This is the accepted version of the following article: Hope, D. and King, M. and Hattingh, H. 2014. Responses of pharmacy students to hypothetical refusal of emergency hormonal contraception. International Journal of Pharmacy Practice. 22 (2): pp. 155-158, which has been published in final form at http://doi.org/10.1111/ijpp.12051

Abstract:

Objectives:

To explore pharmacy students' ethical behaviour and care towards patients in relation to the provision of emergency hormonal contraception (EHC).

Methods:

Three hundred and forty-seven pharmacy students were presented a hypothetical scenario involving refusal of EHC, based on religious or moral grounds, and asked to write responses as to how the patient should be managed; 270 (77.8%) responded.

Key findings:

Of all respondents, 90.4% referred the patient to another health professional to facilitate continuity of care, with referrals increasing as students progressed through the programme. Religion had no influence on referral, while female gender was related to increased referral.

Conclusions:

Gender difference, if continued into practice, has the potential to negatively impact on patient care.

Responses of Pharmacy Students to Hypothetical Refusal of Emergency Hormonal Contraception

Introduction

Pharmacists have legal and ethical obligations to ensure safe and effective supply of medicines and pharmacy services. [1, 2] Professional pharmacy practice involves pharmacists understanding the primacy of patients and their needs. [3] Emergency hormonal contraception (EHC) has been supplied in Australia without prescription since 2004. Supply requires consultation with a pharmacist, who must establish therapeutic need, consider legal and professional obligations, and counsel. [4] The supply of EHC is an area of practice where there may be conflict between moral, religious, professional and ethical beliefs and behaviours, as has been demonstrated in research involving both pharmacists and pharmacy students. [5, 6] In situations of refusal of EHC supply on moral or religious grounds, Australian pharmacists are professionally obligated to ensure continuity of care to the patient and should facilitate timely access to the required medicine. [1, 4, 7, 8] Ethically, a pharmacist should, "recognise the health and wellbeing of the patient as their first priority", and "provide care in a compassionate and professional manner". [2] Fostering ethical behaviour and a caring attitude toward patients are therefore important aspects of pharmacy education. Students first come into contact with ethical scenarios and are taught their responsibility toward continuity of care in second and third year, while the guidelines for the provision of EHC [4] are introduced at the end of fourth year. The aim of this research was to explore the development of attitudes toward professional

responsibilities and patient care as students progressed through an Australian pharmacy education programme.

Methods

An open-ended question based on a hypothetical ethical situation involving potential refusal of EHC was posed to 347 pharmacy students during April-May 2011. These students were enrolled across five year levels of the articulated BPharmSci and MPharm programmes within Griffith University School of Pharmacy. The question was included in an anonymous paper-based survey which was distributed during timetabled lectures or workshops to all 347 pharmacy students in attendance (347 of 471 students in total). Students were prompted, "If a pharmacist refuses to supply EHC based on moral or religious beliefs, how should the patient be managed?"

Broad demographic data were recorded, consisting of year level, gender and religion. Responses were manually analysed by researchers to identify common actions or themes. Common themes were identified and coded as present or absent from the response. Comparisons were made based on student year level, gender, and religion to determine if these characteristics were associated with the presence or absence of this action or theme. Linear regression, Chi-squared, and Fisher's exact tests were performed using IBM SPSS Statistics version 20 (Armonk, New York, USA) with $p<0.05$ considered as statistically significant. Institutional ethics approval was obtained (PHM/05/11/HREC).

Results

Of the 347 surveys distributed, 270 were either partially or fully completed with some variation in response rate between year levels (Table 1). This provided an overall response rate of 77.8%.

Referral to another health professional or service in order to facilitate supply was identified by 244 (90.4%) of those who responded. Although less common, themes identified were disapproval of not supplying (n=14, 5.19%) and a caring and considerate approach towards the patient (n=14, 5.19%).

