they would have gone to the doctor, however, the lower levels of patronage for doctors relative to pharmacists means the real figure may be lower. Other participants commented that they would not have gone elsewhere or they didn't think they needed advice. The authors concluded that this highlights the importance of the pharmacist taking a proactive approach as from the first client survey it was discovered that only 23% had specifically attended the pharmacist that day for advice. Yet those that had not intended receiving advice had perceived to have benefited from the advice. Around half the participants were satisfied to receive advice from the assistants which demonstrates the need to train pharmacy assistants in health promotion. It was concluded that pharmacists have a valued health promotion role in assisting clients to make healthy decisions (Ghalamkari et al., 1997b).

There are strong reasons for pharmacists becoming more involved in health promotion work, chief among these reasons is their high accessibility relative to other health professionals. Recent studies have also demonstrated a high degree of public acceptance for pharmacists to be involved in health promotion work and pharmacists themselves have appreciated their health promotion role. There are many health issues that pharmacists can address. A systematic review of the literature concluded that there was strong evidence for pharmacy involvement in smoking cessation, lipid management, emergency contraception and immunisation and promising findings for other activities such as weight reduction and skin cancer prevention (Anderson,

Blenkinsopp, & Armstrong, 2003). Sexual health (Watson, Bond, & Gault, 2003), dental health (Gilbert, 1998), and skin cancer prevention (Mayer et al., 1998) are just a few of the areas that have been studied as potential health promotion areas for pharmacists.

Pharmacists have a recognised and important role in HIV prevention through needle exchange programs and selling injecting equipment and British figures reveal an increase in pharmacy involvement in providing these services (Sheridan, Strang, Barber, & Glanz, 1996). While this is a very important public health issue it will not be covered within this report or project as issues related to drug use and pharmacy are being extensively covered through other projects and programs.

It has long been recognised that the pharmacist can have an important role in managing such conditions as hypertension, diabetes and asthma (Doucette & Jambulingam, 1999; Knapp, Paavola, Maine, Sorofman, & Politzer, 1999; Selya, 1988). A systematic review of pharmacy based interventions to prevent coronary heart disease (CHD) found that there was strong evidence for community pharmacy interventions addressing smoking cessation and lipid management (Blenkinsopp et al., 2003). Central to implementation of these programs was appropriate training which the authors recommend should be integrated into undergraduate programs (Blenkinsopp et al., 2003). Research has shown that pharmacists can improve glucose monitoring amongst diabetics (Dixon, Hall, Knowles, & Sanders, 2000). This report has concentrated on some of the key health promotion areas that pharmacies have addressed including screening programs, smoking cessation, physical activity, diet, alcohol use and mental health.

CVD and Diabetes Screening

One of the issues with cardiovascular intervention is whether to adopt a population approach and shift the general population towards better health or to target an at risk population (Berenson, Arbeit, Hunter, Johnson, & Nicklas, 1991; Luepker & Perry, 1991; NHMRC, 1996). Luepker and Perry (1991) recommended only the community approach as the screening of an at risk group may have deleterious effects. These effects could be the consequences of being labeled with an illness and given the number of false positives with tests such as cholesterol levels, their promotion of

anxiety may be counterproductive (NHMRC, 1996). A well controlled study with middle aged men found that risk profiles and cholesterol measure feedback did not motivate healthy behaviour change and that the small gains in healthy behaviours from individualized education messages may not justify the costs (Hanlon, McEwen, Carey, Gilmour, & al, 1995). If this strategy is pursued it would need to be part of a broader health promotion strategy (Hanlon et al., 1995).

Pharmacy led screening activities have been questioned in relation to the ability of one off tests to accurately measure physiological parameters that have diagnostic purpose and the economic viability of pharmacy screening (Allison, Page, & George, 1994). From a study of 77 pharmacies in Sheffield, Allison et al. found that excluding pregnancy testing, only 9% were offering a screening service such as blood cholesterol or BMI. They concluded that given the uncertainty regarding the tests usefulness, potential for inappropriate referrals to the doctor and infrastructure costs required for taking blood tests in a pharmacy, provision of screening for CVD within a pharmacy was 'unnecessary and undesirable'. To date pharmacies have been used successfully as a site for CVD screening. It will also be argued that within a rural setting pharmacies can also have a broader role in preventing CVD through exercise, smoking and diet related promotion activity.

Krass, Hourihan and Chen (2003) evaluated a screening program for CVD and diabetes in four rural towns in NSW. The justification for the program was the high rate of CVD and diabetes, particularly in rural areas, and the accessibility of pharmacy practices as a health promotion site. Previous research has found that health consumers would welcome more screening and health promotion services in community pharmacies (McElnay, Nicholl, & Grainger-Rousseau, 1993; Passmore & Kailis, 1990). There were 389 participants that attended the initial screening which took approximately 30 minutes. Their BMI, blood pressure and cholesterol levels were measured and participants were also questioned about their past and family medical history, smoking status, alcohol intake and diabetes risk factors. After the screening procedure, participants received tailored health information according to their risk profile. This information had been sourced from professional health organisations and included Prochaska and DiClemente's (1983) stages of change model.

Around 15% of the sample required referral to a GP for elevated risk profile (Krass et al., 2003). The overwhelming majority of the sample, 88%, had at least one elevated figure on a risk factor. Around 65 to 70% of participants received dietary advice, 45% received advice on exercise and the proportion of smokers, 16%, also received cessation advice. A three month follow up was implemented to detect any change in these modifiable risk factors and 240 of the 282 participants requiring a follow up attended the follow up visit. Of these 240 participants, there was a decrease in prevalence of self reported inadequate physical activity and a reduction in prevalence of elevated cholesterol levels and elevated blood pressure. There was no change in smoking rates.

The participants from the initial screening were later contacted to ascertain their level of satisfaction with the advice given (Krass et al., 2003). Participants rated the diet and smoking advice as very helpful yet were less enthusiastic about the exercise advice. While it was acknowledged that the study sample did not adequately capture the group most at risk, 70% were female and the smoking rate was 16% compared to rural population figures of 26%, there was some indication that early screening and appropriate provision of preventive health services could have a positive health impact for rural communities.

The pharmacy has also been investigated as a site for screening for osteoporosis using bone mineral density screening (Cerulli & Zeolla, 2004). Women made appointments to attend a community pharmacy and the 140 participants provided immediate and three month feedback via self completed questionnaires. The results were positive with the clear majority supportive of the screening and motivated to talk with their physician about osteoporosis. At the 3 month stage, 11% reported improved physical activity levels and 30% reported improved dietary intake relevant to the condition. In addition, 40% of participants were willing to pay for such a service and based on this support and the costs associated with running the program, the authors concluded that providing this service would be economically viable. As the authors noted, the difficulty with this program is that the screenings were conducted in a day or two and required the constant work of a pharmacist and assistant which might be difficult to organise within a practice setting.

In a preliminary report on the project the authors concluded that some level of remuneration is required for the program to become sustainable (Hourihan, Krass, & Chen, 2003). Krass et. al. (2003) concluded that the program had been subsequently implemented in nine pharmacies in rural NSW so this issue of remuneration must have been accommodated. The last point of the article was that for such a program to be successful requires sufficient training for pharmacists in behaviour-change techniques. Training in behaviour change, however, is only one facet of health promotion work and would be insufficient in equipping pharmacists with health promotion expertise.

Smoking Cessation

Tobacco smoking should be considered a high public health priority by community pharmacists. It is the largest single preventable cause of death and disease in Australia and is linked to an extensive range of health conditions most notably lung cancer, heart disease, stroke and chronic obstructive pulmonary diseases (Winstanley, Woodward, & Walker, 1995). Passive exposure to tobacco smoke has also been related to increased risk of cancer and heart disease (Winstanley et al., 1995). Winstanley et al. (1995) also reviewed evidence that passive smoking may cause acute irritant effects on the airways of people that have asthma.

Pharmacies are one of the most accessible health professional contact points for people trying to quit smoking. Due to the non-prescription status of nicotine replacement therapy (NRT) pharmacists are potentially the only health care providers that come into contact with people attempting to quit. As such they have a unique opportunity to provide cessation advice and support to enable a person to quit successfully. However, current research would indicate that pharmacies are not capitalising on this health promotion potential.

A recent study sought to investigate how receptive smokers would be to advice and counselling from a pharmacist (Hudmon, Hemberger, Corelli, Kroon, & Prokhorov, 2003). They interviewed by telephone 103 participants that had recently bought NRT. There were 175 items in the survey including socio demographic items, smoking history, perceptions of the role of a pharmacist in relation to smoking cessation and perceived usefulness of this role, and preferred characteristics of cessation counselling

or advice. Of the 103 participants, only five had been asked whether they smoke by a pharmacist and only two had received advice in relation to their smoking from a pharmacist.

The participants thought that it was appropriate for pharmacists to advise about smoking and the overwhelming majority thought that advice from a pharmacist on smoking cessation would be useful (Hudmon et al., 2003). Around half of the participants were willing to pay \$10 for a counselling service and two-thirds would utilise a counselling service if it was free. The preferred length of consultation and number of consultations varied considerably among participants and the authors concluded that individually tailored programs would need to be adopted. In the discussion Hudmon et al. (2003) also highlighted that around one-half of participants did not read or only skim read the directions that accompanied the NRT material. They suggested the low figures for reading the directions might explain some of the findings on low adherence rates for NRT regimens. A counselling role from a pharmacist could also address issues of medication concordance.

Comparable research has also found low counselling rates from pharmacy services in relation to smoking cessation. Williams, Newsom and Brock (2000) contended that pharmacists have a vital public health role in reducing smoking rates and so it was considered important to obtain an idea of current levels of smoking cessation advice among community pharmacists. From the 1487 surveys mailed out to pharmacists in North Carolina and Texas, 609 (41%) were returned and analysed. It was discovered that only 7.5% of pharmacists enquire about a customer's smoking status. If their smoking status has been identified, then 45.2% of pharmacists reported providing advice on smoking cessation. This advice was most commonly related to a purchase of a NRT. In their discussion the authors commented that lack of training in behavioural change techniques and the awkward situation of some pharmacies selling cigarettes (which has been shown to increase job dissatisfaction and stress), means that many pharmacists do not currently have the confidence and skills to address smoking cessation within their practices. Williams et al. finish their article by recommending that pharmacists be placed as key providers of smoking cessation information which can be achieved by increased training and education in health promotion.

One study that conducted an intervention program for smoking cessation in pharmacies produced a significant difference in cessation rates (Sinclair et al., 1998). The study was based on a number of indicators that suggested pharmacies would be appropriate places for smoking cessation advice. A key reason was that previous research had indicated that people attempting to quit using nicotine replacement therapy (NRT) have appreciated counselling from pharmacists that they have received and a quarter did not recall any counselling which they would have appreciated. It was also discovered that NRT users would prefer individual counselling rather than a support group and that brief intervention is more cost effective than clinical based intervention on a population basis.

Thirty-one intervention pharmacies and 29 control pharmacies participated in the study (Sinclair et al., 1998). A two hour training workshop was organised for the intervention pharmacies and it covered the stages of change model, particularly focusing on the preparation, action, maintenance and relapse stages (Prochaska & DiClemente, 1983). It was decided that as the customers purchasing NRT had already moved from the pre-contemplation stage this would not be covered. By use of brief questioning it was hoped that intervention pharmacists and assistants could uncover a customer's particular stage of change and thus provide specific advice to assist in quitting smoking. Control pharmacies provided standard professional support. Participants in the study were recruited through the pharmacies. There were 224 customers recruited through the intervention pharmacies and 268 recruited through the control pharmacies. There were no significant socio-demographic characteristics between the two groups.

The recruited participants were contacted by the researchers one month, four months and nine months subsequent to visiting the pharmacist (Sinclair et al., 1998). It was found that intervention customers were more likely to have abstained from smoking at each of the follow-up points with the last at nine months of 12% of intervention and 7.4% of controls having abstained although this difference was not statistically different at a 5% alpha level. Twenty-five participants from each group were randomly chosen for follow-up interviews to ascertain level of satisfaction with the service they received. Almost all the participants rated the counselling and advice they received as helpful and a useful support for stopping smoking. When comparing to

previous advice given, the intervention group were significantly more likely to say that the support was better than previous whereas the control group were more likely to comment that the support was the same as previous. The authors concluded that pharmacists have an important role in achieving the national smoking cessation targets and thus this program should be expanded.

Another randomised controlled study did demonstrate significant differences in smoking cessation rates between those receiving pharmacy advice compared to controls (Maguire, McElnay, & Drummond, 2001). In this study, there were 265 smokers recruited who received a pharmacy based smoking cessation program labelled PAS and 219 control participants. In the PAS model pharmacists provided a 10 to 30 minute consultation in which personal and medical information was recorded and motivations and goals discussed and recorded. The program included a weekly follow up for 4 weeks and a monthly follow up for another four months but the monthly follow ups were not acted upon by the participants. At each of the follow up points the PAS participants displayed higher abstinence rates with the 12 month end point of 14.3% for the PAS participants and 2.7% for the controls. This was a significant difference although the abstinence rate for the PAS group of 14.3 was similar to the study of Sinclair et al. (1998) of 12%. Interviews with some of the participating pharmacists found that they viewed this work as part of their role and that lack of time and remuneration were the biggest barriers. It was concluded by Maguire et al. (2001) that pharmacies are well placed to offer smoking cessation services although given the difficulty they had in recruiting pharmacists to the study it is unclear as to the proportion that would be interested in providing this service.

An Australian study conducted through The Queen Elizabeth Hospital examined whether a smoking cessation program they have successfully run through the hospital could be offered in a community pharmacy (Vial, Jones, Ruffin, & Gilbert, 2002). All participants were recruited through the hospital and placed in one of three groups. The control group received an information brochure about quitting. Both the community pharmacy and hospital groups used nicotine patches, an initial consultation of 45 minutes covering smoking cessation issues and weekly check ups for a maximum of 16 weeks. The difference between these groups was the location of the follow up. The intention was to recruit 300 participants, however, only 102 were eligible and

volunteered to participate and of these only 64 were able to be contacted at the 12 month follow up. This reduced the power of the study and thus although the two intervention groups had higher abstinence rates at the 12 month follow up (hospital 38%, community pharmacy 24%, control 4.6%) this difference was not significant.

A 2004 review of pharmacy led smoking cessation programs found that the studies of Maguire et al. (2001) and Sinclair et al. (1998) were the only published randomised controlled studies (Sinclair, Bond, & Stead, 2004). It was concluded in this review that the pharmacist may have a positive effect on smoking cessation rates and that issues of remuneration and time constraints need addressing and that a study outside of the UK community pharmacy needs to be undertaken (Sinclair et al., 2004). There are compelling reasons why pharmacies should be involved in smoking cessation initiatives. The data indicates, however, that involvement in smoking cessation counselling is low even though customers would appreciate this advice. The study of Sinclair et al. (1998) suggests that pharmacies can produce change given the right training. Pharmacists having received training on smoking cessation are more likely to counsel smokers than those who have not training (Aquilino, Farris, Zillich, & Lowe, 2003).

A review of smoking cessation interventions for use in health care settings concluded that pharmacies have an important and obligated role in providing at least brief cessation advice (Miller & Wood, 2001). These conclusions were based on the large number of people utilising pharmacies and their exclusive right to sell NRT and Zyban®. Based on a review of the literature, there is benefit in providing behavioural interventions in conjunction with NRT (Miller & Wood, 2001). People who use support in trying to quit are twice as likely to succeed compared to those who do not access support and pharmacists are well placed to provide brief smoking cessation which has proven to be effective in assisting people to quit smoking (Miller & Wood, 2001). Miller and Wood (2001) recommend that pharmacists apply the 5As approach in assisting people to quit smoking. The QUIT movement in Australia has recently introduced a training program specifically for pharmacists. Access to this training and appropriate reimbursement for the extra time taken to perform smoking cessation counselling would be required for wider implementation of such a program.

Alcohol Use

A review of treatments for alcohol problems concluded that brief alcohol interventions have been shown to be effective (Shand, Gates, Fawcett, & Mattick, 2003). This brief type of intervention can be opportunistic and targets risky drinkers who may be unaware that they are drinking at dangerous levels and aims to encourage people to reduce their consumption (Shand et al., 2003). Shand et al. (2003) provided brief intervention tips based on a review by Bien, Miller and Tonigan (1993). This included information on using empathy to connect with the person and providing choices to limit alcohol consumption. They concluded the section on brief interventions by listing appropriate settings and unfortunately, pharmacies were not mentioned by the authors. However, pharmacies have been successfully used in Australia for alcohol campaigns (May, 2004).

