

Community pharmacists' opinions of their role in administering non-prescription medicines in an emergency.

Introduction

Australian community pharmacists are the most accessible health care professionals for health advice and the provision of primary health care¹, with a stable number of 5,000 community pharmacies serving the public².

Pharmacists may supply Pharmacy (S2) and Pharmacist Only (S3) Medicines without a prescription to treat minor illnesses pursuant to certain legislative requirements. The regulatory provisions incorporate a scheduling system of medicines which aims to protect the health and safety of the public whilst providing access to necessary medicines³, therefore S2 and S3 medicines can only be purchased in a pharmacy and are not available for self-selection by patients. Whilst qualified pharmacy assistants can supply S2 medicines under the supervision of pharmacists, pharmacists must be directly involved in the supply of S3 medicines. Pharmacists have a legal and ethical responsibility to determine that the patient has a therapeutic need and that the medicine is appropriate and safe for the patient before supplying an S3 medicine⁴. Apart from being a legislative requirement, this is also in accordance with the objectives of Australia's National Medicines Policy⁵⁻⁶. Pharmacists also need to provide advice on the effective use of the medicine.

The need to extend the role of Australian pharmacists within the primary health care setting was recently highlighted in the Pharmaceutical Society of Australia's (PSA) *Issues Paper on the Future of Pharmacy Practice* and The

Pharmacy Guild of Australia's *Roadmap*⁷⁻⁸. The recommendation for pharmacists to expand their current role to include services such as the administration of vaccines follows overseas developments, particularly in the United States (US) and United Kingdom (UK)⁹⁻¹⁰. The *PSA Issues Paper* emphasises the requirement to define competency standards for emerging roles⁷. This has been done overseas, for example, pharmacists administering vaccinations in the US and UK need to be trained in emergency responses and the treatment of anaphylactic shock by undertaking appropriate first aid training¹⁰⁻¹¹.

It could be argued that the current primary health care role of Australian pharmacists may also extend to the administration of S2 and S3 medicines in an emergency situation as:

- Pharmacies are readily accessible to the public,
- Certain S2 (aspirin) and S3 (salbutamol, adrenaline and glyceryl trinitrate) medicines are indicated for the treatment of particular medical emergencies, and
- Pharmacists are medicines experts and frequently counsel patients on the use of these medicines.

Pharmacists are therefore ideally placed to administer these medicines in a medical emergency. This role for pharmacists has already been identified in some countries. For example, in the UK there is a legislative exemption that allows pharmacists to administer adrenaline for the purpose of saving a life in a medical emergency.¹² However, there are no clear guidelines for Australian pharmacists regarding this role. For example, in Queensland, the *Health*

(Drugs and Poisons) Regulation 1996 does not authorise pharmacists to administer medicines¹³, with similar provisions in other jurisdictions¹⁴. Indeed, pharmacists' responsibilities and liabilities in roles other than the dispensing and supply of medicines is yet to be clearly defined¹⁵.

The first principle of the pharmacist's *Code of Professional Conduct* is that the primary concern of pharmacists should be patient safety¹⁶. It is therefore reasonable to assume that, if competent to do so, pharmacists should administer medicines in an emergency situation in order to save a person's life. Despite this assumption, there has been no Australian research on *when* and in *what* situations pharmacists should administer an S2 or S3 medicine. There is also a lack of information on what community pharmacists have done in the past when faced with a medical emergency.

Aim

To investigate the opinion of community pharmacists regarding the administration of S2 and S3 medicines by pharmacists in a medical emergency and whether clarification of this role is needed.

Method

A literature review was undertaken to establish if any research previously investigated the pharmacist's role in the administration of medicines in a medical emergency. There was an absence of published research that addressed this role. However, there was some research on the role of pharmacists in the administration of vaccines.

After a range of discussions with pharmacy academics and practitioners, a survey was developed to identify the contexts in which community pharmacists would administer an S3 medicine in a medical emergency. A quantitative approach, through the use of a survey, was chosen in order to gather information from a representative sample of pharmacists.

Participants were asked to respond to questions concerning the administration of S3 medicines using a five-point Likert scale which ranged from strongly agree to strongly disagree. It was decided to specifically focus on S3 medicines in this question as pharmacists need to be directly involved in the supply. For the analysis, strongly agree and agree were combined and strongly disagree and disagree were combined. A number of contexts were explored (Table 1), as well as pharmacists' opinions as to whether they should administer the following S2 and S3 medicines: aspirin for cardiovascular disorders, salbutamol or terbutaline for asthma attacks, adrenaline for anaphylaxis and glyceryl trinitrate for angina. These medicines were selected as they are all non-prescription medicines that can be used in the management of the above medical emergencies. Participants were also requested to indicate whether they had previously administered the above medicines in a medical emergency, and whether they believed the community perceived pharmacists as being more skilled in an emergency than a first aider. The questionnaire also asked participants if they believed that further clarification of their role in managing a medical emergency was required and if they had further comments.