Referral was influenced by year level and gender, but not by religion (Table 2). Referral rates increased by almost 5% per year level as students progressed through the programmes ($p=0.009$, $R^2adj=0.901$; Referral (%) = 74.65 + 4.97 x year level). Overall, female students were more likely to refer the patient to another health professional or service in order to facilitate supply ($p<0.001$; OR 5.50; 95%CI 2.13, 14.19). While female students in third and fourth year were more likely to refer ($p=0.039$ and 0.028 respectively), there was no difference in referral rates in fifth year.

The majority of comments indicating disapproval at not supplying on moral or religious grounds were non-judgmental, for example: "*Should only refuse if the patient can be easily referred to another HCP* [health care professional] *who can supply it"* [5th year student]. However some students were strongly disapproving, for example: *"She should be sent to someone who isn't an absolute* **** [a foolish person]*"* [4th year student].

While the majority of comments focused on the mechanics of referral some showed that care, concern and consideration for the patient were paramount, for example, in response to how the patient should be managed: "*With care*" [1st year student]; *"Patient care is important, so alternative arrangements are to be made where the patient can be treated by another medical professional"* [2nd year student]; *"Truthfully and with respect"* [4th year student]. Some responses demonstrated an awareness of ethical principles, for example: *"Continuity of care must be ensured, refer to another pharmacist"* [2nd year student].

Discussion

As students progressed through the pharmacy programme they increasingly demonstrated an ability to consider ethical principles through intended referral of the hypothetical patient to another health professional to facilitate continuity of care. Based on professional standards [1, 3] and the *Code of Ethics for Pharmacists* [2] this is the most appropriate action to undertake in a situation of refusal of supply. In contrast to another study, [6] religion had no influence on a student's decision to refer, while female gender was related to an increased likelihood of referral in third and fourth year students. Gender disparity diminished by the final year of study, correlating with education.

The high response rate (77.8%) gives robustness to our findings. However, these results may not be generalisable to other universities or other countries due to the unique 4.5-year articulated pharmacy programme offered, and the high proportion of Australians that identify as having no religion, [9] reflecting a secular society. The latter

may also explain the disapproval of refusal of supply, based on religious or moral grounds, shown in some of the responses. An identified limitation is that an increased response rate in the later year levels may reflect students' increased comfort and security in answering the question. Previous research has also suggested that hypothetical scenarios are useful at measuring how people *should* react in a particular situation, which may differ from their actual response. [10] Even though self-reported health professional intentions may well correlate with subsequent behaviour, there can be discrepancies between them. [11]

Practising pharmacists are often confronted with ethically challenging scenarios which require consideration of legal and ethical boundaries, and the application of professional judgement. Pharmacists may find it difficult to apply ethical reasoning skills in practice, especially in relation to more complicated issues such as the supply of EHC. [12, 13] It is therefore important to equip pharmacy students with the knowledge and skills to behave ethically.

In Australia, professional standards require pharmacists to be ethical and focussed on patient outcomes. [1-3] Hence, pharmacy students need to be trained to consider a patient's health and wellbeing, and be able to make appropriate recommendations regarding their management. Some responses in our study demonstrated students' concern and consideration for patient welfare, even in the early years of the programme. By the final year however, all participating students demonstrated consideration of patient outcomes through referrals.

Gender influence on EHC provision has not been identified in other studies of pharmacy students [6] but some gender differences have been identified in practising pharmacists. [14] Further research would be required to determine whether referral biases are associated with the gender of practising pharmacists.

Conclusion

Pharmacy students increasingly adopted a focus on patient care and an ethical approach to practice issues as they progressed through their pharmacy programme. The gender difference identified, if continued into practice, has the potential to negatively impact on patient care.