The Pharmacy Guild of Australia conducted a nation wide campaign on safe alcohol consumption (May, 2004). On the inside cover of a pharmacy prescription folder there was a drink chart depicting standard drink sizes and on the outside a safe drinking message and general health guidelines on safe drinking. As well as providing advice on general consumption issues, a pharmacist was also in the position of being able to advice on issues relevant to medication and alcohol interactions. Evaluation revealed that both clients and pharmacists felt the folder increased the ease and likelihood of conversations relevant to alcohol consumption. There was also an increase in knowledge of safe levels of alcohol consumption.

Physical Activity

Moderate levels of exercise have been shown to reduce the risk of cardiovascular disease (Kannel & Wilson, 1995). Exercise is thought to reduce blood pressure, lower levels of LDL and raise HDL. Exercise might improve mood which could have a positive effect in decreasing risk status. One study found that elderly people had significant decreases in tension, depression, anger and fatigue following exercise (Pierce & Pate, 1994). Physical activity participation in older age has been shown to reduce the risk of disability and mortality (Malmgren, Koepsell, Martin, Diehr, &

LaCroix, 1999). Engaging in physical activity has also been linked with a lower risk of diabetes, falls and some cancers (Bauman, 2004). Determinants of exercise include peer and family support, enjoyment, noticing the positive benefits, perceived good health, time and facility availability and stress (Pate et al., 1995). Baum and Poluszny (1999) note that exercise decreases stress but that stress reduces physical activity. Knowledge of health and exercise and advice to exercise have been poor predictors of exercise participation (Pate et al., 1995).

It is clear that participation in physical activity is one of the key determinants in preventing ill health and disability and pharmacists can play an important role in promoting physical activity participation, particularly with their more elderly patients. Pharmacists have a key role in promoting exercise for older people and lowering their risk of major illnesses and disabilities (Emmerton, 2002). Emmerton (2002) describes a case study of an older man, aged 72, who was currently on antihypertensive medicine and had recently increased his weight due to a sedentary lifestyle. Using recommendations on safe exercise options for older people, the author outlined motivational tips and monitoring guidelines that a pharmacist could use to assist a patient in adhering to an exercise regime.

Gowan and Roller (2003) provide exercise recommendations for women on different medications and with different medical conditions. The authors comment on the significant opportunity that home medication reviews provide in offering holistic advice and support. Gowan and Roller note that often pharmacists are reluctant to provide advice because they see little commercial benefit. Again this relates to the need to remunerate cognitive based services to encourage and support health promoting pharmacist practitioners. Interestingly the authors note that some pharmacists have established walking groups which encompass physical and social health benefits. Such an intervention, a hallmark of community health programs, represents a more community / environmental strategy. Rather than just offering advice to exercise the pharmacist is also providing a safe environment in which to pursue this activity. This kind of activity could be easily incorporated into a health promoting pharmacy practice and if properly evaluated support the health promotion suitability of rural pharmacies.

Diet

Obesity has become a major health problem in Australia. Rising obesity levels have provoked the government to make this a priority health issue. In 1999-2000 around 67% of adult males and 52% of adult females were either overweight or obese and the incidence of overweight children and adolescents has doubled in the last 15 years (Offord, 2004). A taskforce report recommended an approach to curbing this epidemic that created living environments that supported healthy behaviours as well as programs that encourage healthy behaviour adoption. Pharmacists are very well placed to offer the counselling / social support, behavioural modification and appropriate referrals that is required to respond to this health issue. As discussed, rural pharmacists could also have a strong voice in promoting healthy environments, which the taskforce report identified as a key plank of a comprehensive health promotion approach.

Recent trends in both Australia and America suggest pharmacies could be appropriate sites for weight loss and management programs. The March 2005 recent issue of the Australian Pharmacist was devoted to the role of pharmacy in addressing weight management. The lead article by Berbatis (2005) used data from the National Health and Medical Research Council's (NHMRC) guidelines on obesity to outline the dramatic rise of obesity within Australia and its poor position relative to other countries (National Health and Medical Research Council (NHMRC), 2003). Berbatis also highlighted its causal role in many diseases. He then went on to describe current weight loss programs and options within Australia such as the comprehensive lifeweight program which in January 2005 had been adopted in more than 3,200 pharmacies. The product associated with the lifeweight program, Orlistat®, is the only non-prescription pharmaceutical for weight management that is approved by the Therapeutic Goods Administration (Berbatis, 2005) and compares favourably to other anti-obesity drugs in relation to effectiveness and side-effects (Nand, 2002). The March edition of Australian Pharmacist also provided practicing pharmacists with counselling tips for obesity (Basger, 2005), information on healthy diets (Barnes, 2005) and ideas for community health initiatives such as supermarket tours and cooking demonstrations that have been used in rural and remote locations (Leon, McNamara, & Larkin, 2005). Each of these articles highlights the important

contribution pharmacy can make to weight management and it is critical that research investigates the most appropriate models that community pharmacists can adopt to address this health problem.

While previous research has found that dietary programs undertaken by physicians, dietician led clinics and university programs have produced significant and maintained weight loss among the participants, pharmacies have not been trialled as a potential site for a weight loss program and an American study investigated the suitability of a pharmacy as a weight loss program setting (Ahrens, Hower, & Best, 2003).

Ahrens et al. (2003) recruited 95 participants who met certain health and demographic characteristics such as between the ages of 35 to 65 years and a BMI of between 25 and 32. These participants were randomly allocated to either a 12 week MR program or a 12 week reduced calorie diet program. All participants completed a patient assessment from one of the two participating pharmacies. The consultation lasted approximately 45 minutes and covered physiological and behavioural measures such as blood pressure, lipid concentrations and diet and physical activity history. The pharmacist then provided advice re diet, exercise and behaviour modification strategies with accompanying handouts for the participants. During the 12 week program the participants returned for a 15 minute check up every 2 weeks. After the 12 week program participants were followed for a further 10 weeks to monitor maintenance of any weight loss.

Of the 55 participants that completed the 22 week study, there was a significant reduction in weight for both groups across the 12 week program which was maintained across the 10 week follow up (Ahrens et al., 2003). There were no significant differences between the two groups. In respect of biomedical markers, there was a significant decrease in blood pressure across the 22 week period. Due to the easily accessible nature of pharmacies and the minimal time involvement required for this program, Ahrens et al. concluded that pharmacies are ideally placed to provide weight management programs and that pharmacists have a key role in provision of weight loss information, particularly in rural areas.

Offord (2004) reports that a similar weight loss program is being conducted in Penrith, NSW, although this project has not yet been evaluated. The trial is different in respect to a dietician has been employed through the pharmacy setting and the program is self funding through charging the customers. The coordinator of this study, Mr Ferguson has an aim that these services could be funded through Medicare or similar service through the Federal Government (Offord, 2004).

While a weight management program is an important health promotion initiative, the rural setting may also accommodate pharmacy involvement in more preventative and public health work. Risk factors for cardiovascular disease and disease progression are present before adulthood. The fatty streaks in atheromas begin in childhood and the formation of plaques in the arteries is present in people in their twenties (Strong, 1991). Strong (1991) argues for intervention and education programs to be aimed at young adults and children. Various Australian and State health authorities have produced their own school based dietary programs and recommendations. The key requirement is that any curriculum component is integrated into a whole school environment approach that addresses canteen policy, parent involvement and includes such initiatives as designated fruit eating time within the classroom program. These resources and supports are easily available to metropolitan schools but maybe lacking in smaller isolated communities where specialist health promotion advice is lacking. Thus the potential is there for pharmacies to liaise with the school community and implement a health promotion program through the local school. This population approach would augment well with a weight management program conducted through the pharmacy setting.

Social structures contribute to diet and obesity of which community pharmacists would need to be aware. Obesity is more prevalent in lower socioeconomic groups (Brownell & Wadden, 1992) and people from low socioeconomic backgrounds are more likely to die from cardiovascular disease (National Health Strategy, 1992). Infants from lower socio-economic areas are less likely to be breastfed or for shorter durations, and children, adolescents and adults from lower socioeconomic areas are likely to have poorer dietary habits and behaviours (Turrell & Kavanagh, 2004). These behaviours are closely interrelated with material disadvantage such as low income and psychosocial stresses such as anxiety and low sense of control (Turrell &

Kavanagh, 2004). Turrell and Kavanagh (2004) contend that these issues need to be considered when designing behavioural interventions and that the program is appropriate for the context in which people live their lives.

Dietary habits are determined by food availability and Robinson and Booth (2004) illustrate some environmental settings health promoting dietary interventions. These include signs on supermarket shelves indicating healthy options, changes to the way food is prepared in retail food outlets and increased availability of healthy food options in places like school canteens.

Sexual Health

A controlled study of access to emergency contraception comparing access from clinics, pharmacies and an advance provision group found that increased access does not increase the likelihood of unprotected sex and the spread of STIs and HIV/AIDS (Raine et al., 2005). In Raine et al.'s (2005) study ability to obtain emergency contraception was not related to a higher percentage of use than access through a health clinic although it was noted that access through the clinic was higher in their study relative to other studies. It was speculated that as the participants in their study were initially recruited through a clinic this may account for their higher rates and thus may not generalise to other women (Raine et al., 2005). A study conducted in France found that women who had used EC were less likely to have consulted a doctor in the preceding 12 months and more likely to have had an STI or unwanted pregnancy (Bajos, Goulard, & Job-Spira, 2003). It was concluded that if EC is to be available through pharmacies than at the least they should provide information material about checking for STI as counselling may not be effective or appropriate within a pharmacy environment (Bajos et al., 2003). A study conducted in Pennsylvania where a researcher pretended to require information about EC found that only 35% were able to provide EC stock on that day and that lack of knowledge about EC was related to low proportion of dispensing (Bennett, Petraitis, D'Anella, & Marcella, 2003).

As pharmacists have been recommended to contribute towards the prevention of HIV/AIDS and hepatitis B and C, a survey was conducted among pharmacists in Grampian about their current practice and confidence in giving advice in relation to

HIV and hepatitis B and C (Watson et al., 2003). Although almost all pharmacists stocked condoms and lubricants, less than half stocked extra strong condoms which are recommended for anal sex and only two stocked dental dams which offer protection during oral sex. Knowledge of condoms and ability to answer questions about them has been previously pointed out as an important aspect of pharmacy practice (Billow, 1992). In relation to knowledge and attitude, the study found that pharmacists lacked knowledge in relation to hepatitis B and C and the majority felt that they could have a greater role in preventing these infectious diseases. A private area for consultation and funding for training were two barriers that currently impeded greater health promotion work in this area. Information about sexual health needs to be culturally sensitive and explicit (Mitchell, 2004). By explicit, Mitchell (2004) explains that information should avoid confusing euphemisms and be direct in approach. If this information upsets certain people, then she recommends adopting a narrowcast communication strategy to target a particular population.

Skin Cancer

A project conducted in Alberta, Canada, found that community pharmacists were keen to be involved in 'sun smart' campaigns (Leinweber, Campbell, & Trottier, 1995). A survey of community pharmacists prior to and post a sun smart campaign was undertaken to assess the suitability of pharmacies as a health promotion site (Leinweber et al., 1995). The campaign materials focused on avoiding the midday sun, covering up when exposed to the sun and use of sunscreen. The survey prior to the campaign revealed that pharmacists have a strong knowledge of skin cancer prevention. Time pressure on the pharmacist and perceived time pressure of the customer were barriers to discussing skin protection topics. The survey post the campaign revealed that 34% of pharmacists thought the campaign increased their level of contact with the customers. The majority of pharmacists received positive feedback from customers and 97% thought the campaign should be repeated the following year. It was concluded that pharmacies are an appropriate site for health promotion with high levels of knowledge and a willingness to participate evident from the pharmacists surveyed. How such a campaign influences behaviour change was acknowledged as requiring further study.

Emotional and Social Health

It has been predicted that by 2020 heart disease and depression will be the two most common world wide causes of disease burden. Pharmacists can contribute towards better management of mental illnesses as illustrated by Ron Pohar, manager clinical pharmacy services at Central Care Medical Pharmacy in Edmonton (Bond, 2002). Pohar has developed a disease management program for people affected by depression and addictions. His program includes a symptoms diary requiring a rating of signs of depression (energy levels, suicidal ideation, sadness etc.) on a scale of 1 to 10 and a counselling component in the causes, symptoms and role of medication for depression and its relationship with addictions.

As reviewed, client control over health and medical decisions is very important in both recovery from acute and management of chronic illness. Pharmacists have a very important role in facilitating medication concordance through allowing the patient to actively make decisions based on the advice and encouragement of a pharmacist. Chewning and Wiederholt contend that there is a lack of information on how health care providers other than the physician relate to consumers and influence concordance rates (Chewning & Wiederholt, 2003). They also recommend the development of protocols and tools to detect concordance rates and involvement in decision making (Chewning & Wiederholt, 2003). This project will test a medication concordance model for patients with depression given the escalating rates of antidepressant usage.

Depression has moved from being the 10th most common problem seen in general practice in 1990 to the fourth most common by 1998-99 with anti-depressant usage three times greater in 98-99 than it was in 1990 (McManus et al., 2000). A qualitative study investigated feedback and perceptions on information about depression which is presented to people taking antidepressant medication (Grime & Pollock, 2004). It was found that people were not satisfied with the biochemical explanation and their views on the aetiology of depression were more complex than what was presented in the leaflet. Further issues of individual variability, downplaying of 'side-effects', and difficulties with self identity when taking mood altering drugs was not covered within the information leaflet. Concern was also expressed about the difficulties of monitoring mood changes and whether this represents improvements or minor fluctuations. While concerns are raised that presenting this information will reduce

medication concordance and increase patient anxiety, the opposite results have been found. It was concluded that offering a more complex and patient oriented information leaflet would assist the patient in raising issues of concern with their health professional presented.

A pilot study conducted with older people found that there was support amongst the participants for sessions related to medication adherence (Higgins, Livingston, & Katona, 2004). Termed 'concordance therapy' a psychiatrist delivered a combination of cognitive behavioural and motivational interviewing techniques over 3 to 4 sessions of between 15 to 45 minutes in length. The topics covered were patient's attitude towards medication, ambivalence and rationale for treatment. The small sample size, 10 in the intervention group and 9 controls, was too small to detect any significant change. However, the goal of the study was to ascertain its practicability and from the positive feedback of the participants, it was concluded that the model should be tested on a larger sample.

A larger medication concordance study involving pharmacists found that there was a significant difference in adherence rates between the intervention and control groups (Finley et al., 2002). Two pharmacists with experience and training in psychiatric pharmacy delivered an intervention program centred on medication adherence and management issues. They were also granted approval to modify anti-depressant dosage or add ancillary medication. Participants in this group received an initial consultation of between 20 and 30 minutes after receiving their first prescription which consisted of providing health and personal information and receiving education and advice on medication and depression management. Follow up consisted of scheduled visits at weeks 6 and 24 and 5 to 10 minute phone conversations at weeks 1, 2, 4, 10 and 16. At 6 month follow up, the 91 intervention participants had significantly higher medication adherence rates compared to the 124 control participants who had received regular care. In addition the intervention group had significantly less primary care visits in the 6 month period. As previous studies have not produced such strong differences and adherence to antidepressant medications is often low, it was concluded that the specialist pharmacy advice on medication management could be a key reason for the success of this program.

Consumer Participation

Participation in health services is noted as an important predictor of good health outcomes for consumers (Consumer Focus Collaboration, 2001) and aids equitable and effective health planning and evaluation (Department of Human Services Victoria, 2000). Meaningful participation requires careful analysis of why the organisation is seeking participation and from there adopting appropriate participation processes. Employing a participation technique without first thinking about the objectives of participation will most likely result in flawed participation processes (Department of Public Health Flinders University & The South Australian Community Health Research Unit, 2000).

A number of public institutions have recently published guides and resources on the topic of effective participation processes within health services. The Consumer Focus Collaboration is a national body established in 1997 that has representatives from consumer, professional and private sector organisations, and all health departments. They have produced a number of reports funded by the Commonwealth Department of Health and Aged Care including, 'Improving health services through consumer participation,' (Department of Public Health Flinders University & The South Australian Community Health Research Unit, 2000) which provides a one to two page summary of 43 different participation strategies that health organisations can use. The strategies are listed in order of increasing strength of participation from information provision to community control models. The following headings outline some of these broad approaches.

Information Provision

Information about services, health conditions, and treatment options is noted as a necessary adjunct to other participation strategies (Department of Public Health Flinders University & The South Australian Community Health Research Unit, 2000). Current information provision strategies include mail outs on programs, newspaper advertisements, newspaper articles, community notice boards, newsletters, printed and electronic service/community directories, pamphlets, and information sheets. Apart from community and women's health services, the majority of primary care services have largely utilised information provision strategies in engaging consumers (National Resource Centre for Consumer Participation in Health, 2000). Even in a coordinated

care trial that was designed to promote service and consumer partnerships many trials used information provision as their main consumer engagement strategy(National Resource Centre for Consumer Participation in Health, 2000).

