

**Title: Rural pharmacy not delivering on its health
promotion potential.**

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Abstract

Objective: To investigate the level and perceived quality of health promotion advice received from rural pharmacists.

Design: Self-administered written survey on access to and quality of pharmacy services in rural Western Australia completed by rural residents.

Setting: Rural Pharmacy.

Participants: Four hundred and eighty-three respondents who regularly used a pharmacy.

Outcome measures: Items in the survey included frequency of receiving prevention advice and satisfaction ratings on health and pharmacy services.

Results: Eighty-eight per cent of respondents had never discussed exercise or diet with their pharmacist and 65% had never discussed preventing health problems. Receiving good prevention advice predicted satisfaction with health services in general but not satisfaction with pharmacy services.

Conclusion: Pharmacies are being underutilised with respect to their capacity to deliver health prevention advice and ways to capitalise on this potential need to be investigated.

Abstract word count = 139

Key Words: rural pharmacy, prevention, advice, frequency

Rural Pharmacy and Health Promotion

What is already known in this subject: Pharmacies are recognised as highly suitable health promotion sites due to being the most commonly used health service and the broad health knowledge of pharmacists. In some rural communities pharmacists are the most visible and accessible health provider. Studies have examined pharmacists' perceptions of how frequently they engage in health promotion activities but few if any have investigated consumers' perceptions of whether they have received advice on preventing health problems. (word count = 77)

What this study adds: The study found that few people were receiving advice from their pharmacist on smoking, diet, exercise or preventing health problems. These low percentages were evident even for higher risk groups that could benefit from this advice, such as older people and those on medications for cardiovascular problems. Pharmacists in rural areas may need education and financial support to engage in health promotion work. (word count = 67)

Main body word count = 1567 (excluding references and Tables)

Introduction

Pharmacies are being recognised as highly suitable health promotion sites¹. Common reasons given are their respected position within the community and the high volume of people that frequent their services during the year². It is argued that pharmacies are the most accessible of all health providers with over 90% of the population visiting at least once each year³. As health educators and influential community members, 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 ⁴.

Community perceptions support pharmacies as a health promotion setting ⁵.

A recent national study found that pharmacists were undertaking a large variety of preventative activities although some health priorities areas such as weight control and hyperlipidemia received less attention relative to other less significant health issues ⁶. While there have been large published studies on pharmacists' perception of their involvement in health promotion activities ^{7,8}, few studies have examined the percentage of pharmacy consumers that have received health promotion advice from pharmacists. It is generally acknowledged that rural populations have poorer health outcomes than urban populations and have less access to health services ⁹ thus timely is of great importance.

This study sought to examine whether consumers of rural pharmacy services received preventative health advice. This formed part of a larger study on access to, and quality of, pharmacy services in rural towns in Western Australia which was approved by the Human Research Ethics Committee Curtin University of Technology (HR 221/2002).

Method

Participants

Overall there were 819 participants in the study and 653 of these participants had partners (79.7%). Of these 819 participants, 483 were included in the study as they obtained their medications always or usually from a pharmacist. (The remaining participants obtained their medicines from a dispensing doctor). Of these 483

participants 63.5% were female and 36.5% male. The majority, 98.5% were of Caucasian origin. Participants circled their approximate age according to a ten year margin and 9.2% were less than 35 years, 62% were between the ages of 36 and 65 years, and 28.8% were above the age of 65 years. Table 1 displays the number of participants taking medication for common diseases.

(Insert Table 1)

Table 1 clearly shows that medications for cardiovascular disease, in particular hypertension, were the most common conditions requiring medication.

Materials

A three-part self administered questionnaire was devised to investigate the level and quality of pharmacy services in rural communities. Section 1 asked respondents to supply demographic data such as their age, gender, ethnicity, education level, employment status, length of residence in the town, whether any children resided with them, the ages of these children and whether they were being treated for any illnesses. Space was provided for primary respondents to supply data relating to their partners, if applicable.

Section 2 covered use of health services. The items included frequency and location of obtaining non-prescription and prescription medicines. In this section four questions were included on health advice. One item assessed whether participants currently smoked cigarettes. Those currently smoking were then asked whether the pharmacist had ever enquired or given advice about quitting smoking. Next all participants were asked whether their pharmacist had ever asked about or given

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advice on diet or exercise and lastly, whether their pharmacist had ever talked about or given advice on preventing health problems. Smoking, diet and exercise were included as these behaviours relate to cardiovascular diseases which was the most common health problem requiring medication indicated in a pilot study and thus are relevant for pharmacy practice (results verified in current study, see Table 1).