A pilot survey was conducted to ensure that the questions were clear and, considering the average community pharmacist's busy workload, that the survey could be completed in a reasonable amount of time. Three pharmacy practice academics and one teacher practitioner within the School of Pharmacy of an Australian university participated and no major changes resulted. The research was approved by the University's Human Research Ethics Committee prior to the distribution of the survey.

During September 2009, a letter explaining the study was faxed to all community pharmacies located within the Gold Coast (n=113) and Toowoomba (n=38) areas of South East Queensland. The pharmacies represented a broad range of pharmacy types, including banner groups (pharmacies that have similar marketing strategies but are independently owned) and independents from urban and semi-rural areas. During October 2009 the survey and detailed information about the research aims were posted to all of the 151 community pharmacies, requesting that it be completed by a pharmacist. Follow-up telephone calls were subsequently conducted in November 2009 to all of the pharmacies to increase the response rate, which resulted in 15 more surveys being re-sent as requested by the pharmacist.

Data Analysis

Data were de-identified, and frequencies were determined using SPSS v18. Pharmacists' comments were analysed to identify common themes.

Results

Participant details

Forty-five surveys were returned, which provided a 30% (45/151) response rate. The majority of participants (27/43; 60%) worked in a pharmacy that was part of a banner group. Respondents represented a mean age of 40.4 years (range 23-63), and 60% were male. The average year of pharmacy qualification was in 1992 (range 1968 to 2008).

Pharmacists' opinions on administering an S3 medicine in a medical emergency

When presented with nine different contexts in which the respondents had to identify if they would administer an S3 medicine in a medical emergency (Table 1), the highest response rates and similar scores (40/45, 89%) were when they considered all potential outcomes first, had no easy access to a doctor and the patient couldn't administer the medicine they carried with them.

(Insert Table 1 Here)

Pharmacists' role in administering medicines in a medical emergency

Participants were asked for their opinions on whether pharmacists should be able to administer the four non-prescription medicines in a medical emergency or have done so in the past. The responses demonstrated fairly similar results regarding whether pharmacists should administer aspirin (18/36, 51%), salbutamol (22/44, 50%), adrenaline (23/42, 55%) and glyceryl

trinitrate (22/43, 51%) in a medical emergency (denominators vary due to different response rates). From those that had administered the above medicines in the past, 2/36 (4%) had administered aspirin, 2/44 (5%) had administered salbutamol, and 3/43 (7%) had administered glyceryl trinitrate. None of the participants had previously administered adrenaline. Twenty five (56%) respondents believed that the community would view pharmacists as more skilled than a qualified first aider in certain medical emergencies.

Clarification of pharmacists' role

The majority (36/43, 84%) of participants believed that role clarification in treating medical emergencies was required for pharmacists.

Common themes

At the end of the survey, participants were invited to provide qualitative feedback about the role of pharmacists in a medical emergency. Most comments were associated with the role and knowledge of the pharmacist, with some diametrically opposed, for example:

Some respondents were supportive of administering medicines in a medical emergency:

"It is everyone's responsibility to help another person in an emergency. As pharmacists with vast knowledge of S3's we can use our experience and professional judgement to make a real difference in these situations."

While others did not identify medicine administration as being within a pharmacist's role:

"I am a pharmacist – I am not an ambulance officer or a nurse or a GP. These roles do not change when in a medical emergency."

Pharmacists also identified that liability was an issue:

"I believe there is a dilemma between administering first aid in emergency situations and legal issues – definitely needs more clarification for pharmacists" and;

"You are blurring [sic] the lines between a) being paid and indemnified as being a qualified ambo [ambulance officer] / paramedic and b) being a concerned well meaning member of the public (who happens to be a pharmacist) acting in a role (ambo / paramedic) that we are not qualified for or indemnified for if all goes wrong. Help should be voluntary not expected or legislated unless that's our profession – we are not qualified to assess..."

Discussion

Currently, the Australian Competency Standards for Pharmacists state that in the delivery of primary and preventative care pharmacists should:

- Ensure the *clinical appropriateness* of medicines and health care products;
- Promote *safe and effective use* of medicines; and
- Provide *direct care* consistent with the role of the pharmacist⁴.

The same principles could apply to the use of non-prescription medicines in a medical emergency as pharmacists in their current role advise on the quality use of medicines and are concerned with patient safety¹⁷. Indeed, responses indicated that patient safety was of paramount importance with many of the respondents wanting to consider potential outcomes first or have external affirmation for their decision in the form of a previous supply or dispensing of the medicine, i.e. the patient having the medicine with them. Pharmacists often only agreed to administer an S3 medicine if there was no other available option, for example, when there was no easy access to the doctor or if the patient could not administer the medicine themselves. These results are consistent with the comments by some of the pharmacists who do not want to diagnose conditions or act in the role of other health professionals such as a medical practitioner, nurse or ambulance officer. However, comments indicated that some pharmacists believe they have the knowledge and skills required to assist patients in a medical emergency.

