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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

25 responsibilities and patient care as students progressed through an Australian
26 pharmacy education programme.
27

28 **Methods**

29

30 An open-ended question based on a hypothetical ethical situation involving potential
31 refusal of EHC was posed to 347 pharmacy students during April-May 2011. These
32 students were enrolled across five year levels of the articulated BPharmSci and
33 MPharm programmes within Griffith University School of Pharmacy. The question
34 was included in an anonymous paper-based survey which was distributed during
35 timetabled lectures or workshops to all 347 pharmacy students in attendance (347 of
36 471 students in total). Students were prompted, "If a pharmacist refuses to supply
37 EHC based on moral or religious beliefs, how should the patient be managed?"
38

39 Broad demographic data were recorded, consisting of year level, gender and religion.
40 Responses were manually analysed by researchers to identify common actions or
41 themes. Common themes were identified and coded as present or absent from the
42 response. Comparisons were made based on student year level, gender, and religion to
43 determine if these characteristics were associated with the presence or absence of this
44 action or theme. Linear regression, Chi-squared, and Fisher's exact tests were
45 performed using IBM SPSS Statistics version 20 (Armonk, New York, USA) with
46 $p<0.05$ considered as statistically significant. Institutional ethics approval was
47 obtained (PHM/05/11/HREC).
48

49 **Results**

50

51 Of the 347 surveys distributed, 270 were either partially or fully completed with some

52 variation in response rate between year levels (Table 1). This provided an overall

53 response rate of 77.8%.

54

55 Referral to another health professional or service in order to facilitate supply was

56 identified by 244 (90.4%) of those who responded. Although less common, themes

57 identified were disapproval of not supplying (n=14, 5.19%) and a caring and

58 considerate approach towards the patient (n=14, 5.19%).

59

60 Referral was influenced by year level and gender, but not by religion (Table 2).

61 Referral rates increased by almost 5% per year level as students progressed through

62 the programmes ($p=0.009$, $R^2adj=0.901$; Referral (%) = 74.65 + 4.97 x year level).

63 Overall, female students were more likely to refer the patient to another health

64 professional or service in order to facilitate supply ($p<0.001$; OR 5.50; 95%CI 2.13,

65 14.19). While female students in third and fourth year were more likely to refer

66 ($p=0.039$ and 0.028 respectively), there was no difference in referral rates in fifth year.

67

68 The majority of comments indicating disapproval at not supplying on moral or

69 religious grounds were non-judgmental, for example: "*Should only refuse if the*

70 *patient can be easily referred to another HCP* [health care professional] *who can*

71 *supply it"* [5th year student]. However some students were strongly disapproving, for

72 example: *"She should be sent to someone who isn't an absolute* **** [a foolish

73 person]*"* [4th year student].

74

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

100 may also explain the disapproval of refusal of supply, based on religious or moral
101 grounds, shown in some of the responses. An identified limitation is that an increased
102 response rate in the later year levels may reflect students' increased comfort and
103 security in answering the question. Previous research has also suggested that
104 hypothetical scenarios are useful at measuring how people *should* react in a particular
105 situation, which may differ from their actual response. [10] Even though self-reported
106 health professional intentions may well correlate with subsequent behaviour, there can
107 be discrepancies between them. [11]
108
109 Practising pharmacists are often confronted with ethically challenging scenarios
110 which require consideration of legal and ethical boundaries, and the application of
111 professional judgement. Pharmacists may find it difficult to apply ethical reasoning
112 skills in practice, especially in relation to more complicated issues such as the supply
113 of EHC. [12, 13] It is therefore important to equip pharmacy students with the knowledge
114 and skills to behave ethically.
115
116 In Australia, professional standards require pharmacists to be ethical and focussed on
117 patient outcomes. [1-3] Hence, pharmacy students need to be trained to consider a
118 patient's health and wellbeing, and be able to make appropriate recommendations
119 regarding their management. Some responses in our study demonstrated students'
120 concern and consideration for patient welfare, even in the early years of the
121 programme. By the final year however, all participating students demonstrated
122 consideration of patient outcomes through referrals.
123

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

128

129 **Conclusion**

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

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193

194 Table 1. Number of questionnaires distributed and completed

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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