Section 3 of the questionnaire required participants to provide an indication of how strongly they agreed or disagreed with ten statements. The statements included the following: There is too long a delay from when I need a medication to when it is available to me; I have to travel too far to get prescriptions filled; I have received good advice on how to prevent potential health problems; the health services in my town are adequate for my needs; and I think my town needs more access to pharmacy services. The response format used was a five-point Likert scale (1 = strongly agree, 2 = agree, 3 = unsure, 4 = disagree, 5 = strongly disagree).

Procedure

The self administered questionnaires were mailed to participants. The first mail out date was the 3rd September 2004. To ensure a higher response rate a second mail out was conducted on the 2nd November 2004 for non-respondents. Participants were randomly selected from the electoral roll records provided by the shire councils.

Using a random number generator, each resident had an equal chance of being selected in the study. If two members from the same family and address were selected the next closest person on the roll list not from that family was selected. For each shire a random sample of 150 participants was produced. In an effort to boost the

return rate and to give participants prior notice of the study, the project was advertised in local newspapers at the end of August and start of September.

Results

Access to Health Education

The results on the numbers of participants receiving health advice are presented in Table 2. To examine whether pharmacists were selective in providing advice the data were also separated into older aged participants and those receiving medications for cardiovascular disease.

(Insert Table 2)

Table 2 reveals a low level of enquiry about customer's smoking habits. Very few participants were asked about their diet or exercise habits or given advice on these topics from their pharmacist (12%). A relatively higher percentage received advice on how to prevent health problems (35%). However, the overall majority received no information on preventing health problems from their pharmacist. Pharmacists were not selective in targeting specific groups as older people did not receive more advice on diet or exercise or preventing health problems nor did those receiving medication for cardiovascular conditions.

Predicting Satisfaction with Services

Section 3 of the questionnaire ascertained whether participants were satisfied with pharmacy and health services in their area. One of the items measured whether

participants were satisfied with the level of prevention advice they had received which is shown in Table 3.

(Insert Table 3)

Table 3 illustrates that the majority of participants were satisfied with the level of advice they had received on prevention. A series of logistic regression analyses were conducted to gauge whether satisfaction with preventative health advice predicted overall satisfaction with health services and pharmacy services. These analyses controlled for key demographic and health service variables of age of respondent, location of nearest pharmacy, location of nearest doctor, source of emergency medication and town type (pharmacy versus non pharmacy town). Obtaining medications quickly (odds ratio [OR], 1.43; 95% confidence interval [CI], 1.02-2.00), not having to travel far (OR, 1.44; CI, 1.01-2.06), obtaining medications quickly in an emergency (OR, 1.99; CI, 1.42-2.77) and obtaining good advice on prevention (OR, 1.69; CI, 1.12-2.57), predicted whether participants were satisfied with the level of health services in their area.

For satisfaction with pharmacy services, after controlling for demographic and health service variables, significant predictors were quick access to medications (OR, 2.23; CI, 1.49-3.34) and travelling short distances (OR, 2.26; CI, 1.48-3.46). Participants who were more concerned about privacy were more likely to indicate dissatisfaction with the level of access to pharmacy services (0.52; 0.32-0.84). Receiving good advice on prevention did not predict satisfaction with pharmacy services.

Discussion

As previously noted, pharmacies are ideally suited for health promotion as over 90% of the population visit during one year³, potentially, before major illness or disease². The results of the study showed that few people were receiving advice or talking to their pharmacists about smoking (if relevant), diet, exercise or prevention in general. These low figures on prevention advice were the same for seniors and those receiving medication for cardiovascular health problems.

Despite few people receiving advice from a pharmacist, the majority of participants were satisfied with the level of prevention advice they received. Further, satisfaction with prevention advice was a significant predictor of whether people were satisfied with health services in their town. It would seem from these data that people were accessing health advice from sources other than pharmacies. Further, if they perceive having received good prevention advice from other sources, they may be disinclined to discuss these issues with a pharmacist. However, a limitation of this study was the lack of data on how these perceptions were formed. In addition there was no measure of the quality of advice that had been received or whether participants acted upon the prevention advice given. The only definitive conclusion from these data was that consumers were still underutilising pharmacists health expertise.

Findings from this study support the argument that pharmacists' health promotion role is currently being unrealised³. Rural communities value prevention advice and services⁵ and pharmacy is well placed to provide a valuable public health role¹. Prevention based services can potentially play an important role in improving the health status of those living in rural areas. This requires addressing key barriers to

conducting health promotion in pharmacies such as lack of training¹ and financial support¹⁰. By providing appropriate training and overcoming barriers, rural pharmacists can offer their communities a valuable health promotion service.

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