Evaluation

The resource guide lists a number of evaluation strategies that health services can use (Department of Public Health Flinders University & The South Australian Community Health Research Unit, 2000). Health services can utilise a range of evaluation strategies from satisfaction surveys, small group discussions, annual forums, reviews of individual program plans, consultation on leaving the service, conversations about current programs, and follow up procedures via telephone. Complaints or lack thereof have also been used as a way to gauge satisfaction with health services. Strategies for organisational decision making such as consumer consultants, consumer representatives on committees, and advisory committees are also vehicles through which to gain feedback on current service provision. Of importance for this project is to value consumer input into evaluation:

“Evaluation should reflect the partnership between consumers and providers. Avoid falling into the trap of using empowerment ideas for practice and being the sole expert when it comes to evaluation.”(Department of Public Health Flinders University & The South Australian Community Health Research Unit, 2000)

Individual Client Consultation

Acknowledging the central role of the client in making decisions about their health care is very important for promoting positive health and recovering from ill health. There is evidence demonstrating better prognosis when people are put in control of their care. Research indicates that self-management programs have been related to better health outcomes for people with asthma, diabetes, heart disease, lung disease, stroke, and arthritis (Department of Public Health Flinders University & The South Australian Community Health Research Unit, 2000). Governments have also shown an interest in consumer driven models of health care given the potential for these models to save money from the treatment and management of chronic conditions (National Resource Centre for Consumer Participation in Health, 2000). Focus group

consultation with people with disabilities found that having control over health decisions was one of the key indicators of satisfaction with services with coordinated care being the other key indicator (Kroll, 2003). There have been recommendations for research into pharmacists' communication strategies with patients and this relates to medication concordance (Chewning & Wiederholt, 2003).

Many health services have charters and policies that emphasise involvement in health decision making. Equally important in this process is clients providing accurate information and assuming responsibility for decisions regarding their health care which is also mentioned in some charters. The Consumer Focus Collaboration rate policies much more highly than charters as they tend to integrate participation within the organisation and provide a platform for other organisation practices and processes (Department of Public Health Flinders University & The South Australian Community Health Research Unit, 2000). One of the guides for involving consumers at a clinical level is to regularly reassess care as appropriate (Department of Public Health Flinders University & The South Australian Community Health Research Unit, 2000). Complaints procedures are common within the agencies and one of the recommendations from the Consumer Focus Collaboration is that complaints should be encouraged and people trained to deal with complaints as they are a valuable resource for service development (Department of Public Health Flinders University & The South Australian Community Health Research Unit, 2000).

Organisational Decision Making

There are a number of avenues by which agencies seek input into planning decisions. Quite a few health agencies engage in community development projects and some of the agencies have locally elected boards representative of a community control model (Department of Public Health Flinders University & The South Australian Community Health Research Unit, 2000). Engaging the broader community requires an understanding of the various community leaders and how to access marginalised groups (Arole, Fuller, & Deutschmann, 2004). Many mental health services employ consumer consultants whose roles include advocacy, listening to complaints and ideas from consumers and raising these issues with management, representing consumer views on staff committees and public speaking on mental health issues. The strategies of advisory groups and consumer representatives on committees tend to work best

when in combination as this promotes effective communication. An advisory group that did not have representatives on committees of management would limit means of communication.

These strategies, consumer representatives on committees or advisory committees, seem to be employed well when they are based on specific groups or issues, such as people with vision loss, carers, people with an intellectual disability, or people with a psychiatric disability. These groups tend to have more permanent relationships with health services. Mental health services also have a history of including consumer run services where the consumers organise and conduct the service (Holter, Mowbray, Bellamy, MacFarlane, & Dukarski, 2004). Movements are underway to provide more rigorous evaluations of such programs (Holter et al., 2004). The New Zealand government introduced health reforms in 2001 designed to increase Maori involvement in health service governance by designing regional health boards that would have a minimum number of Maori board members (Boulton, Simonsen, Walker, Cumming, & Cunningham, 2004). Some member agencies have volunteer representation on central committees and Boards of Management. Ongoing support and continual recognition is deemed essential for retaining volunteers within an organisation.

Some of the larger organisations or services that deal with people for very specific time periods tend to employ broader based consumer/community engagement strategies. These consultations can take the form of discussion groups, focus groups, or forums. These consultations included the views of older people, parents with mental illness, and ethnic groups. The challenge for health services is how to act on the information that is being gathered. While there is increasing evidence of consultation with previously marginalised groups, it is not apparent within the research literature of how this information has been used to influence health and community services (National Resource Centre for Consumer Participation in Health, 2000).

Intake calls is another means of communication that can influence service provision and planning. Some agencies that have social policy units attached to their organisations have a means by which community voices cannot only influence current service provision but can influence what issues are presented at government levels.

Another method of involving consumers in decisions that affect the health service is through involvement on interview panels.

Consumer Participation in Pharmacy

At a national level, the Pharmacy Guild of Australia and the Pharmaceutical Society of Australia have worked with the Consumers' Health Forum of Australia (Consumers' Health Forum of Australia (CHF), 2002a). A report produced in January 2002 documented consultations with key consumer bodies on the most appropriate messages and dissemination strategies for the educating consumers on the 1999 Standards relating to Pharmacist Only and Pharmacist Medications (Consumers' Health Forum of Australia (CHF), 2002a). This was followed by a report in October 2002 of the most appropriate ways to evaluate consumer experiences of pharmacy services in relation to the new standards (Consumers' Health Forum of Australia (CHF), 2002b). Again from consultations with key consumer bodies, it was concluded that telephone interviews would be the most appropriate evaluation method (Consumers' Health Forum of Australia (CHF), 2002b). The questions included in the interview would need to be focus group tested and an indigenous consultant could design a questionnaire specific for aboriginal people (Consumers' Health Forum of Australia (CHF), 2002b).

Supporting a Health Promotion Pharmacy

As discussed there are many benefits in utilising pharmacies as a health promotion setting. However, based on their experience in Britain, Blenkinsopp et al. (2000) detail many of the barriers for pharmacists who wish to address health promotion. One of the main hindrances is lack of remuneration and efforts have been made to address this issue through allowances for certain health promotion initiatives such as promotion displays. Recent initiatives have seen the awarding of grants to pharmacists for participation in health promotion training and campaigns (Anderson, 2000). Ongoing training and support and funding allowances that recognise the holistic approach of health promoting pharmacists was mentioned as areas that need addressing.

Recent research suggests some consumers may be willing to support cognitive based pharmacy services. A survey of 90 participants from a community pharmacy found

that approximately half the sample were willing to pay more than \$10 for a single pharmaceutical care evaluation (Daftary, Lee, Dutta, & Olangundoye, 2003). Around 60% were willing to pay more than \$10 for an initial evaluation followed by a year of monitoring by the patient. Just over 90% of the sample thought these cognitive services should be covered by health insurance companies. These figures indicate high acceptance of the extended counselling role of the pharmacist yet around half the sample had not received any counselling about their medications and 61% reported never receiving monitoring services. Thus a system needs to be established that can reimburse pharmacists for cognitive based services.

It was reported in the Australian Journal of Pharmacy in 2004 that a proposal by the Pharmacy Guild has been sent to the Department of Veterans Affairs to fund a cognitive based service (Martin, 2004). This service would include counselling, medication management and screening / referral to GP services. Thus a movement towards funding non product based service is developing. Funding for such programs would seem to be based on a cost/benefit notion of providing services in the community to save on hospital admissions. Taking this logic further requires funding for pharmacy services that target people before they are clinically unwell. To ensure that health promotion services are recognised in future funding guidelines requires study into the health promotion potential, roles, and then evaluation of pharmacy based health promotion services.

A recent economic analysis of public health programs produced by the government found that the economic benefit of increased life productivity through lower smoking mortality and morbidity and lower health care expenditure greatly exceeded that spent on public health campaigns to reduce tobacco consumption (Department of Health and Ageing, 2003). It was concluded that the government saved \$2 for every \$1 spent on campaigns to reduce tobacco consumption (Department of Health and Ageing, 2003). As acknowledged attributing causal relationships with such broad social factors is difficult and those figures are based on a conservative estimate that public health campaigns contributed towards 10% of the fall in smoking rates. The same style of analysis was also performed for Coronary Heart Disease, HIV/AIDS prevention, immunisation programs, and road safety programs. HIV/AIDS campaigns also provided the government with a net saving in health care expenditure although

the other areas provided negligible to slight losses in relation to strict health care expenditure figures. However, as the authors contended, the return to society in relation to increased quality and quantity of life is the key outcome measure of which these public health campaigns measure very well (Department of Health and Ageing, 2003).

As has been discussed during this paper, current pharmacy based health promotion initiatives have concentrated on screening and information provision. This approach is best represented by the Pharmacy Self Care program which includes information provision with health cards and participation in health campaigns. There is also an education component on communication, counselling and referral skills via audio, video or written materials (Coper & Smeltink, 1994). Current membership of the Pharmacy Self Care Program in Western Australia is 38% (Pharmacy Self Care State Manager, 19th July 2004). Given that pharmacists participate in this program without remuneration, these figures would suggest a solid level of interest in health promotion.

The potential for action across a number of health issues is vast. Rather than overwhelming pharmacies with directive programs or addressing a specific issue, the project style advocated within this report is an investigation into the supports required for a rural pharmacist to become health promoting. The direction will be initiated in large part by the needs identified by the community and skills of the pharmacist. This will increase the chance of the project becoming sustainable. A style that allows for community input and pharmacy led direction also follows fundamental health promotion principles. Both the Ottawa Charter (WHO, 1986) and Jakarta Declaration on health promotion (WHO, 1997) put emphasis on involving communities and individuals in planning and responding to their health needs. Participation in health promotion programs could occur at the level of designing, implementing, or evaluating a health promotion program (Secker, 1998; Wass, 1994). The project will also investigate how pharmacists can work with other health professionals as partnerships are important for patient care (McGlynn et al., 2000) and health promotion.

The main thrust of this project will be to investigate how pharmacists can best perform a health promotion role and what supports are required. This will include an

examination of the amount of time required, type of activities, barriers, strengths, evaluation models, possible remuneration strategies and auditing requirements. Once a model is established that can support health promotion practice the opportunity is there to organise a number of issue based intervention studies to investigate whether rural based pharmacies can improve and promote the health of their communities.

Pilot Model

Community pharmacy is well placed to provide in store health promotion advice and to organise community activities that promote health. These two components were the central elements of the health promotion model that was piloted:

- Provide a grant of \$10,000 to participating pharmacies to provide in store health promotion programs and organise and/or sponsor community health events. The grant money was to cover both staff wages when doing health promotion work and for the costs of running health promotion community activities.
- Link community pharmacy with other health service providers in the area by organising and running joint health promotion initiatives
- Provide training and consultation support by the employment of a health promotion worker who will undertake periodic visits to the pharmacy, liaise with health promotion organisations, and provide as needed consultation support specific to each project.

Process indicators were used to measure this initial pilot so that a more refined model could be tested on a larger sample in a future project. Participant numbers accessing health advice, numbers participating in community activities, satisfaction with community activity (for an example see appendix A), and other service provider feedback on the model or program (see appendix B) were all used to gauge the success of the program and to refine the proposed model. In addition to implementing this model the pilot project had some aims in evaluation and the development of a training and resource guide:

- To provide a health promotion resource guide for rural pharmacies in Western Australia (see appendix C)

- To provide guidelines for follow up projects involving greater numbers of pharmacies addressing specific health issues (see recommendations section)

Participating Pharmacies

Recruitment of three pharmacies took place by invitation as while a brief tender process is the most equitable method, the advantage of a recruitment process is that those with a proven record of interest in health promotion can be involved without the long term negative effects of declining potential pharmacists that could be involved in future projects. The Pharmaceutical Care Program Manager, who had a particular knowledge of those pharmacies interested in extended pharmacy care roles, was consulted as to pharmacies that might be interested in joining the program. Her recommendations were cross checked with data from a rural pharmacy survey recently completed by consumers which included health promotion questions (Sunderland, Burrows, & Joyce, 2005). The three pharmacies were Augusta, Moora and Beverley. Unfortunately due to staff shortages, Beverley Pharmacy had to withdraw from the study and Corrigin and Pingelly were recruited to the study.

Assessing Consumer Health Promotion Needs

A questionnaire was developed to assess the health promotion needs of consumers (appendix D). There was a question in regards to provision of health information and another question on community activities to encourage respondents to think of the broader health role of pharmacies. This was modified in one of the pharmacies (appendix E). The intent of the questionnaire was to quickly gauge consumer perception of health promotion needs and thus it was kept to one page so that it could be completed in store. Table 1 provides information on the ages of respondents to the questionnaire.

Table 1
Age Frequency of Respondents

	Frequency	Valid Percent
18-35	10	9.3
36-45	12	11.2
46-55	11	10.3
56-65	22	20.6
66-75	27	25.2
76-85	23	21.5
86+	2	1.9
Total	107	

The most number of responses were received from people aged between 56 and 85 years of age. Of these respondents, 74.8% were female and 25.2% were male. Table 2 provides information on responses to the value of a pharmacy. The response rate was lower for this item as 18 respondents completed the shorter questionnaire (appendix B), however, the total number of responses is greater than 89 as participants could list multiple responses.

Table 2
Respondents' perceptions of the value of their local pharmacy (n = 89)

	Count	Percentage
Friendly service and help/advice	73	70.9
Locality/convenience	10	9.7
Cheap drugs	1	1.0
Availability of prescriptions/goods	6	5.8
Advice on medicines	3	2.9
Confidence in staff	4	3.9
Efficient / prompt	5	4.9
Above average	1	1.0

The perception of the pharmacy as friendly and helpful coincides with previous research on the pharmacists in rural areas who are often the most prevalent, approachable and accessible health care providers and people like dealing with pharmacists who they know well and who know them (Coburn & Ziller, 2000; Epstein, 1996; Mason & Svarstad, 1984; Selya, 1988). It demonstrates that pharmacists are well placed to offer health promotion advice should pharmacy customers be receptive to such communication.

Table 3 provides the responses to whether respondents thought any changes could be made to pharmacy service.

Table 3
*Respondents' perceptions of whether any changes could be made to pharmacy service
 (n = 89)*

	Count	Percentage
None	67	76.1
Everything in stock / wider range	4	4.5
More specials on 'Kooomea?'	1	1.1
Cheaper prices	2	2.3
More health advice given	1	1.1
More room	6	6.8
Automatic doors	1	1.1
Colour brick walls	1	1.1
Box for leaving after hours scripts	1	1.1
TV touch screen for looking up meds	1	1.1
Print outs on vitamin/mineral medication	1	1.1
Less time waiting for scripts (at times	2	2.3

Apart from one respondent there were no unsolicited requests for more health information. Tables 4 and 5 provide information on responses to whether customers would like more information on health topics and whether they would like health promotion activities to be organised in their town.

Table 4
Health Promotion areas that people wanted more information about (n = 107)

	Count	Percentage
None	63	57.8
Diabetes	6	5.5
Respiratory failure	1	0.9
Sleep apnoea / sleep disorders	2	1.8
Fosomax osteoporosis jaw	1	0.9
Asthma and asthma medication	7	6.4
Hormonal problems	1	0.9
Part of diabetes foundation and products	1	0.9
Medications	8	7.3
General information	1	0.9
Coeliac disease	1	0.9
Depression	3	2.8
Osteoporosis	1	0.9
Ovarian cancer	1	0.9
Restless leg syndrome	1	0.9
Heart disease	2	1.8
Mental illness	4	3.7
Obesity	4	3.7
Cancer	1	0.9

Table 5
Health promotion topics respondents wanted covered (n = 107)

	Count	Percentage
None	53	46.5
Exercise (walking or bike riding group)	6	5.3
Healthy eating / cooking class	18	15.8
Diet and osteoporosis	1	0.9
Quit smoking	11	9.6
Information centre on health and well-being	1	0.9
Already available in town	3	2.6
Exercise hydro pool	1	0.9
Staff do excellent job	1	0.9
Talks on medications	1	0.9
Falls prevention	2	1.8
Aids for independence	1	0.9
Weight loss	8	7.0
Diabetes awareness program	2	1.8
Asthma	1	0.9
Cancer	1	0.9
Dietician	1	0.9
Lifestyle	1	0.9
Yoga	1	0.9

Tables 4 and 5 show that the majority of participants were not desiring of more information from the pharmacy and did not perceive a personal need for a health promotion topic. Further two of the pharmacies in the project had great difficulty in getting customers to complete the questionnaire. From these results there was some interest in weight loss and healthy eating and hence became an in store focus for two of the participating pharmacies.

