INTRODUCTION

In Australia, community pharmacists may supply Pharmacy (S2 medicines) and Pharmacist Only Medicines (S3 medicines) without a prescription for the management of a range of primary health conditions. Additionally, some of the non-prescription medicines could be used to manage certain medical emergencies. The public might therefore expect pharmacists to be able to render first-aid assistance[1] in the form of medicine supply or administration in these medical emergencies.

Current legislative provisions[2] do not specifically address the pharmacist's role in a medical emergency in the pharmacy, hence there is insufficient guidance for pharmacists to administer medicines in such situations. For example: the Queensland *Health (Drugs and Poisons) Regulation* 1996 endorses pharmacists to **dispense** and **supply** but not administer medicines.[2] Professional practice standards do not provide clear guidance for pharmacists regarding this role either[3,4,5] and the dominant indemnity insurer for pharmacists does not specify pharmacist liability associated with medicine administration in a medical emergency.[6] This uncertainty regarding what is expected of a pharmacist may influence their actions in a medical emergency.

This descriptive study aimed to identify community pharmacists' proposed actions and opinions of their scope of practice in a medical emergency, in order to inform policy development.

METHOD

A questionnaire was developed and validated by three pharmacy practice academics and one teacher practitioner at the School of Pharmacy, Griffith University. Participants were asked

for their opinions regarding the role of pharmacists in medicine administration and to respond to a number of statements (Tables 1 and 2) concerning two hypothetical medical emergency situations: a salbutamol (S3 medicine) request from a non-compliant asthmatic experiencing an attack (Table 1), and an anaphylaxis scenario involving a four year old child weighing less than 20kg (Table 2). The child was accompanied by his mother who was unsure of the strength of Epi-Pen® (adrenaline auto-injector) previously used, however only the Epi-Pen® for adults (S3 medicine) was available, reflecting common pharmacy stock-holding practices. Responses were made using a five point scale: strongly agree, agree, neutral, disagree and strongly disagree. The strongly agree and agree responses were aggregated as were the strongly disagree and disagree responses. The survey also gave pharmacists the opportunity to provide further comments.

In September 2009 all 151 community pharmacies located within the Gold Coast (n=113) and Toowoomba (n=38) areas were faxed a letter explaining the study and inviting pharmacists to participate in the research. The survey was subsequently posted in October 2009 with an information sheet explaining the research aims. Follow up telephone calls were made in November to all of the pharmacies and 15 pharmacists subsequently requested that the survey be re-sent. Ethical approval was obtained from the University's Ethics Committee and the surveys were anonymous.

RESULTS

Participant details

Forty-five community pharmacists responded to the survey, including five who responded after follow up telephone calls (n=45; 29.8%). Twenty-three participants were over 40 years

of age (51.1%), and 27 were male (60%). The majority of participants (27/43; 60%) worked in a pharmacy that was part of a banner group.

Hypothetical Medical Emergency Situation 1: salbutamol

The statement that was agreed with most often by pharmacists supported the administration of salbutamol (n=41, 91.1%), with 28 participants (62.2%) confident with their asthma first-aid procedures.

Hypothetical Medical Emergency Situation 2: adrenaline auto-injector (Epi-Pen®)

Twenty participants (44.4%) agreed that they would take an Epi-Pen® from the shelf to use for the child, however 16 were unsure (35.6%) and nine (20.0%) would not. From the 38 participants that responded to further questions (Table 2), only 21 (55.3%) felt comfortable administering the Epi-Pen®, with 12 pharmacists (31.6%) indicating that they would ask the mother to administer in a situation where they were unsure about liability. Given another scenario where they were unsure about administering the Epi-Pen®, nine respondents (23.7%) were inclined to ask the mother if she remembered the directions.

A comment that encapsulated the sentiments of several respondents was:

> "Many questions/concerns raised here. Would I be covered by my insurance? Am I legally allowed to administer? Could I instruct instead an assistant to administer (then because they are not the pharmacist, they are not liable?) Would I bypass legal responsibility to save a life potentially? Yes."

DISCUSSION

Pharmacists held varied opinions about their role in a medical emergency. They were more confident administering salbutamol compared to adrenaline; possibly related to potential risks and consequences.

Strengths and limitations of the study

This is the first Australian study that has investigated community pharmacists' responses to medical emergency situations and as such involved participants willing to participate and reflect on their practices. The small sample size, catchment area and response rate may limit the generalisability of the findings, which probably only apply to community pharmacists. The responses may not accurately reflect actions taken in real life situations and further qualitative research may be necessary.

When responding to the hypothetical scenarios, respondents agreed that salbutamol should be administered by pharmacists in a medical emergency and they were confident in doing so. However, some respondents were unsure whether they would use, or disagreed with using adrenaline. This could be influenced by the higher risk associated with its use compared to salbutamol. Pharmacists are expected to counsel and provide advice to patients and carers on how to administer medicines. Failure to do this may be associated with parents not administering adrenaline when needed;[7,8] a potentially fatal situation. As accessible health care professionals, pharmacists could use their medicine knowledge to assist members of the public in a medical emergency and this role could potentially include medicine administration in certain situations. It is therefore imperative to undertake further research on this topic to inform practice guidelines for pharmacists.

CONCLUSION

This study highlights the need for pharmacists to be trained to respond to a medical emergency, with specific reference to the administration of certain S3 medicines. The lack of clarity regarding Australian pharmacists' legal responsibility and liability, pharmacists' familiarity with the medicine and the medicine's safety profile could influence pharmacists' actions in these situations. Appropriate protocols and training need to be developed to ensure that all practising pharmacists meet both professional and public expectations regarding their current and future role in a medical emergency.

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