References

1. Pharmaceutical Society of Australia. Professional Practice Standards - Version 42010. Available from: http://www.psa.org.au/download/standards/professional-practice-standards-v4.pdf.
2. Pharmaceutical Society of Australia. Code of Ethics for Pharmacists2011. Available from: http://www.psa.org.au/download/codes/code-of-ethics-2011.pdf.
3. Pharmaceutical Society of Australia. National Competency Standards Framework for Pharmacists in Australia2010. Available from: http://www.psa.org.au/download/standards/competency-standards-complete.pdf.
4. Pharmaceutical Society of Australia. Guidance for provision of a Pharmacist Only medicine Levonorgestrel, November 2011. In: Sansom LN, editor. Australian Pharmaceutical Formulary and Handbook, 22nd edition. Canberra: Pharmaceutical Society of Australia; 2012.
5. Borrego ME, Short J, House N, Gupchup G, Naik R, Cueller R. New Mexico Pharmacists' Knowledge, Attitudes, and Beliefs Toward Prescribing Oral Emergency Contraception. Journal of the American Pharmacists Association [Internet]. 2006; 46(1):[33-43 pp.]. Available from: http://japha.org/article.aspx?articleid=1040697.
6. Ragland D, West D. Pharmacy Students' Knowledge, Attitudes, and Beliefs Regarding Emergency Contraception. American Journal of Pharmaceutical

Education [Internet]. 2009; 73(2):[Article 26 p.]. Available from: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2690901/.

7. Pharmaceutical Society of Australia. Position statement: Ethical issues in declining to supply2003. Available from: http://www.psa.org.au/download/policies/ethical-issues-in-declining-to-supply.pdf.

8. Pharmaceutical Society of Australia. Guidance for the provision of *Pharmacist Only* medicine levonorgestrel 2011; Available from: http://www.psa.org.au/supporting-practice/professional-practice-standards/pharmacist-only-medicines-s3-protocols.

9. Pink B. 2009-2010 Year Book Australia2010; Number 91. Available from: http://www.ausstats.abs.gov.au/ausstats/subscriber.nsf/0/AC72C92B23B6DF6DCA257737001B2BAB/$File/13010_2009_10.pdf.

10. Collett JL, Childs E. Minding the gap: Meaning, affect, and the potential shortcomings of vignettes. Social Science Research. 2011;40(2):513-22.

11. Eccles MP, Hrisos S, Francis J, Kaner EF, Dickinson HO, Beyer F, et al. Do self-reported intentions predict clinicians' behaviour: a systematic review. Implement Sci [Internet]. 2006; 1(1):[28 p.]. Available from: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1664582/.

12. Cooper RJ, Wingfield J, Bissell P. Ethical, religious and factual beliefs about the supply of emergency hormonal contraception by UK community pharmacists. Journal of Family Planning and Reproductive Health Care. 2008;34(1):47-50.

13. Higgins SJ, Hattingh HL. Requests for emergency contraception in community pharmacy: An evaluation of services provided to mystery patients. Research in Social and Administrative Pharmacy [Internet]. 2012; (in press). Available from: http://www.sciencedirect.com/science/article/pii/S155174111200037X.

14. Hussainy SY, Stewart K, Chapman CB, Taft AJ, Amir LH, Hobbs MK, et al. Provision of the emergency contraceptive pill without prescription: attitudes and practices of pharmacists in Australia. Contraception. 2011;83(2):159-66.

194 Table 1. Number of questionnaires distributed and completed

195

Year level	No. distributed	No. completed (%)
1	68	45 (66.2)
2	36	29 (80.6)
3	97	70 (72.2)
4	89	73 (82.0)
5	57	53 (93.0)
Total	347	270 (77.8)

196

197

198 Table 2. Referral by year level, gender and religion.

199

	Not refer n (%)	Refer n (%)	p-value
Year level			
1	9 (20.0)	36 (80.0)	**0.001***
2	4 (13.8)	25 (86.2)	
3	10 (14.3)	60 (85.7)	
4	3 (4.1)	70 (95.9)	
5	0 (0.0)	53 (100.0)	
Gender			
Male	20 (18.0)	91 (82.0)	**<0.001****
Female	6 (3.8)	150 (96.2)	
Religion			
None	6 (7.1)	79 (92.9)	0.477*
Christian (non-Catholic)	8 (10.7)	67 (89.3)	
Catholic	4 (6.9)	54 (93.1)	
Muslim	4 (18.2)	18 (81.8)	
Other	3 (12.0)	22 (88.0)	

200 *Fisher's exact test **Chi-squared test