Health Promotion Initiatives

Health Promotion Screening and Counselling

Two of the pharmacies offered blood pressure testing and screening during the year. One of the pharmacies offered this as a two in-store health and screening days with approximately 60 people attending the days. During the days blood pressure and blood glucose were tested and information provided on diabetes, quitting smoking, healthy eating and cholesterol. Those with elevated blood pressures were referred to the doctor. Another pharmacy offered these services through a health nurse who worked in the pharmacy one day per month. As well as testing for blood pressure she organised a baby clinic: weighing babies and providing maternal and child health information. On average ten people made use of this service each month.

As healthy eating and weight loss was mentioned as a priority from some participants, two of the pharmacies offered to conduct dietary assessments based on a fat and fibre questionnaire (Wright & Scott, 2000) (appendix F). This questionnaire was chosen as it was one page and quick to complete which would make it appropriate within a pharmacy setting. Despite advertising within the store only four customers across the two pharmacies completed the questionnaire. To overcome this lack of interest a range of promotion materials on health behaviour topics printed on repeat prescription scripts were developed to encourage customers to discuss health behaviour topics with their pharmacy. Unfortunately due to time delays these were unable to be used in this project but will be tested in future projects.

Two of the pharmacies concentrated on delivering falls prevention advice and screening in support of a state-wide campaign on falls prevention. This involved delivering a risk assessment questionnaire and providing an action kit to older aged customers. Around 150 people made use of this service. As will be discussed in the next section, this in-store component was supported by organising home assessment and physical activity programs. Of the \$20,000 that was spent by the pharmacies on health promotion activities, $\frac{1}{4}$ was spent on in-store activities mainly on salary costs. Approximately 330 were reached through screening or information provision which equates to about \$15 per person. These figures do not include the salary costs of the health promotion worker as in this project the majority of his time was spent on research activities related to the project not consultation support.

Health Promotion Community Activities

There were a large number of community activities organised by the participating pharmacies during the year. Of the \$20,000 spent, $\frac{3}{4}$ was spent on community activities with costs differing according to the activity such as speaker fees, room hire, resource purchasing, and advertising costs for the activity. These different programs reached approximately 510 people which equates to \$30 per person. This probably represents an overestimate of reach cost per person as one of the activities involved training other health professionals to then run exercise classes for older people and the school children were only counted once even though they benefited from three programs sponsored by one of the participating community pharmacies.

Some of the local service providers that were involved in these activities provided feedback (appendix B). Each respondent commented that the program would not have run without the support of the pharmacy. There was strong support for a local grants program to be attached to the pharmacy:

“Local projects can offer programs / workshops specific to community needs, located in local town therefore no large travel distances or accommodation expenses for participants to pay and consider.”

“More awareness to public – support local community.”

“Our fitness group has grown in numbers and everyone is talking about it, as well as the other promotions and events the pharmacy has provided.”

“Provides financial support for schools on low budgets, links community services having a common focus, two way benefits and relationship – educate students and families.”

“Wider range of the community have easy and cheap access to health issues and information not otherwise easily available.”

The following list outlines the main initiatives undertaken:

Breast Cancer Awareness Day

Attended by 45 people, the speakers included past and present breast cancer sufferers, local cancer support staff members, and breast cancer workers from Perth. Topics discussed were how breast cancer is diagnosed, self-checks, medications used to treat breast cancer, and local support available. A sponsored lunch was provided, followed up with quiz activities and some money was raised for breast cancer research.

Stay on Your Feet Individual Reviews

Often home reviews only take place after someone has had a fall. One of the pharmacies sponsored an accredited HACC service provider to undertake home reviews for at risk clients who have not fallen but are at increased risk according to the risk assessment criteria. Thirty-one clients had their homes checked for hazards, their medications were reviewed by the pharmacist and they were encouraged to join the local seniors exercise classes. Where appropriate they were provided with equipment (such as the push-cush cushions to improve foot muscle tone) and were counselled on measures they could do to reduce their risk of falling and what to do in the event of a fall.

Falls Prevention Talks

A series of four one hour talks over a period of four weeks was organised for 30 older people who attended HACC programs. The talks concentrated on how older people could manage their own health and home to avoid falling. The last talk was provided by the pharmacist and concentrated on medication issues related to falls. Thirty people attended the talks and the nine people completed a post talk evaluation (appendix A). Of these, eight participants, 6 agreed or strongly agreed that they had the knowledge

to prevent a fall from occurring and 5 were confident that they could prevent a fall from occurring.

NoFalls Physical Activity Program

One of the participating pharmacies was used as a referral point and jointly sponsored a physiotherapy program for older people at risk of a falling. The program with 20 clients enrolled is running for 15 weeks comprising of a 45- to 50 minute class each week and a 25 minute home exercise program. The exercises are designed to increase strength and flexibility to reduce the risk of falls.

Men's Health Evening

An information evening was organised for men which was attended by approximately 100 people. Speakers were all local health providers including the local doctor, diabetes educator and pharmacist. A particular focus of the evening was mental health and the pharmacist presented a talk on anti-depressant medications to dispel some of the myths surrounding these medications.

Mental Illness Community Forum

Co-sponsored by the rotary foundation and one of the pharmacies, 60 people attended an evening forum on mental illness. A psychologist from a nearby major town spoke about common mental illnesses and what people could do to promote their own mental health and decrease the risk of mental health problems.

School Health Promotion

One of the pharmacies concentrated on promoting links with the local schools and sponsoring health events within the school. This included sponsoring:

- a 'Be Active Soccer Clinic' promoting physical activity attended by 70 students'
- a dental hygiene day conducted by a dentist who presented to each class and provided sample bags containing toothbrush, toothpaste, stickers and dental hygiene booklet

- resources for a social and mental health program called the ‘Friendly Schools Program’ which is a whole school program to reduce bullying and improve the emotional and social health of children.

Supermarket Tour

One of the pharmacies organised for a visiting dietician to conduct a supermarket tour to provide information on food labels and healthy food options in the supermarket. Four people attended the tour and one participant arranged a follow-up appointment.

Food Additives Presentation

The same dietician that conducted the supermarket tour presented a talk and information handout on food additives which was attended by 14 people.

Nutrition Education Afternoon

A nutritionist conducted an afternoon forum on healthy eating options and participants were able to sample different foods and drinks. Forty-six people attended the forum which was held on a Saturday afternoon.

Child Development Education

An occupational therapist conducted a two hour class for new mothers on educational toys and videos that promote healthy development. Ten mothers attended the session. A follow up from this group was baby swimming lessons.

Physio-Chi Workshop

One of the pharmacies sponsored local HACC service providers to undertake training in physio-chi. This was then incorporated into the exercise classes that are run for elder people in the town. Seven people attended the training.

Women’s Health Day

A women’s health day was conducted at the start of March and was attended by 30 people. A visiting female doctor performed breast checks, pap smears, answered general questions and provided a talk on women’s health issues. Information was also provided on other women’s health issues on the day.

Discussion

The main aim of this project was to investigate how pharmacists can best perform a health promotion role and what supports are required. A pilot model was implemented in four rural pharmacies with each pharmacy receiving up to \$10,000 and consultation support to provide in store health promotion programs and to organise and/or sponsor community health events. It was also envisaged that pharmacies would forge stronger links with other health and community providers when undertaking the health promotion work. The results indicated that pharmacies were very well placed to provide community programs.

The pharmacy health promotion literature has to date concentrated on health education which is only one component of a health promotion approach (Howat et al., 2003). Programs in Britain and Australia have concentrated on in-store screening and/or counselling for behaviour change (Blenkinsopp et al., 2000; Krass et al., 2003). In this project pharmacies were able to organise and sponsor many health promotion community activities. The process indicators revealed that these activities were successful, and having a local provider in consultation with community members decide on allocation of health resources was in line with both the Ottawa Charter (WHO, 1986) and Jakarta Declaration on health promotion (WHO, 1997) which emphasise involving communities and individuals in planning and responding to their health needs. This engendered a stronger sense of consumer, carer and community participation in health services which was noted as an important predictor of good health outcomes for consumers (Consumer Focus Collaboration, 2001).

Providing small grants for single town rural pharmacies achieves three important aims. Firstly, remuneration has been identified by many authors as one of the key barriers in pharmacies offering health promotion services (Anderson, 2000; Blenkinsopp et al., 2000; Ghalamkari et al., 1997c; Hourihan et al., 2003; Maguire et al., 2001; O'Loughlin et al., 1999; Sinclair et al., 2004). Incentive payments are one of the key criteria determining pharmacies' effectiveness in providing smoking cessation services (Martin, 2005). Providing this small grant energises the pharmacy to offer in store and community health promotion activities contributing in-kind staff time. However, the incentive payments in this capacity are able secondly, to provide much

needed community health promotion activities. It was identified in the literature review section that rural populations use fewer health services, suffer from poorer health than urban populations (Australian Health Ministers' Conference, 1996; Gangeness, 1997; Humphreys, Hegney, Lipscombe, Gregory, & Chater, 2002; Kamien, 1995; Lavelle, 2003; Silver, 1994), and have less access to health promotion information (Humphreys et al., 1993; Lavelle, 2003; Watt, Franks, & Sheldon, 1994).

In the project local pharmacies were able to organise or support community activities such as mental health workshops, exercise groups, infant health groups, cardiovascular disease and diabetes screening, breast cancer awareness, falls prevention talks, supermarket tours for diabetes, and school based health promotion. Thirdly, through the organising and sponsoring of community activities this acts as a marketing exercise in promoting the health promotion potential of the pharmacy. Many rural residents only utilise the drug dispensing services and do not utilise the health information services that a pharmacy could provide (Sunderland et al., 2005). Community health promotion activities are of themselves beneficial but can also be used to focus the pharmacy as a source of health promotion advice. A simple cost / benefit analysis indicated that over 800 people were reached through this \$20,000 at an average of \$25 per person. Further research would need to factor in the costs of a health promotion worker as for this project the research and consultation support was provided by the one person.

The in-store component of the project was not as successful as the community aspect. Two Australian studies have demonstrated that consumers are receptive to pharmacies undertaking health promotion work (Humphreys et al., 1993; Teh, Chen, & Krass, 2001) yet a different impression was received in this project. The topic and direction of the in-store component in the project was decided upon by using a one page client questionnaire on satisfaction with the pharmacy and health promotion areas they would like covered within a pharmacy setting. There was not a high level of interest expressed in health promotion overall although some clients mentioned an interest in activities related to diet and weight loss. However, few clients took the opportunity of having a dietary assessment when it was offered within the pharmacy setting. There was some use of health screening which has been utilised in other studies (Krass et al., 2003).

The lack of interest suggests a need for marketing the health promotion knowledge and skills of community pharmacies. The Pharmacy Guild of Australia recently conducted a nation wide campaign on safe alcohol consumption (May, 2004). On the inside cover of a pharmacy prescription folder there was a drink chart depicting standard drink sizes and on the outside a safe drinking message and general health guidelines on safe drinking. As well as providing advice on general consumption issues, the message highlighted that a pharmacist was also in the position of being able to advise on issues relevant to medication and alcohol interactions. Evaluation revealed that both clients and pharmacists felt the folder increased the ease and likelihood of conversations relevant to alcohol consumption. There was also an increase in knowledge of safe levels of alcohol consumption. This style of communication could be used for other health topics as well as print media and radio advertising which could reach a large percentage of the rural community. Promotion materials were developed during the project as outlined in the results but due to time delays were not able to be field tested (for an example see appendix G) and this is a priority for future research.

Many of the intervention projects address pharmacists' ability to offer behaviour change counselling and a key component of this is training in behaviour change principles (Sinclair et al., 2004). In this project, pharmacists were provided the option of attending smoking cessation training but it was not made mandatory and only one pharmacist attended training. Pharmacies were provided with a health promotion worker whom they could consult with and who provided information on health promotion counselling. Despite this resource, apart from a couple of attempts, there was a lack of specific in-store focus on dietary and smoking related counselling. The lack of interest in addressing smoking despite its high prevalence, known health effects and relevance to pharmacy products, suggests a lack of confidence in addressing behaviour change topics.

There is ample information available to pharmacists on health consultation and the Australian Pharmacist provides many tips to pharmacists on health promotion counselling. Gowan and Roller (2003) provided exercise recommendations for women on different medications and with different medical conditions. The March 2005 edition of Australian Pharmacist also provided practicing pharmacists with

counselling tips for obesity (Basger, 2005), information on healthy diets (Barnes, 2005) and ideas for community health initiatives such as supermarket tours and cooking demonstrations that have been used in rural and remote locations (Leon et al., 2005). The December 2005 edition encouraged pharmacists to be more active in smoking cessation and commented that training was required. The pharmacists and pharmacy assistants could have benefited more organised education and marketing promotion to increase the level of in-store health promotion consultation.

Recommendations

The model tested in this study revealed that with financial and consultation support, pharmacies are ideally placed to offer health promotion education and community activities. An area lacking in this project that would need to be addressed in a follow up project is training. A rural pharmacy model would need to include a training day where participating pharmacists and pharmacy assistants can practise skills related to behaviour change counselling and receive instruction in radio interviews. The theoretical basis could be based on the 5As model, 'ask, assess, advise, assist, arrange' (US Department of Health and Human Services, 1996, 2000) and Prochaska and DiClemente's (1983) stages of change model which have been extensively used in health promotion research and programs.

After the training day pharmacists and pharmacy assistants would be supported by a health promotion worker who can offer further in store and phone support and assist pharmacies with their in store promotions and community events. Promotion materials would need to be developed to move people from the pre-contemplation stage consistent with Prochaska and DiClemente's (1983) model so that people realize the importance of health behaviour change and secondly, realize that pharmacies are able to offer advice on these topics. Promotion materials on health behaviour topics have been developed in this project (appendix G) which could be used for a follow up project.

The average amount of financial support used in this project was \$5000 and it is the strong recommendation that such support be further evaluated as in this project it enabled pharmacies to offer valuable community programs in underserved rural communities. Pharmacies could use the following criteria to determine whether to organise or sponsor a local community initiative:

- event or activity is local to their shire;
- event or activity relates to a health issue that is covered within a pharmacy setting;

- event or activity aims at changing an environment to be more health conducive and/or provides instruction in skills, attitudes, or health promotion knowledge; and
- event or activity encourages participants to take control over their own health.

Based on the findings of this project, the four facets of the proposed model are: sponsoring of health promotion community events and activities; in store health promotion displays; staff training; and health promotion consultation support. This model could be tested by surveying whether more health consumers receive health promotion advice from their community pharmacy and participate in community activities following implementation of the model. It would also provide a health promoting rural pharmacy structure that could enable more intensive interventions and further the health promotion role of rural pharmacies.

References

- Ahrens, R. A., Hower, M., & Best, A. M. (2003). Effects of weight reduction interventions by community pharmacists. *Journal of the American Pharmacists Association, 43*(5), 583-589.
- Allison, C., Page, H., & George, S. (1994). Screening for coronary heart disease risk factors in retail pharmacies in Sheffield, 1992. *Journal of Epidemiology and Community Health, 1994*(48), 178-181.
- Anderson, C. (2000). Health promotion in community pharmacy: the UK situation. *Patient Education and Counseling, 39*, 285-291.
- Anderson, C., Blenkinsopp, A., & Armstrong, M. (2003). *The contribution of community pharmacy to improving the public's health*. London: PharmacyHealthLink and the Royal Pharmaceutical Society of Great Britain.
- Aquilino, M. L., Farris, K. B., Zillich, A. J., & Lowe, J. B. (2003). Smoking-cessation services in Iowa community pharmacies. *Pharmacotherapy, 23*(5), 666-673.
- Arole, R., Fuller, B., & Deutschmann, P. (2004). Improving community capacity. In R. Moodie & A. Hulme (Eds.), *Hands-on health promotion*. Melbourne: IP Communications.
- Australian Health Ministers' Conference. (1996). *National rural health strategy update*. Canberra, ACT: Commonwealth of Australia.
- Bajos, N., Goulard, H., & Job-Spira, N. (2003). Emergency contraception: from accessibility to counseling. *Contraception, 67*(1), 39-40.
- Barnes, J. (2005). A lipid management lifestyle. *Australian Pharmacist, 24*(3), 226-231.
- Basger, B. (2005). Fascinating fats and counselling tips for obesity. *Australian Pharmacist, 24*(3), 214-216.
- Baum, A., & Posluszny, D. M. (1999). Health psychology: mapping biobehavioral contributions to health and illness. *Annu Rev Psychol, 50*, 137-163.
- Bauman, A. (2004). Physical activity. In R. Moodie & A. Hulme (Eds.), *Hands-on health promotion* (pp. 161-174). Melbourne: IP Communications.
- Bauman, A., Bellew, B., Vita, P., Brown, W., & Owen, N. (2002). *Getting Australia active: towards better practice for the promotion of physical activity*. Melbourne: National Public Health Partnership.
- Bennett, W., Petraitis, C., D'Anella, A., & Marcella, S. (2003). Pharmacists' knowledge and the difficulty of obtaining emergency contraception. *Contraception, 68*(4), 261-267.
- Benrimoj, S. I., & Frommer, M. S. (2004). Community pharmacy in Australia. *Aust Health Rev, 28*(2), 238-246.
- Berbatis, C. G. (2005). Weight management and the challenges to Australian pharmacy. *Australian Pharmacist, 24*(3), 196-201.
- Berenson, G. S., Arbeit, M. L., Hunter, S. M., Johnson, C. C., & Nicklas, T. A. (1991). Cardiovascular health promotion for elementary school children. The Heart Smart Program. *Ann N Y Acad Sci, 623*, 299-313.
- Bien, T. H., Miller, W. R., & Tonigan, J. S. (1993). Brief interventions for alcohol problems: a review. *Addiction, 88*(3), 315-335.
- Billow, J. A. (1992). Choosing condoms. *Am Pharm, NS32*(9), 55-58.