It has been highlighted that pharmacists should undergo relevant first aid training to be able to manage medical emergency situations. This approach co-incides with good practice principles and the pharmacists' aim to provide safe patient care^{4,11}. Approximately half of the pharmacists in this study indicated that they believed that the public would view them as more skilled than a qualified first aider in certain emergency situations. Whether the respondents believed this to be the case due to having more medication knowledge compared to a community first aider is unknown, as a senior first aid certificate does not include training on how to administer medicines,

whereas it is an initial registration requirement for Australian pharmacists to have competent first aid skills^{4,18}. One possible explanation for those respondents that disagreed is that the term 'qualified first aider' was not defined in the survey, so pharmacists may have included the roles of an ambulance officer in this category. Nevertheless, members of the public may have an expectation that pharmacists can provide emergency assistance¹¹. If pharmacists provide first aid, including the administration of medicines in a medical emergency, they have a responsibility to act within their level of competence¹⁹. Although no respondent had previously administered adrenaline, the appropriate use of adrenaline requires more knowledge and skill and carries more risks than the other named S2 and S3 medicines. Being trained to administer any of these medicines in medical emergencies will ensure that patients' safety and best interests remain priorities.

Training for pharmacists should be customised to their actual and potential roles – whether delivering an administration service, working in a multidisciplinary team or providing primary health care. In the US it is a requirement that pharmacists who provide immunisations have undergone first aid training that includes the correct administration of adrenaline to a patient with anaphylaxis¹⁰. Basic and advanced cardiac life support certification has also been strongly recommended for pharmacists working within a hospital Emergency Cardiopulmonary Resuscitation team²⁰. With the proposed primary health care reforms in Australia²¹, it is imperative for pharmacists to consider future roles in the delivery of primary health care services in the community and the training these roles would require.

There was widespread concern relating to the potential legal implications and liability arising from administering a medicine in a medical emergency and the majority of pharmacists indicated that clarification of this role was required. There are currently no legislative provisions or practice standards in place for pharmacists to administer medicines in a medical emergency^{14,17}. This lack of clarification as to pharmacists' legal liability has already been identified as a potential barrier in delivering other health services²². The results from this study indicate that some pharmacists have administered S2 and S3 medicines, although the health outcomes of the patient and competence of the pharmacist involved in these cases are unknown. Current guidance only refers to the protection of pharmacists as 'Good Samaritans' if acting in a competent, professional manner²³.

This research demonstrates that some pharmacists do administer S2 and S3 medicines in practice and believe that they should be able to administer certain medicines if necessary to protect a patient's health and wellbeing. However, there needs to be more information available as to what the average pharmacist would do in practice to be able to determine what a reasonable competent pharmacist should do²³. This is crucial in ensuring that pharmacists practising in the community understand their role and identify the training required to be competent in administering medicines in a medical emergency.

Given that only a few pharmacists in our survey had previously administered medications in an emergency situation, it is difficult to determine a peer view of competency required or indeed if administration is within the role of a pharmacist. Being aware of what a competent pharmacist would do in a medical emergency will assist in the development and implementation of guidelines and training.

Strengths and limitations of the study

The participants represented a relatively small sample of community pharmacists, the geographical area was limited and the response rate to the survey was low, even after follow up. Very few pharmacists had administered the named medicines in a medical emergency and no information was obtained as to the actual circumstances or the impact of their actions on the patient's health. However, while this study did not focus on the gathering of qualitative information, two open-ended questions were included. These questions identified pharmacists' uncertainty and the need for clarification of their role when dealing with a medical emergency involving S2 and S3 administration. In future, qualitative research will be conducted to further investigate these findings.

Conclusion

Given that community pharmacists are the most accessible health care professionals and they currently supply and counsel on the use of S2 and S3 medicines, an expansion to their role to include the administration of these medicines in a medical emergency would seem logical. However, opinions

varied as to whether this falls within the pharmacist's role and clarification is therefore needed. Should Australian pharmacists be of the opinion that their role be extended to include medicine administration, further research and training is required.

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Conflict of Interest

None.

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Table 1: Pharmacists response to when they would administer an S3 medicine in an emergency.

You would administer Pharmacist Only Medications in an emergency if:	Agree n (%)	Neutral n (%)	Disagree n (%)
You were aware of the patient's medical history.	37 (82)	4 (9)	4 (9)
You were up to date with your first aid certification.	25 (56)	14 (31)	6 (13)
You considered all actions and the consequent results(s) before making a decision.	40 (89)	2 (4)	3 (7)
The patient asked you to.	29 (64)	11 (24)	5 (11)
There was a protocol in the pharmacy to follow so you were familiar with what to do.	25 (57)	13 (30)	16 (14)
There was no easy access to a doctor (i.e. no medical centre nearby).	40 (89)	3 (7)	2 (4)
The patient carried the medicine with them and could not do so themselves.	40 (89)	3 (7)	2 (4)
The patient had used the medication before and did not have the medication with them.	33 (75)	8 (18)	3 (7)
You were 100% sure that they were suffering from the condition that medicine is used to treat.	34 (77)	7 (16)	3 (7)