

UNIVERSITI TEKNOLOGI MARA

**AVAILABILITY AND PREFERENCES OF
ONLINE REFERENCES AND
PATIENT MEDICATION RECORDS (PMR)
FACILITIES IN COMMUNITY PHARMACIES
AND ITS IMPACT ON PROFESSIONAL
PRACTICE**

EZLINA USIR

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ABSTRACT

Introduction:

Availability of online references is increasingly important in giving customer oriented advice. PMR keeping has become increasingly necessary to improve service. Thus, with more information available to improve service, information-driven service becomes necessary for professional practice.

Method: The study involves two surveys 1) availability and preferences of references and PMR facilities in community pharmacies and 2) importance and satisfaction of professional practice issues. In the first survey, 500 structured questionnaires were mailed to community pharmacies in a proportionally stratified random sampling manner. The questionnaire covered availability and preferences of references and PMR. In the second survey, 200 structured questionnaires were mailed to 20 community pharmacies which were stratified according to geographical region. The pharmacists then distributed this questionnaire to their patient and subsequently returned it in the provided envelope. This survey consisted of a four-point Likert scale on the importance of professional services in pharmacies and patient satisfaction and a five-point Likert scale on pharmacist's behaviour and professionalism. The results were analyzed using SPSS 14.

Results: In the first survey, 93 (18.6% response rate) completed questionnaires were returned and only 29% has an online reference and 59% kept PMRs in their store. The results indicated that there was no statistically significant difference between online and PMR availability with demographic characteristics of pharmacists and pharmacies. In the second survey, 151 (75.5% response rate) completed questionnaires were returned. Patients were found to be very satisfied with the pharmacist friendly and courteous nature (64.2%), ability to speak to the pharmacist on issues that concern them (60.3%) and pharmacist giving clear instruction on medications (59.6%). Online availability was correlated with regard to ability of store employee to solve their problems, $r(151) = 0.160$, $p = 0.05$. PMR availability and customer satisfaction were found to be negatively correlated with regard to the medications being clearly labeled, $r(151) = -0.165$, $p = 0.04$ and ability to speak to the pharmacist with issues that concern them, $r(151) = -0.236$, $p = 0.01$.

Discussion and conclusion: The results indicated that usages of online references were minimal and PMRs availability was fair in community pharmacies. The results suggested that for general public, a pharmacist's social behaviour and attitude was the most important aspect in their service provision followed by ability to speak to the pharmacist and matters pertaining to prescription itself. The results also indicated that those with online facilities tend to have employees that are more able to solve customers' problems. Pharmacies with PMR facilities tend to have problems with clearly labeled medications and being able to speak to the pharmacist.

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CHAPTER 1

INTRODUCTION

1.1 Background on drug information

Drug information is an area of pharmacy practice that deals with obtaining, managing and evaluating information to prepare and disseminate it in a suitable format, wherever and whenever it is needed or in anticipation of need (Malone, 2002). The advent of electronic databases, especially the Internet, has enhanced database accessibility and availability of drug related information (Malone, 2002). Although it has been reported that community pharmacies is one of the important sources of advice on pharmaceuticals, the appropriateness of prescribing by the pharmacy staff has been found to be far from acceptable (Goel *et al.*, 1996).

Pharmacists play an important role in the provision of information on drugs to healthcare professional and the general public. However, the number of drugs and the complexity of therapeutics have increased. The need and expectation for an electronic drug information system tailoring to the community pharmacists is very likely to increase in the near future due to the rapid increase and improvement in information and technology to manage it (Bergk *et al.*, 2004; Malone, 2002). According to 35 percent of pharmacists in Switzerland, the importance of offering drug information to customers will increase in the future (Zehnder *et al.*, 2004). In Denmark, one of the possible future scenarios for community pharmacist is that of a provider of individualized information for each customer according to their needs (Norgaard *et al.*, 2001). In Japan, one of the factors that is most sought by customers in the “ideal pharmacies” environment is information management (Kamei *et al.*, 2001). Information technology techniques can detect some adverse events on a timely and cost effective manners, in some cases early enough to prevent harming the patient (Bates *et al.*, 2003).