- Blenkinsopp, A., Anderson, C., & Armstrong, M. (2003). Systematic review of the effectiveness of community pharmacy-based interventions to reduce risk behaviours and risk factors for coronary heart disease. *J Public Health*, 25(2), 144-153.
- Blenkinsopp, A., Panton, R., & Anderson, C. (2000). *Health Promotion for Pharmacists* (2nd ed.). Oxford: Oxford University Press.
- Bond, K. (2002). Health promotion - an innovator whose 'heart beats for pharmacy'. *Pharmacy Practice*, 18(11), 39.
- Boulton, A., Simonsen, K., Walker, T., Cumming, J., & Cunningham, C. (2004). Indigenous participation in the 'new' New Zealand health structure. *Journal of Health Services Research & Policy [NLM - MEDLINE]*, 9 Supplement 2, 35.
- Cerulli, J., & Zeolla, M. M. (2004). Impact and feasibility of a community pharmacy bone mineral density screening and education program. *J Am Pharm Assoc (Wash DC)*, 44(2), 161-167.
- Chewning, B., & Wiederholt, J. B. (2003). Concordance in cancer medication management. *Patient Education and Counseling*, 50(1), 75-78.
- Coburn, A. F., & Ziller, E. C. (2000). *Improving prescription drug coverage for rural medicare beneficiaries: Key rural considerations and objectives for legislative proposals (P2000-8)*. Columbia: University of Missouri, Rural Policy Research Institute.
- Consumer Focus Collaboration. (2001). *The evidence supporting consumer participation in health. A consumer focus collaboration document*. Canberra: Commonwealth Department of Health and Aged Care.
- Consumers' Health Forum of Australia (CHF). (2002a). *Consumer Awareness and Education Strategies: Standards for Pharmacist only and Pharmacist Medicines*. Canberra: CHF.
- Consumers' Health Forum of Australia (CHF). (2002b). *Consumer Reporting of Experiences of the Provision of Pharmacist Only and Pharmacy Medicines*. Canberra: CHF.
- Coper, L., & Smeltink, K. (1994). Pharmacy - the accessible health promotion centre. *Australian Pharmacist*, 13(5), 332.
- Daftary, M. N., Lee, E., Dutta, A. P., & Olangundoye, A. X., Z. (2003). Patients' willingness to pay for cognitive pharmacy services in ambulatory care settings in the USA. *Journal of Pharmacy Practice and Research*, 33(4), 265-267.
- Department of Health and Ageing. (2003). *Returns on Investment in Public Health: An epidemiological and economic analysis prepared for the Department of Health and Ageing*. Canberra: Commonwealth Government of Australia.
- Department of Human Services Victoria. (2000). *Preparing a Consumers' and Carers' Charter. A Draft Guide for Discussion*. Melbourne: Victorian Government Department of Human Services.
- Department of Public Health Flinders University, & The South Australian Community Health Research Unit. (2000). *Improving health services through consumer participation. A resource guide for organisations. A consumer focus collaboration document*. Canberra: Commonwealth Department of Health and Aged Care.
- Dixon, N., Hall, J., Knowles, D., & Sanders, E. (2000). Can a community pharmacy influence the control of disease in people with diabetes through the use of a local quality control scheme? *The Pharmaceutical Journal*, 265(7114), R21.

- Doucette, W. R., & Jambulingam, T. (1999). Pharmacy entrepreneurial orientation: Antecedents and its effect on the provision of innovative pharmacy services. *Journal of Social and Administrative Pharmacy, 16*, 26-37.
- Emmerton, L. (2002). Shaping up in later life. *Australian Pharmacist, 21*(10), 746-748.
- Epstein, D. (1996). Can rural pharmacy survive? *Drug Topics, 140*, 58-62.
- Finley, P. R., Rens, H. R., Pont, J. T., Gess, S. L., Louie, C., Bull, S. A., et al. (2002). Impact of a collaborative pharmacy practice model on the treatment of depression in primary care. *Am J Health Syst Pharm, 59*(16), 1518-1526.
- Gangness, D. E. (1997). Pharmaceutical care for rural patients: Ominous trends. *Journal of the American Pharmaceutical Association, 37*(62-65), 84.
- Ghalamkari, H. H., Rees, J. E., & Saltrese-Taylor, A. (1997a). Evaluation of a pilot health promotion project in pharmacies: (2) Clients' initial views on pharmacists' advice. *The Pharmaceutical Journal, 258*, 314-317.
- Ghalamkari, H. H., Rees, J. E., & Saltrese-Taylor, A. (1997b). Evaluation of a pilot health promotion project in pharmacies: (3) Client's further opinions and actions taken after receiving health promotion advice. *The Pharmaceutical Journal, 258*, 909-913.
- Ghalamkari, H. H., Rees, J. E., Saltrese-Taylor, A., & Ramsden, M. (1997c). Evaluation of a pilot health promotion project in pharmacies: (1) Quantifying the pharmacist's health promotion role. *The Pharmaceutical Journal, 258*(138-143).
- Gilbert, L. (1998). The role of the community pharmacist as an oral health adviser - an exploratory study of community pharmacists in Johannesburg, South Africa. *Journal of the South African Dental Association, 53*(8), 439-443.
- Gowan, J., & Roller, L. (2003). Women's health: exercise and home medication reviews. *The Australian Journal of Pharmacy, 84*, 144-147.
- Grime, J., & Pollock, K. (2004). Information versus experience: a comparison of an information leaflet on antidepressants with lay experience of treatment. *Patient Education and Counseling, 54*(3), 361-368.
- Hanlon, P., McEwen, J., Carey, L., Gilmour, H., & al, e. (1995). Health checks and coronary risk: Further evidence from a randomised controlled trial. *British Medical Journal, 311*(7020), 1609.
- Higgins, N., Livingston, G., & Katona, C. (2004). Concordance therapy: an intervention to help older people take antidepressants. *Journal of Affective Disorders, 81*(3), 287-291.
- Holter, M. C., Mowbray, C. T., Bellamy, C. D., MacFarlane, P., & Dukarski, J. (2004). Critical ingredients of consumer run services: results of a national survey. *Community Mental Health Journal [NLM - MEDLINE], 40*(1), 47.
- Hourihan, F., Krass, I., & Chen, T. (2003). Rural community pharmacy: A feasible site for a health promotion and screening service for cardiovascular risk factors. *Australian Journal of Rural Health, 11*, 28-35.
- Howat, P., Maycock, B., Cross, D., Collins, J., Jackson, L., Burns, S., et al. (2003). Towards a more unified definition of health promotion. *Health Promotion Journal of Australia, 14*(2), 82-85.
- Hudmon, K. S., Hemberger, K. K., Corelli, R. L., Kroon, L. A., & Prokhorov, A. V. (2003). The pharmacist's role in smoking cessation counselling: Perceptions of users of non-prescription nicotine replacement therapy. *Journal of the American Pharmacists Association, 43*(5), 573-582.

- Humphreys, J. S., Hegney, D., Lipscombe, J., Gregory, G., & Chater, B. (2002). Whither rural health?: Reviewing a decade of progress in rural health. *Australian Journal of Rural Health, 10*, 2-14.
- Humphreys, J. S., Rolley, F., & Weinand, H. C. (1993). Evaluating the importance of information sources for preventive health care in rural Australia. *Australian Journal of Public Health, 17*(2), 149-157.
- Kamien, M. (1995). Undergraduate rural incentives program: Assisting medical schools to help solve the shortage of rural doctors. *Medical Journal of Australia, 162*, 228-229.
- Kannel, W. B., & Wilson, P. W. F. (1995). An update on coronary risk factors. *Medical Clinics of North America, 79*, 951-971.
- Knapp, K. K., Paavola, F. G., Maine, L. L., Sorofman, B., & Politzer, R. M. (1999). Availability of primary care providers and pharmacists in the United States. *Journal of the American Pharmaceutical Association, 39*, 127-135.
- Krass, I., Hourihan, F., & Chen, T. (2003). Health promotion and screening for cardiovascular risk factors in NSW: a community pharmacy model. *Health Promotion Journal of Australia, 14*(2), 101-107.
- Kroll, T. (2003). Towards improving health care delivery for people with physical disabilities: findings from focus groups with health care consumers in Minnesota. *Managed Care Quarterly [NLM - MEDLINE], 11*(4), 8.
- Lavelle, P. (2003). *Country life: A health hazard?*, from <http://www.abc.net.au/health/regions/features/countrylife/default.htm>
- Leinweber, C. E., Campbell, S., & Trotter, D. L. (1995). Is a health promotion campaign successful in retail pharmacies. *Canadian Journal of Public Health, 86*(6), 380-383.
- Leon, T., McNamara, K., & Larkin, C. (2005). Weight management strategies in rural and remote Australia. *Australian Pharmacist, 24*(3), 234-236.
- Luepker, R. V., & Perry, C. L. (1991). The Minnesota Heart Health Program. Education for youth and parents. *Ann N Y Acad Sci, 623*, 314-321.
- Maguire, T. A., McElnay, J. C., & Drummond, A. (2001). A randomized controlled trial of a smoking cessation intervention based in community pharmacies. *Addiction, 96*(2), 325-331.
- Malmgren, J. A., Koepsell, T. D., Martin, D. P., Diehr, P., & LaCroix, A. Z. (1999). Mortality, health service use, and health behaviour in a cohort of well older adults. *Journal of the American Geriatrics Society, 47*(1), 51-59.
- Marmot, M., & Wilkinson, R. G. (Eds.). (1999). *Social Determinants of Health*. Oxford: OUP.
- Martin, K. (2004). Veteran care and pharmacy's diabetes destiny. *Australian Journal of Pharmacy, 85*, 102-104, 106.
- Martin, K. (2005). Breathing life into quit rates. *Australian Journal of Pharmacy, 86*(1029), 954-956.
- Mason, H. L., & Svarstad, B. L. (1984). Medication counselling behaviours and attitudes of rural community pharmacists. *Drug Intelligence and Clinical Pharmacy, 18*, 409-414.
- Mason, P. (2000). *Nutrition and dietary advice in the pharmacy* (2nd ed.). Oxford: Blackwell Science.
- May, K. W. (2004). Evaluation of alcohol awareness campaign. *Pharmacy Review, 28*(3), 48-49.

- Mayer, J. A., Eckhardt, L., Stepanski, B. M., Sallis, J. F., Elder, J. P., Slymen, D. J., et al. (1998). Promoting skin cancer prevention counselling by pharmacists. *American Journal of Public Health, 88*(7), 1096-1099.
- McElnay, J., Nicholl, A., & Grainger-Rousseau, T. (1993). The role of the community pharmacist - a survey of public opinion in N. Ireland. *International Journal of Pharmacy Practice, 2*(95-100).
- McGlynn, S., Reid, F., McAnaw, J., Chinwong, S., & Hudson, S. (2000). Pharmaceutical Care: Coronary Heart Disease. *The Pharmaceutical Journal, 265*, 194-205.
- McManus, P., Mant, A., Mitchell, P. B., Montgomery, W. S., Marley, J., & Auland, M. E. (2000). Recent trends in the use of antidepressant drugs in Australia, 1990-1998. *Med J Aust, 173*(9), 458-461.
- Miller, L. G., & Scott, D. M. (1996). Documenting indicators of pharmaceutical care in rural community pharmacies. *Journal of Managed Care Pharmacy, 2*, 1-11.
- Miller, M., & Wood, L. (2001). *Smoking cessation interventions: Review of evidence and implications for best practice in health care settings*. Canberra: Commonwealth Department of Health and Ageing.
- Mitchell, A. (2004). Sexual health. In R. Moodie & A. Hulme (Eds.), *Hands-on health promotion* (pp. 207-217). Melbourne: IP Communications.
- Moodie, R. (2004). Introduction: getting your hands on. In R. Moodie & A. Hulme (Eds.), *Hands-on Health Promotion*. Melbourne: IP Communications.
- Nand, R. (2002). Management of obesity and the overweight patient - a review of drugs in current use. *Australian Pharmacist, 21*(8), 592-600.
- National Health and Medical Research Council (NHMRC). (2003). *Clinical practice guidelines for the management of overweight and obesity in adults*. Canberra: Commonwealth of Australia.
- National Resource Centre for Consumer Participation in Health. (2000). *Feedback, participation and consumer diversity - A literature review. A Consumer Focus Collaboration Publication*. Canberra: Commonwealth Department of Health and Aged Care.
- NHMRC. (1996). *Guidelines for Preventive Interventions in Primary Health Care: Cardiovascular Disease and Cancer*. Canberra: Commonwealth Government of Australia.
- Nissen, L. (2003). It's better in the bush! *Australian Pharmacist, 22*(8), 602-608.
- Nola, K. M., Gourley, D. R., Portner, T. S., Gourley, G. K., Solomon, D. K., Elam, M., et al. (2000). Clinical and humanistic outcomes of a lipid management program in the community pharmacy setting. *J Am Pharm Assoc (Wash), 40*(2), 166-173.
- Offord, L. (2004). Helping trim the obesity epidemic. *The Australian Journal of Pharmacy, 85*, 108-111.
- O'Loughlin, J., Masson, P., Dery, V., & Fagnan, D. (1999). The Role of Community Pharmacists in Health Education and Disease Prevention: A Survey of Their Interests and Needs in Relation to Cardiovascular Disease. *Preventive Medicine, 28*(3), 324-331.
- Paluck, E. C., Stratton, T. P., & Godwin, O. E. (1994). Community pharmacists' participation in health education and disease prevention activities. *Canadian Journal of Public Health, 85*(6), 389-392.
- Passmore, P., & Kailis, S. (1990). Pharmacy practice consumer perspective. *Australian Pharmacist, 9*, 183-184.

- Pate, R. R., Pratt, M., Blair, S. N., Haskell, W. L., Macera, C. A., Bouchard, C., et al. (1995). Physical activity and public health. A recommendation from the Centers for Disease Control and Prevention and the American College of Sports Medicine. *Jama*, 273(5), 402-407.
- Pharmaceutical Services Negotiating Committee, National Pharmaceutical Association, Royal Pharmaceutical Society of Great Britain, & Pharmacy HealthLink. (2004). Retrieved August, 2004, from <http://www.npa.co.uk/pdf/nhsdev/publichealth.pdf>
- Pierce, E. F., & Pate, D. W. (1994). Mood alterations in older adults following acute exercise. *Perceptual and Motor Skills*, 79, 191-194.
- Prochaska, J., & DiClemente, C. (1983). Stages and processes of self-change of smoking: toward an integrative model of change. *Journal of Consulting and Clinical Psychology*, 51, 390-395.
- RACGP National Preventive and Community Medicine Committee. (2002). *Guidelines for preventive activities in general practice* (5th ed.). South Melbourne: Royal Australian College of General Practitioners.
- Raine, T. R., Harper, C. C., Rocca, C. H., Fischer, R., Padian, N., Klausner, J. D., et al. (2005). Direct access to emergency contraception through pharmacies and effect on unintended pregnancy and STIs: a randomized controlled trial. *Jama*, 293(1), 54-62.
- Robinson, Y., & Booth, S. (2004). Promoting healthy eating: challenges and opportunities for local action. In R. Moodie & A. Hulme (Eds.), *Hands-on Health Promotion* (pp. 175-185). Melbourne: IP Communications.
- Secker, J. (1998). Current conceptualizations of mental health and mental health promotion. *Health Education Research*, 13, 57-66.
- Selya, R. M. (1988). Pharmacies as alternative sources of medical care: The case of Cincinnati. *Social Science Medicine*, 26, 409-416.
- Shand, F., Gates, J., Fawcett, J., & Mattick, R. (2003). *Guidelines for the Treatment of Alcohol Problems*. Retrieved November 1, 2005, from [http://www.health.gov.au/internet/wcms/publishing.nsf/Content/health-pubhlth-publicat-document-metadata-alcprobguide.htm/\\$FILE/alcprobguide.pdf](http://www.health.gov.au/internet/wcms/publishing.nsf/Content/health-pubhlth-publicat-document-metadata-alcprobguide.htm/$FILE/alcprobguide.pdf)
- Sheridan, J., Strang, J., Barber, N., & Glanz, A. (1996). Role of community pharmacies in relation to HIV prevention and drug misuse: Findings from the 1995 national survey in England and Wales. *British Medical Journal*, 313(7052), 272.
- Silver, M. D. (1994). Rural health care in Canada and Australia. *Canadian Medical Association Journal*, 151, 512.
- Sinclair, H. K., Bond, C. M., Lennox, A. S., Silcock, J., Winfield, A. J., & Donnan, P. T. (1998). Training pharmacists and pharmacy assistants in the stage-of-change model of smoking cessation: a randomised controlled trial in Scotland. *Tobacco Control*, 7(3), 253-261.
- Sinclair, H. K., Bond, C. M., & Stead, L. F. (2004). Community pharmacy personnel interventions for smoking cessation. *Cochrane Database Syst Rev*(1), CD003698.
- Strong, J. P. (1991). The natural history of atherosclerosis in childhood. *Ann NY Acad Sci*, 623, 9-15.
- Sunderland, V. B., Burrows, S. D., & Joyce, A. W. (2005). *A comparative evaluation of pharmacy services in single and no pharmacy towns*. Perth: Curtin University of Technology.

- Teh, R., Chen, T., & Krass, I. (2001). Consumer perspectives of pharmacist delivered health information and screening services. *The International Journal of Pharmacy Practice*, 9, 261-267.
- Turrell, G., & Kavanagh, A. (2004). Socioeconomic determinants of health: from evidence to policy. In R. Moodie & A. Hulme (Eds.), *Hands-on health promotion* (pp. 391-406). Melbourne: IP Communications.
- Uden, D., & Larson, T. (1997). Advancing rural pharmacy practice. *Journal of Managed Care Pharmacy*, 3, 488.
- US Department of Health and Human Services. (1996). Smoking cessation. Clinical Practice Guideline Number 18.
- US Department of Health and Human Services. (2000). *Treating tobacco use and dependence*.
- Van Amburgh, J. A., Waite, N. M., Hobson, E. H., & Migden, H. (2001). Improved influenza vaccination rates in a rural population as a result of a pharmacist-managed immunization campaign. *Pharmacotherapy*, 21, 1115-1122.
- Vial, R. J., Jones, T. E., Ruffin, R. E., & Gilbert, A. L. (2002). Smoking cessation program using nicotine patches linking hospital to the community. *Journal of Pharmacy Practice and Research*, 32(1), 57-62.
- Wass, A. (1994). *Promoting health: the primary health care approach*. Sydney: Harcourt Brace & Company.
- Watson, L., Bond, C., & Gault, C. (2003). A survey of community pharmacists on prevention of HIV and hepatitis B and C: current practice and attitudes in Grampian. *Journal of Public Health Medicine*, 25(1), 13-18.
- Watt, I. S., Franks, A. J., & Sheldon, T. A. (1994). Health and health care of rural populations in the UK: Is it better or worse? *Journal of Epidemiology and Community Health*, 48, 16-21.
- WHO. (1948). Preamble to the Constitution of the World Health Organization as adopted by the International Health Conference, New York, 19-22 June, 1946; signed on 22 July 1946 by the representatives of 61 States. *Official Records of the World Health Organization*, 2, 100.
- WHO. (1986). from <http://www.who.int/hpr/background/ottawacharter.htm>
- WHO. (1997). from <http://www.who.int/hpr/background/jakarta/jakartadeclaration.htm>
- Williams, D. M., Newsom, J. F., & Brock, T. P. (2000). An evaluation of smoking cessation-related activities by pharmacists. *Journal of the American Pharmaceutical Association*, 40(3), 366-370.
- Winstanley, M., Woodward, S., & Walker, N. (1995). *Tobacco in Australia: Facts and Issues*. Melbourne: QUIT Victoria.
- Wright, J. L., & Scott, J. A. (2000). The Fat and Fibre Barometer, a short food behaviour questionnaire: reliability, relative validity and utility. *Aust J Nutr Diet*, 57, 33-39.

Appendix A

Falls Prevention

Please circle whether how strongly you agree or disagree with the following statements:

1. I know how to prevent a fall from occurring.

A. Strongly Agree

B. Agree

C. Unsure

D. Disagree

E. Strongly Disagree

2. I am confident that I can prevent a fall from occurring.

A. Strongly Agree

B. Agree

C. Unsure

D. Disagree

E. Strongly Disagree

3. What did you find most useful about this session?

4. Is there something you would like further information about?

Appendix B

Pharmacy and Health Promotion

During 2005 four rural pharmacies were supported with funding to undertake health promotion work. As part of this project, \$5000 was allocated to the pharmacy to support health and community events. This was justified on two accounts:

- A local service provider would have a greater understanding of the needs of the community relative to a state or national funding body
- The local pharmacy could be seen as a source of general health and prevention advice in addition to their well known roles in dispensing and providing advice on medications.

We are interested in your opinions on whether you think this resource was well used and how you think a local pharmacy could better support the health of the community.

1. Did you receive financial support for a project from Your Pharmacy? Yes No
2. If yes, could you please provide some brief details about the project?

3. Would this project have happened without support from the pharmacy?

4. What do you see as the advantages of using a local pharmacy to provide funds for local health and community projects?

5. What do you see as the disadvantages of using a local pharmacy to provide funds for local health and community projects?

6. Do you think there is a role for pharmacy in health promotion and what do you see that role as being?

Appendix C



School of Pharmacy

A Health Promotion Guide for Rural Pharmacies

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Curtin University of Technology
PO Box U 1987
Perth Western Australia 6845

WA Centre for Health Promotion Research
Division of Health Sciences
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Introduction

Pharmacies are increasingly operating outside their normal dispensary and health advice roles and are having a greater role in patient management and preventative activities. Pharmacy is well placed to offer preventative services given their high accessibility and position of trust held within the community. The challenge for community pharmacy in rural regions is how they can best utilise their health service position to offer within store health promotion services while contributing to the broader health determinants that are necessary to support healthy behaviours and lifestyles. As health promotion is increasingly targeting supportive health environments, so pharmacies need to address these issues in partnership with other services to best support the health of their community.

This guide has been written to assist pharmacies interested in health promotion, particularly in relation to health behaviours which fewer pharmacies are addressing (O'Loughlin et al., 1999). Given the time constraints faced by pharmacists and pharmacy assistants, the intent of the guide is to provide quick reference material on health behaviours that community pharmacies can address. It concentrates on health information and conversation tips based on the stages of change model (Prochaska & DiClemente, 1983) for four behavioural health topics of smoking, diet, physical activity and alcohol use. Ideas are also presented for how pharmacies can become involved in community health promotion activities. For those requiring further information on these or health topics an appendix at the back of this document lists references and web sites that contain useful resources and fact sheets that can be used.

Health Promotion Approach

The field of public health, and within that domain, health promotion, has adopted a social model of health which emphasises responding to the broader environmental determinants of health that support and promote well-being (Wass, 1994). Growing evidence demonstrates the importance of economic and social conditions in influencing states of health and illness (Marmot & Wilkinson, 1999). This approach is well captured by the well referenced Ottawa Charter (WHO, 1986) and Jakarta Declaration (WHO, 1997) on health promotion:

Ottawa Charter for Health Promotion (WHO, 1986)

“Prerequisites for health: The fundamental conditions and resources for health are peace, shelter, education, food, income, a stable ecosystem, sustainable resources, social justice and equity. Improvement in health requires a secure foundation in these basic prerequisites.

- Building healthy public policy – legislation, fiscal measures, taxation and organizational change
- Creating supportive environments for health – conservation of natural resources, work and living conditions that are safe, stimulating, satisfying and enjoyable.
- Strengthening community action – enabling communities to have control over their endeavours and destinies.
- Developing personal skills – information, education and life skills in settings such as school, home, work and community settings
- Reorienting health services – moving the health service in a health promotion direction.”

The Jakarta Declaration on leading health promotion into the 21st century(WHO, 1997)

“Increasingly, health promotion is being recognized as an essential element of health development. It is a process of enabling people to increase control over, and to improve, their health.

Priorities for the 21st century:

- Promote social responsibility for health – public and private sectors need policies that protect the health of the individual and environment.
- Increase investments for health development – for sectors such as health, education and housing, focusing on particular groups.
- Consolidate and expand partnerships for health – ‘between different sectors at all levels of governance and society.
- Increase community capacity and empower the individual – is to be carried out with people rather than for people.
- Secure an infrastructure for health promotion – develop the appropriate political, legal, educational, social and economic environments required to support health promotion.”

This emphasis on environmental determinants of health does not preclude individual and behavioural approaches. Rather such approaches need to be supported by an appropriate economic and social infrastructure that emphasises positive health. This guide recognises that the majority of health promotion services offered by pharmacies will be around personal skills and education. However, recommendations and ideas will be presented for how pharmacies can become involved in community consultation and action.

Smoking Cessation

Tobacco smoking is the largest single preventable cause of death and disease in Australia and is linked to an extensive range of health conditions most noticeably lung cancer and cardiovascular diseases (Winstanley et al., 1995). Passive exposure to tobacco smoke has also been related to increased risk of cancer and cardiovascular diseases (Winstanley et al., 1995) and pharmacies could provide information in store on the dangers of exposure to passive smoke. Pharmacies have a unique opportunity to provide cessation advice and support to enable a person to quit successfully given their role as providers of nicotine replacement therapy (NRT). To date there is some evidence of the effectiveness of pharmacy cessation programs (Maguire et al., 2001; Sinclair et al., 1998) and consumers are receptive to pharmacies advising on smoking (Hudmon et al., 2003). People who use support in trying to quit are twice as likely to succeed compared to those who do not access support and pharmacies are well placed to provide brief smoking cessation which has proven to be effective in assisting people to quit smoking (Miller & Wood, 2001).

Physical Activity

Participation in physical activity is one of the key determinants in preventing ill health and disability and pharmacies can play an important role in promoting physical activity participation, particularly with their more elderly patients. There is evidence to demonstrate that population improvements in physical activity would assist in cardiovascular disease prevention, diabetes prevention and control, primary prevention of some cancers, injury prevention and control, and promotion of mental health (Bauman, Bellew, Vita, Brown, & Owen, 2002). Physical activity participation in older age has been shown to reduce the risk of disability and mortality (Malmgren et al., 1999). Pharmacies have a key role in promoting exercise for older people and lowering their risk of major illnesses and disabilities (Emmertson, 2002).

Diet

Overweight and obesity have become a major health problem in Australia. Rising overweight and obesity levels have provoked the government to make this a priority health issue. In 1999-2000 around 67% of adult males and 52% of adult females were

either overweight or obese and the incidence of overweight children and adolescents has doubled in the last 15 years (Offord, 2004). A taskforce report recommended an approach to curbing this epidemic that created living environments that support healthy behaviours as well as programs that encourage healthy behaviour adoption. Recent trends in both Australia and USA suggest pharmacies could be appropriate sites for weight loss and management programs. Mason (2000) contends that pharmacies have a very important role in providing nutritional information and has written a book specifically for nutrition advice in the pharmacy.

Alcohol Use

A review of treatments for alcohol problems concluded that brief alcohol interventions can be effective (Shand et al., 2003). This brief type of intervention may be opportunistic by targeting risky drinkers who may be unaware that they are drinking at harmful or hazardous levels. They aim to encourage people to reduce their consumption (Shand et al., 2003). The Pharmacy Guild of Australia conducted a nation wide campaign on safe alcohol consumption (May, 2004). Evaluation revealed that both clients and pharmacies felt the information provided by the pharmacy increased the ease and likelihood of conversations relevant to alcohol consumption. There was also an increase in knowledge of safe levels of alcohol consumption.

Community Activities

Pharmacists can, like doctors, direct customers to additional health services and alternative health care options that may be of assistance (Miller & Scott, 1996; Selya, 1988; Uden & Larson, 1997; Van Amburgh, Waite, Hobson, & Migden, 2001). In a rural setting the pharmacist can organise other health professionals to work in their pharmacy or local area (Nissen, 2003). This highlights the central health promotion role of rural pharmacies in supporting community activities that address the health of their population. The following list provides some examples of community activities that pharmacies could assist in organising and / or sponsoring:

- participate in community health seminars or talks on topics like men's health, diabetes, mental health, cancer screening, asthma, and falls prevention;

- organise dietician to conduct supermarket tours for community members to educate on healthy shopping purchases;
- organise or sponsor walking groups or Tai Chi for seniors;
- sponsor a healthy eating workshop or course;
- organise for a health body or health professional to visit local school to promote a health topic;
- organise health screening days;
- sponsor a maternal and child health group; and
- organise or sponsor a relaxation group or coping skills program;

Health Education

5As

The 5As model, ‘ask, assess, advise, assist, arrange’ has been used in a health behaviour change guide for general practitioners (RACGP National Preventive and Community Medicine Committee, 2002) and is based on a process for assisting patients to quit smoking developed by the US Department of Health (US Department of Health and Human Services, 1996, 2000). Elements of this process are more suited to a structured assessment which may not be appropriate in a pharmacy. However, if the health behaviour is relevant for medication use or the person initiates conversation then a pharmacist or pharmacy assistant could follow the 5A’s model (see appendix for more links). It is important to assess the person’s readiness to change and then advise and assist accordingly (described in the stages of change process below). Depending on the information gathered it may be appropriate to arrange other health services.

Stages of Change

Prochaska and DiClemente's (1983) stages of change model has been used for understanding the process of change in many health behaviours. The following table provides information on each of the stages and examples of possible conversation topics for each stage of the process relevant to the four health behaviours. In many cases a brief conversation aimed at the relevant stage can assist in promoting successful health behaviour change. Of course on occasions a brief conversation will reveal that they need professional assistance from a GP, dietician or other health professional and appropriate referral options need to be in place.

Stage	Smoking	Diet	Physical Activity	Alcohol
Precontemplation: Person may be unaware problem exists	Provide in the pharmacy information on the dangers of cigarette smoking and passive exposure	Person may be unaware that poor diet is contributing to their health condition. Provide information on link between diet and disease	Person may be unaware that even moderate exercise can be beneficial and it can be accrued in daily life (e.g. walking up stairs or gardening)	Person may be unaware that they are drinking at dangerous levels so provide information on safe consumption levels.
Contemplation: Considering changing but reluctant	Talk about how people can successfully quit smoking and that with support the rate of success doubles. Tell them to gather support by informing their friends and family they intend to quit	Talk about simple changes to vegetable and fruit intake can have substantial benefit	Talk about situations where person could incorporate exercise into daily life such as walking rather than driving somewhere	Talk about difficulties such as stress or social situations that may be exacerbating situation
Preparation and determination: About to change	Discuss cues that lead to smoking such as in social situations or other ways of coping with stress. Set a quit date two weeks in advance(US Department of Health and Human Services, 2000)	Talk about a realistic goal of fruit and vegetable intake given their current levels, e.g. having an apple rather than chips as a morning snack	Talk about setting a realistic goal of physical activity for a week	Discuss the level of control they have over their drinking
Action: Implemented health behaviour change	Reinforce the benefits of quitting and reinforce that lapses are normal and try not to think that a lapse is permanent	Discuss that not eating regular intake every day or occasional consumption of unhealthy food is normal	Discuss situations that may cause changes to exercise patterns such as weather, change in work, change in family situation and to modify goals and activities rather than stopping behaviour	Emphasise that occasional deviations from their goals of reduced consumption is to be expected
Maintenance: Health behaviour part of normal routine	Re-emphasise the importance of environments where they may be more likely to smoke	Talk about and provide information on a variety of shopping and meal plans that could incorporate more fruit and vegetables	Ask whether they have friends or family that can join a daily walk	Talk about home environment such as access to alcohol in the house or venues outside the house that may assist in ongoing safe consumption levels

References

- Ahrens, R. A., Hower, M., & Best, A. M. (2003). Effects of weight reduction interventions by community pharmacists. *Journal of the American Pharmacists Association*, 43(5), 583-589.
- Allison, C., Page, H., & George, S. (1994). Screening for coronary heart disease risk factors in retail pharmacies in Sheffield, 1992. *Journal of Epidemiology and Community Health*, 1994(48), 178-181.
- Anderson, C. (2000). Health promotion in community pharmacy: the UK situation. *Patient Education and Counseling*, 39, 285-291.
- Anderson, C., Blenkinsopp, A., & Armstrong, M. (2003). *The contribution of community pharmacy to improving the public's health*. London: PharmacyHealthLink and the Royal Pharmaceutical Society of Great Britain.
- Aquilino, M. L., Farris, K. B., Zillich, A. J., & Lowe, J. B. (2003). Smoking-cessation services in Iowa community pharmacies. *Pharmacotherapy*, 23(5), 666-673.
- Arole, R., Fuller, B., & Deutschmann, P. (2004). Improving community capacity. In R. Moodie & A. Hulme (Eds.), *Hands-on health promotion*. Melbourne: IP Communications.
- Australian Health Ministers' Conference. (1996). *National rural health strategy update*. Canberra, ACT: Commonwealth of Australia.
- Bajos, N., Goulard, H., & Job-Spira, N. (2003). Emergency contraception: from accessibility to counseling. *Contraception*, 67(1), 39-40.
- Barnes, J. (2005). A lipid management lifestyle. *Australian Pharmacist*, 24(3), 226-231.
- Basger, B. (2005). Fascinating fats and counselling tips for obesity. *Australian Pharmacist*, 24(3), 214-216.
- Baum, A., & Posluszny, D. M. (1999). Health psychology: mapping biobehavioral contributions to health and illness. *Annu Rev Psychol*, 50, 137-163.
- Bauman, A. (2004). Physical activity. In R. Moodie & A. Hulme (Eds.), *Hands-on health promotion* (pp. 161-174). Melbourne: IP Communications.
- Bauman, A., Bellew, B., Vita, P., Brown, W., & Owen, N. (2002). *Getting Australia active: towards better practice for the promotion of physical activity*. Melbourne: National Public Health Partnership.
- Bennett, W., Petraitis, C., D'Anella, A., & Marcella, S. (2003). Pharmacists' knowledge and the difficulty of obtaining emergency contraception. *Contraception*, 68(4), 261-267.
- Benrimoj, S. I., & Frommer, M. S. (2004). Community pharmacy in Australia. *Aust Health Rev*, 28(2), 238-246.
- Berbatis, C. G. (2005). Weight management and the challenges to Australian pharmacy. *Australian Pharmacist*, 24(3), 196-201.
- Berenson, G. S., Arbeit, M. L., Hunter, S. M., Johnson, C. C., & Nicklas, T. A. (1991). Cardiovascular health promotion for elementary school children. The Heart Smart Program. *Ann N Y Acad Sci*, 623, 299-313.
- Bien, T. H., Miller, W. R., & Tonigan, J. S. (1993). Brief interventions for alcohol problems: a review. *Addiction*, 88(3), 315-335.
- Billow, J. A. (1992). Choosing condoms. *Am Pharm*, NS32(9), 55-58.
- Blenkinsopp, A., Anderson, C., & Armstrong, M. (2003). Systematic review of the effectiveness of community pharmacy-based interventions to reduce risk behaviours and risk factors for coronary heart disease. *J Public Health*, 25(2), 144-153.
- Blenkinsopp, A., Panton, R., & Anderson, C. (2000). *Health Promotion for Pharmacists* (2nd ed.). Oxford: Oxford University Press.

- Bond, K. (2002). Health promotion - an innovator whose 'heart beats for pharmacy'. *Pharmacy Practice*, 18(11), 39.
- Boulton, A., Simonsen, K., Walker, T., Cumming, J., & Cunningham, C. (2004). Indigenous participation in the 'new' New Zealand health structure. *Journal of Health Services Research & Policy [NLM - MEDLINE]*, 9 Supplement 2, 35.
- Cerulli, J., & Zeolla, M. M. (2004). Impact and feasibility of a community pharmacy bone mineral density screening and education program. *J Am Pharm Assoc (Wash DC)*, 44(2), 161-167.
- Chewning, B., & Wiederholt, J. B. (2003). Concordance in cancer medication management. *Patient Education and Counseling*, 50(1), 75-78.
- Coburn, A. F., & Ziller, E. C. (2000). *Improving prescription drug coverage for rural medicare beneficiaries: Key rural considerations and objectives for legislative proposals (P2000-8)*. Columbia: University of Missouri, Rural Policy Research Institute.
- Consumer Focus Collaboration. (2001). *The evidence supporting consumer participation in health. A consumer focus collaboration document*. Canberra: Commonwealth Department of Health and Aged Care.
- Consumers' Health Forum of Australia (CHF). (2002a). *Consumer Awareness and Education Strategies: Standards for Pharmacist only and Pharmacist Medicines*. Canberra: CHF.
- Consumers' Health Forum of Australia (CHF). (2002b). *Consumer Reporting of Experiences of the Provision of Pharmacist Only and Pharmacy Medicines*. Canberra: CHF.
- Coper, L., & Smeltink, K. (1994). Pharmacy - the accessible health promotion centre. *Australian Pharmacist*, 13(5), 332.
- Daftary, M. N., Lee, E., Dutta, A. P., & Olangundoye, A. X., Z. (2003). Patients' willingness to pay for cognitive pharmacy services in ambulatory care settings in the USA. *Journal of Pharmacy Practice and Research*, 33(4), 265-267.
- Department of Health and Ageing. (2003). *Returns on Investment in Public Health: An epidemiological and economic analysis prepared for the Department of Health and Ageing*. Canberra: Commonwealth Government of Australia.
- Department of Human Services Victoria. (2000). *Preparing a Consumers' and Carers' Charter. A Draft Guide for Discussion*. Melbourne: Victorian Government Department of Human Services.
- Department of Public Health Flinders University, & The South Australian Community Health Research Unit. (2000). *Improving health services through consumer participation. A resource guide for organisations. A consumer focus collaboration document*. Canberra: Commonwealth Department of Health and Aged Care.
- Dixon, N., Hall, J., Knowles, D., & Sanders, E. (2000). Can a community pharmacy influence the control of disease in people with diabetes through the use of a local quality control scheme? *The Pharmaceutical Journal*, 265(7114), R21.
- Doucette, W. R., & Jambulingam, T. (1999). Pharmacy entrepreneurial orientation: Antecedents and its effect on the provision of innovative pharmacy services. *Journal of Social and Administrative Pharmacy*, 16, 26-37.
- Emmertson, L. (2002). Shaping up in later life. *Australian Pharmacist*, 21(10), 746-748.
- Epstein, D. (1996). Can rural pharmacy survive? *Drug Topics*, 140, 58-62.
- Finley, P. R., Rens, H. R., Pont, J. T., Gess, S. L., Louie, C., Bull, S. A., et al. (2002). Impact of a collaborative pharmacy practice model on the treatment of depression in primary care. *Am J Health Syst Pharm*, 59(16), 1518-1526.
- Gangeness, D. E. (1997). Pharmaceutical care for rural patients: Ominous trends. *Journal of the American Pharmaceutical Association*, 37(62-65), 84.

- Ghalamkari, H. H., Rees, J. E., & Saltrese-Taylor, A. (1997a). Evaluation of a pilot health promotion project in pharmacies: (2) Clients' initial views on pharmacists' advice. *The Pharmaceutical Journal*, 258, 314-317.
- Ghalamkari, H. H., Rees, J. E., & Saltrese-Taylor, A. (1997b). Evaluation of a pilot health promotion project in pharmacies: (3) Client's further opinions and actions taken after receiving health promotion advice. *The Pharmaceutical Journal*, 258, 909-913.
- Ghalamkari, H. H., Rees, J. E., Saltrese-Taylor, A., & Ramsden, M. (1997c). Evaluation of a pilot health promotion project in pharmacies: (1) Quantifying the pharmacist's health promotion role. *The Pharmaceutical Journal*, 258(138-143).
- Gilbert, L. (1998). The role of the community pharmacist as an oral health adviser - an exploratory study of community pharmacists in Johannesburg, South Africa. *Journal of the South African Dental Association*, 53(8), 439-443.
- Gowan, J., & Roller, L. (2003). Women's health: exercise and home medication reviews. *The Australian Journal of Pharmacy*, 84, 144-147.
- Grime, J., & Pollock, K. (2004). Information versus experience: a comparison of an information leaflet on antidepressants with lay experience of treatment. *Patient Education and Counseling*, 54(3), 361-368.
- Hanlon, P., McEwen, J., Carey, L., Gilmour, H., & al, e. (1995). Health checks and coronary risk: Further evidence from a randomised controlled trial. *British Medical Journal*, 311(7020), 1609.
- Higgins, N., Livingston, G., & Katona, C. (2004). Concordance therapy: an intervention to help older people take antidepressants. *Journal of Affective Disorders*, 81(3), 287-291.
- Holter, M. C., Mowbray, C. T., Bellamy, C. D., MacFarlane, P., & Dukarski, J. (2004). Critical ingredients of consumer run services: results of a national survey. *Community Mental Health Journal [NLM - MEDLINE]*, 40(1), 47.
- Hourihan, F., Krass, I., & Chen, T. (2003). Rural community pharmacy: A feasible site for a health promotion and screening service for cardiovascular risk factors. *Australian Journal of Rural Health*, 11, 28-35.
- Howat, P., Maycock, B., Cross, D., Collins, J., Jackson, L., Burns, S., et al. (2003). Towards a more unified definition of health promotion. *Health Promotion Journal of Australia*, 14(2), 82-85.
- Hudmon, K. S., Hemberger, K. K., Corelli, R. L., Kroon, L. A., & Prokhorov, A. V. (2003). The pharmacist's role in smoking cessation counselling: Perceptions of users of non-prescription nicotine replacement therapy. *Journal of the American Pharmacists Association*, 43(5), 573-582.
- Humphreys, J. S., Hegney, D., Lipscombe, J., Gregory, G., & Chater, B. (2002). Whither rural health?: Reviewing a decade of progress in rural health. *Australian Journal of Rural Health*, 10, 2-14.
- Humphreys, J. S., Rolley, F., & Weinand, H. C. (1993). Evaluating the importance of information sources for preventive health care in rural Australia. *Australian Journal of Public Health*, 17(2), 149-157.
- Kamien, M. (1995). Undergraduate rural incentives program: Assisting medical schools to help solve the shortage of rural doctors. *Medical Journal of Australia*, 162, 228-229.
- Kannel, W. B., & Wilson, P. W. F. (1995). An update on coronary risk factors. *Medical Clinics of North America*, 79, 951-971.
- Knapp, K. K., Paavola, F. G., Maine, L. L., Sorofman, B., & Politzer, R. M. (1999). Availability of primary care providers and pharmacists in the United States. *Journal of the American Pharmaceutical Association*, 39, 127-135.

- Krass, I., Hourihan, F., & Chen, T. (2003). Health promotion and screening for cardiovascular risk factors in NSW: a community pharmacy model. *Health Promotion Journal of Australia*, 14(2), 101-107.
- Kroll, T. (2003). Towards improving health care delivery for people with physical disabilities: findings from focus groups with health care consumers in Minnesota. *Managed Care Quarterly [NLM - MEDLINE]*, 11(4), 8.
- Lavelle, P. (2003). *Country life: A health hazard?* Retrieved September, 2004, from <http://www.abc.net.au/health/regions/features/countrylife/default.htm>
- Leinweber, C. E., Campbell, S., & Trotter, D. L. (1995). Is a health promotion campaign successful in retail pharmacies. *Canadian Journal of Public Health*, 86(6), 380-383.
- Leon, T., McNamara, K., & Larkin, C. (2005). Weight management strategies in rural and remote Australia. *Australian Pharmacist*, 24(3), 234-236.
- Luepker, R. V., & Perry, C. L. (1991). The Minnesota Heart Health Program. Education for youth and parents. *Ann N Y Acad Sci*, 623, 314-321.
- Maguire, T. A., McElnay, J. C., & Drummond, A. (2001). A randomized controlled trial of a smoking cessation intervention based in community pharmacies. *Addiction*, 96(2), 325-331.
- Malmgren, J. A., Koepsell, T. D., Martin, D. P., Diehr, P., & LaCroix, A. Z. (1999). Mortality, health service use, and health behaviour in a cohort of well older adults. *Journal of the American Geriatrics Society*, 47(1), 51-59.
- Marmot, M., & Wilkinson, R. G. (Eds.). (1999). *Social Determinants of Health*. Oxford: OUP.
- Martin, K. (2004). Veteran care and pharmacy's diabetes destiny. *Australian Journal of Pharmacy*, 85, 102-104, 106.
- Martin, K. (2005). Breathing life into quit rates. *Australian Journal of Pharmacy*, 86(1029), 954-956.
- Mason, H. L., & Svarstad, B. L. (1984). Medication counselling behaviours and attitudes of rural community pharmacists. *Drug Intelligence and Clinical Pharmacy*, 18, 409-414.
- Mason, P. (2000). *Nutrition and dietary advice in the pharmacy* (2nd ed.). Oxford: Blackwell Science.
- May, K. W. (2004). Evaluation of alcohol awareness campaign. *Pharmacy Review*, 28(3), 48-49.
- Mayer, J. A., Eckhardt, L., Stepanski, B. M., Sallis, J. F., Elder, J. P., Slymen, D. J., et al. (1998). Promoting skin cancer prevention counselling by pharmacists. *American Journal of Public Health*, 88(7), 1096-1099.
- McElnay, J., Nicholl, A., & Grainger-Rousseau, T. (1993). The role of the community pharmacist - a survey of public opinion in N. Ireland. *International Journal of Pharmacy Practice*, 2(95-100).
- McGlynn, S., Reid, F., McAnaw, J., Chinwong, S., & Hudson, S. (2000). Pharmaceutical Care: Coronary Heart Disease. *The Pharmaceutical Journal*, 265, 194-205.
- McManus, P., Mant, A., Mitchell, P. B., Montgomery, W. S., Marley, J., & Auland, M. E. (2000). Recent trends in the use of antidepressant drugs in Australia, 1990-1998. *Med J Aust*, 173(9), 458-461.
- Miller, L. G., & Scott, D. M. (1996). Documenting indicators of pharmaceutical care in rural community pharmacies. *Journal of Managed Care Pharmacy*, 2, 1-11.
- Miller, M., & Wood, L. (2001). *Smoking cessation interventions: Review of evidence and implications for best practice in health care settings*. Canberra: Commonwealth Department of Health and Ageing.
- Mitchell, A. (2004). Sexual health. In R. Moodie & A. Hulme (Eds.), *Hands-on health promotion* (pp. 207-217). Melbourne: IP Communications.

- Moodie, R. (2004). Introduction: getting your hands on. In R. Moodie & A. Hulme (Eds.), *Hands-on Health Promotion*. Melbourne: IP Communications.
- Nand, R. (2002). Management of obesity and the overweight patient - a review of drugs in current use. *Australian Pharmacist*, 21(8), 592-600.
- National Health and Medical Research Council (NHMRC). (2003). *Clinical practice guidelines for the management of overweight and obesity in adults*. Canberra: Commonwealth of Australia.
- National Resource Centre for Consumer Participation in Health. (2000). *Feedback, participation and consumer diversity - A literature review. A Consumer Focus Collaboration Publication*. Canberra: Commonwealth Department of Health and Aged Care.
- NHMRC. (1996). *Guidelines for Preventive Interventions in Primary Health Care: Cardiovascular Disease and Cancer*. Canberra: Commonwealth Government of Australia.
- Nissen, L. (2003). It's better in the bush! *Australian Pharmacist*, 22(8), 602-608.
- Offord, L. (2004). Helping trim the obesity epidemic. *The Australian Journal of Pharmacy*, 85, 108-111.
- O'Loughlin, J., Masson, P., Dery, V., & Fagnan, D. (1999). The Role of Community Pharmacists in Health Education and Disease Prevention: A Survey of Their Interests and Needs in Relation to Cardiovascular Disease. *Preventive Medicine*, 28(3), 324-331.
- Paluck, E. C., Stratton, T. P., & Godwin, O. E. (1994). Community pharmacists' participation in health education and disease prevention activities. *Canadian Journal of Public Health*, 85(6), 389-392.
- Passmore, P., & Kailis, S. (1990). Pharmacy practice consumer perspective. *Australian Pharmacist*, 9, 183-184.
- Pate, R. R., Pratt, M., Blair, S. N., Haskell, W. L., Macera, C. A., Bouchard, C., et al. (1995). Physical activity and public health. A recommendation from the Centers for Disease Control and Prevention and the American College of Sports Medicine. *Jama*, 273(5), 402-407.
- Pharmaceutical Services Negotiating Committee, National Pharmaceutical Association, Royal Pharmaceutical Society of Great Britain, & Pharmacy HealthLink. (2004). Retrieved August, 2004, from <http://www.npa.co.uk/pdf/nhsdev/publichealth.pdf>
- Pierce, E. F., & Pate, D. W. (1994). Mood alterations in older adults following acute exercise. *Perceptual and Motor Skills*, 79, 191-194.
- Prochaska, J., & DiClemente, C. (1983). Stages and processes of self-change of smoking: toward an integrative model of change. *Journal of Consulting and Clinical Psychology*, 51, 390-395.
- RACGP National Preventive and Community Medicine Committee. (2002). *Guidelines for preventive activities in general practice* (5th ed.). South Melbourne: Royal Australian College of General Practitioners.
- Raine, T. R., Harper, C. C., Rocca, C. H., Fischer, R., Padian, N., Klausner, J. D., et al. (2005). Direct access to emergency contraception through pharmacies and effect on unintended pregnancy and STIs: a randomized controlled trial. *Jama*, 293(1), 54-62.
- Robinson, Y., & Booth, S. (2004). Promoting healthy eating: challenges and opportunities for local action. In R. Moodie & A. Hulme (Eds.), *Hands-on Health Promotion* (pp. 175-185). Melbourne: IP Communications.
- Secker, J. (1998). Current conceptualizations of mental health and mental health promotion. *Health Education Research*, 13, 57-66.
- Selya, R. M. (1988). Pharmacies as alternative sources of medical care: The case of Cincinnati. *Social Science Medicine*, 26, 409-416.

- Shand, F., Gates, J., Fawcett, J., & Mattick, R. (2003). *Guidelines for the Treatment of Alcohol Problems*. Retrieved November 1, 2005, from [http://www.health.gov.au/internet/wcms/publishing.nsf/Content/health-publth-publicat-document-metadata-alcprobguide.htm/\\$FILE/alcprobguide.pdf](http://www.health.gov.au/internet/wcms/publishing.nsf/Content/health-publth-publicat-document-metadata-alcprobguide.htm/$FILE/alcprobguide.pdf)
- Sheridan, J., Strang, J., Barber, N., & Glanz, A. (1996). Role of community pharmacies in relation to HIV prevention and drug misuse: Findings from the 1995 national survey in England and Wales. *British Medical Journal*, *313*(7052), 272.
- Silver, M. D. (1994). Rural health care in Canada and Australia. *Canadian Medical Association Journal*, *151*, 512.
- Sinclair, H. K., Bond, C. M., Lennox, A. S., Silcock, J., Winfield, A. J., & Donnan, P. T. (1998). Training pharmacists and pharmacy assistants in the stage-of-change model of smoking cessation: a randomised controlled trial in Scotland. *Tobacco Control*, *7*(3), 253-261.
- Sinclair, H. K., Bond, C. M., & Stead, L. F. (2004). Community pharmacy personnel interventions for smoking cessation. *Cochrane Database Syst Rev*(1), CD003698.
- Strong, J. P. (1991). The natural history of atherosclerosis in childhood. *Ann N Y Acad Sci*, *623*, 9-15.
- Sunderland, V. B., Burrows, S. D., & Joyce, A. W. (2005). *A comparative evaluation of pharmacy services in single and no pharmacy towns*. Perth: Curtin University of Technology.
- Teh, R., Chen, T., & Krass, I. (2001). Consumer perspectives of pharmacist delivered health information and screening services. *The International Journal of Pharmacy Practice*, *9*, 261-267.
- Turrell, G., & Kavanagh, A. (2004). Socioeconomic determinants of health: from evidence to policy. In R. Moodie & A. Hulme (Eds.), *Hands-on health promotion* (pp. 391-406). Melbourne: IP Communications.
- Uden, D., & Larson, T. (1997). Advancing rural pharmacy practice. *Journal of Managed Care Pharmacy*, *3*, 488.
- US Department of Health and Human Services. (1996). Smoking cessation. Clinical Practice Guideline Number 18.
- US Department of Health and Human Services. (2000). *Treating tobacco use and dependence*.
- Van Amburgh, J. A., Waite, N. M., Hobson, E. H., & Migden, H. (2001). Improved influenza vaccination rates in a rural population as a result of a pharmacist-managed immunization campaign. *Pharmacotherapy*, *21*, 1115-1122.
- Vial, R. J., Jones, T. E., Ruffin, R. E., & Gilbert, A. L. (2002). Smoking cessation program using nicotine patches linking hospital to the community. *Journal of Pharmacy Practice and Research*, *32*(1), 57-62.
- Wass, A. (1994). *Promoting health: the primary health care approach*. Sydney: Harcourt Brace & Company.
- Watson, L., Bond, C., & Gault, C. (2003). A survey of community pharmacists on prevention of HIV and hepatitis B and C: current practice and attitudes in Grampian. *Journal of Public Health Medicine*, *25*(1), 13-18.
- Watt, I. S., Franks, A. J., & Sheldon, T. A. (1994). Health and health care of rural populations in the UK: Is it better or worse? *Journal of Epidemiology and Community Health*, *48*, 16-21.
- WHO. (1948). Preamble to the Constitution of the World Health Organization as adopted by the International Health Conference, New York, 19-22 June, 1946; signed on 22 July 1946 by the representatives of 61 States. *Official Records of the World Health Organization*, *2*, 100.
- WHO. (1986). from <http://www.who.int/hpr/background/ottawacharter.htm>
- WHO. (1997). from <http://www.who.int/hpr/background/jakarta/jakartadeclaration.htm>

- Williams, D. M., Newsom, J. F., & Brock, T. P. (2000). An evaluation of smoking cessation-related activities by pharmacists. *Journal of the American Pharmaceutical Association, 40*(3), 366-370.
- Winstanley, M., Woodward, S., & Walker, N. (1995). *Tobacco in Australia: Facts and Issues*. Melbourne: QUIT Victoria.
- Wright, J. L., & Scott, J. A. (2000). The Fat and Fibre Barometer, a short food behaviour questionnaire: reliability, relative validity and utility. *Aust J Nutr Diet, 57*, 33-39.

Appendix A

Health Promotion References and Web Sites

Adolescent Health

The Australian Clearinghouse for Youth Studies: <http://www.acys.utas.edu.au>

- Information, resources, links and programs relevant to all aspects of youth health.

Alcohol

Australian Drug Foundation: <http://www.adf.org.au/>

- Provides link to information clearing house which has brief information and publications on alcohol and other drug issues: <http://www.druginfo.adf.org.au/>

Department of Veterans' Affairs: <http://www.therightmix.gov.au/professionals.asp>

- Guidelines for health professionals on alcohol related problems for the veterans community

National Drug Research Institute: <http://www.ndri.curtin.edu.au/index.html>

- Reports, program and media release information on alcohol use and illicit drug use.

Arthritis

Arthritis Australia: <http://www.arthritisaustralia.com.au/>

- Information and resources on treatment and management of arthritis such as exercise and diet guidelines for the condition.

Asthma

Asthma Foundations of Australia: <http://www.asthmaaustralia.org.au/>

- Provides links to state asthma foundations and includes information about programs and resources.

Behaviour Change Resources

Centers for Disease Control and Prevention, Atlanta, GA , U.S.A:

<http://www.cdc.gov/nccdphp/dnpa/physical/starting/>

- Provides information and tips on each stage of the behaviour change model specific to physical activity.

SNAP, a population health guide to behavioural risk factors in general practice:

<http://www.racgp.org.au/downloads/pdf/SNAPguide2004.pdf>

- Written for general practitioners but has information useful for pharmacies on how to use the 5A model in health promotion practice.

Cancer

Anti Cancer Council of Western Australia: <http://www.cancerwa.asn.au/>

- Provides links to the various programs run through the council such as the sun smart, nutrition and quit programs.

Cardiovascular Health

Heart Foundation: <http://www.heartfoundation.com.au/index.cfm>

- Lists programs, resources, research, and activities currently running relating to all aspects of cardiovascular health.

National Stroke Foundation: <http://www.strokefoundation.com.au/>

- Includes resources on stroke risk factors such as high blood pressure and has information about their programs and research.

Consumer Participation:

Health Consumers' Council of Western Australia: <http://www.hcc-wa.global.net.au/index2.html>

- Information about services for consumers of health services and information for health services on how they can enhance consumer collaboration.

The National Resource Centre for Consumer Participation in Health (NRCCPH): <http://www.participateinhealth.org.au/>

- Publications and guidelines on involving consumers in every aspect of health service planning, delivery and evaluation.

Diabetes

Department of Health, WA:

http://www.diabetes.health.wa.gov.au/publications/docs/0732_Health_LifeStyles.pdf

- Government strategy for the primary prevention of diabetes and cardiovascular disease 2002 – 2007. Includes sections on the different levels of response such as population and risk factor approach.

Diabetes Australia: <http://www.diabetesaustralia.com.au/home/index.htm>

- Provides information on diabetes and associated topics as well as information on products, programs and contact details.

Diet

NHMRC Dietary Guidelines for Older Australians:
<http://www.nhmrc.gov.au/publications/pdf/n23.pdf>

- Provides detailed information on dietary requirements of older Australians and provides recommendations on exercise and dietary behaviours for older people.

Falls Prevention

Department of Health, WA:

http://www.health.wa.gov.au/safetyandquality/docs/Falls_Policy_document.pdf

- Falls prevention policy and strategy for the department of health, WA.

Department of Health and Ageing:

<http://www.health.gov.au/internet/wcms/publishing.nsf/Content/health-pubhlth-strateg-injury-falls-projects.htm>

- Provides information and links to current falls prevention projects being conducted in Australia.

Generic Health Promotion

Australian Institute for Health and Welfare: <http://www.aihw.gov.au/>

- Reports, statistics, and information on a range of health topics

Carers WA: <http://www.carerswa.asn.au/index.asp>

- Information and support services for carers and information and education services for health professionals.

Healthway: <http://www1.healthway.wa.gov.au/default.aspx>

- Provides details of healthway projects and grant applications.

Pharmacy Self Care Program: <http://www.psa.org.au/ecms.cfm?id=237>

- Contains resources and fact sheets for a range of health topics.

UK Public Health Guide for Community Pharmacists:

<http://www.npa.co.uk/pdf/nhsdev/publichealth.pdf>

- There is a section summarising evidence for the role of pharmacists in public health areas such as smoking cessation and a list of resources links for specific health areas.

Men's Health

Men's Health Program Department of Veteran's Affairs:

<http://www.dva.gov.au/health/menshealth/>

- Information for men on various health problems and where to access support and help.

Mental Health

Australian Network for Promotion, Prevention and Early Intervention for Mental Health: <http://auseinet.flinders.edu.au/index.php>

- “Auseinet informs, educates and promotes good practice in a range of sectors and the community about mental health promotion, prevention, early intervention and suicide prevention across the lifespan.”

Ministerial Council for Suicide Prevention: <http://www.mcsp.org.au>

- “This website seeks to increase access to and availability of suicide prevention information for professionals, researchers and community members.”

National Action Plan for Promotion, Prevention and Early Intervention for Mental Health: <http://www.mentalhealth.gov.au/mhinfo/ppei/pdf/actionplan.pdf>

- Framework for mental health promotion and implementation recommendations.

Promotion, Prevention and Early Intervention for Mental Health: A Monograph: <http://www.mentalhealth.gov.au/mhinfo/ppei/pdf/monograph.pdf>

- Rationale and evidence base for mental health promotion.

Older People

American Society on Ageing: <http://www.asaging.org/cdc/index.cfm>

- Tips and information on how to promote the health of older people across a variety of health domains including overview of behaviour change models.

Department of Veteran’s Affairs:

http://www.dva.gov.au/health/health_promotion/index.htm

- Link to the Department’s Health Promotion Site which contains information on health promotion activities and tips for older people.

Physical Activity

Department of Health, WA, Find 30 campaign: <http://www.find30.com.au/>

- Physical activity guidelines for adults and children and resources in line with the campaign

State Government of Victoria, Go For Your Life Campaign:

<http://www.goforyourlife.vic.gov.au/hav/articles.nsf?open>

- Includes a link to resources and tips for how people can become more physically active

Reproductive and Sexual Health

Family Planning Australia: <http://www.fpa.net.au/index.htm>

- Includes information about training courses, programs for consumers and downloadable information sheets.

WA AIDS Council: <http://www.waaid.com/>

- Information on their programs, publications and current news related to HIV/AIDS.

Smoking

QUIT: <http://www.quit.org.au/index2.html>; <http://www.quitwa.com/index.cfm>

- Resources on quitting smoking and links to many sites related to tobacco control.

Women's Health

Women's Health Australia: <http://www.newcastle.edu.au/centre/wha/>

- Information and publications on a large scale longitudinal project addressing women's health issues.

Appendix D

Pharmacy Service Survey

1. Please circle your current age?

18 – 35 36 – 45 46 – 55 56 – 65 66 – 75 76 – 85 86+

2. Please circle your gender? Female Male

3. What do you most value about your pharmacy service?

4. What would you like to change about your local pharmacy and are there any improvements you can recommend?

5. Are there any health topics which you would like more information about (e.g. diabetes, heart disease, depression, asthma, particular medications)?

6. Are there any health promotion activities you would like organised (e.g. an exercise group, healthy eating classes, quit smoking program)?

Appendix E

Pharmacy Service Survey

1. Please circle your current age?

18 – 35

36 – 45

46 – 55

56 – 65

66 – 75

76 – 85

86+

2. Please circle your gender?

Female

Male

3. Are there any health topics you would like more information about?

(please tick)

Diabetes _____

Heart Disease _____

Asthma _____

Mental Illness _____

Medications _____

Obesity _____

Other (please specify)

4. Are there any health promotion activities you would like organised?

(Please tick)

Healthy eating group _____

Weight loss _____

Quit smoking program _____

Diabetes awareness program _____

Falls prevention _____

Other (please specify) _____

Appendix F

Fat and Fibre Barometer

Ask your client these questions about their fat and fibre intake to see if they need to improve their eating plan.

Meat and Chicken

- Do you trim fat off meat before cooking?
- Do you remove the skin from the chicken?
- Do you eat less processed meats?

Dairy Products

- Do you choose reduced fat cheeses?
- Do you eat high fat cheese less often?
- Do you choose low fat milk?

Butter, margarine and oils

- Do you use spreads less often?
- Do you use baking, grilling and microwaving instead of frying?

High fat foods

- Do you eat less pies/pastries/sausage rolls?
- Do you eat less hot chips or potato crisps?
- Do you eat less food fried with a batter or breadcrumb coating?
- Do you eat less high fat take-away foods?

Fruit and Vegetables (including legumes)

- Do you eat 2 or more pieces of fruit per day?
- Do you eat 5 or more serves of vegetables per day?
- Do you choose many different types of vegetables?

¹The Fat and Fibre Barometer was developed by Seal and O'Keefe as part of the Healthway funded Beat Diabetes 2 Health Promotion Programme. Adapted with permission from: Wright J.L., Scott J.A. The Fat and Fibre Barometer, a short food behaviour questionnaire: reliability, relative validity and utility. *Aust J Nutr Diet* 2000;57:33-39.

Do you eat more legumes?

Wholegrain Breads and Cereals

Do you choose wholemeal pasta?

Do you choose wholemeal bread?

Do you choose wholegrain breakfast cereals?

A score of 5 indicates the best way of eating.
A score of 3 or less shows this is an area of your eating plan
that can be improved.

Total Score:

Appendix G

Physical Activity Facts

Participating in 30 minutes or more of moderate physical activity most days of the week can help you live longer, feel better, and prevent or control many chronic diseases. It can also help you lose weight or keep it off. If you are overweight or obese, losing even a small amount of weight can help you live longer and feel better. Physical activity can also help you control your blood pressure, cholesterol, and blood sugar. It can also help you feel better about your appearance and your self-esteem. It can also help you sleep better and reduce your stress. It can also help you feel better about your life.

PRESCRIPTION REPEATS

Physical Activity can benefit all health conditions.

To find out how...

ASK YOUR PHARMACIST
FOR MEDICAL ADVICE AND INFORMATION

Please take a look for ideas on how to accumulate 30 minutes of daily moderate physical activity

Why not grab a friend or join a team?

PHYSICAL ACTIVITY



Some benefits of physical activity include:

- Improving your health
- maintaining a healthy weight
- Improving mental well-being and
- making new friends



Or try something by yourself....