

# Kansas Pharmacists' Knowledge, Attitudes and Beliefs Regarding Over-the-Counter Emergency Contraception

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## ABSTRACT

**Background:** To increase patient access, the FDA recently approved OTC sale of emergency contraception (EC) however increased access may not have been achieved due to pharmacists refusing to sell the product.

**Purpose:** Measure knowledge, attitudes and beliefs of KS pharmacists regarding EC. **Methods:** A survey with 46 items assessing respondent characteristics, knowledge, and attitudes/beliefs was mailed to all 2,601 registered KS pharmacists. **Results:** A total of 22.4% of pharmacists responded, n=583. The overall mean knowledge score was 57% ± 20, however scores were higher in persons working in settings where EC is sold, 46% ± 21 vs. 61% ± 18, p<0.001. The knowledge question with the lowest accuracy, 28%, asked about notifying authorities in cases of sexual assault. Only 37% correctly identified the primary mechanism of action as delaying/preventing ovulation. A majority of pharmacists would dispense EC in cases of rape (80%), incest (79%), and regardless of the situation (62%). However, many expressed concerns including its use as a regular form of birth control (44%), medical liability (41%), and promoting unsafe sex (37%). Religious and political views significantly affected willingness to dispense. **Conclusion:** Overall, knowledge of KS pharmacists regarding EC is low and should be strengthened. While the majority of pharmacists are willing to dispense EC, a significant number did express concerns indicating this may be causing some professional ethical stress deserving of statewide discussion.

## 1. INTRODUCTION

Almost half of the pregnancies in the US are unintended, totaling three million each year.[1] An estimated 42% of these women will have an abortion.[2] As a result, emergency contraception (EC) has become an issue at the forefront of pregnancy prevention. In August 2006, the FDA approved the sale of EC over-the-counter (OTC), without a prescription. Because the efficacy of EC is improved the sooner after coitus it is taken, it was thought that making it OTC would eliminate the time-consuming step of seeing a prescriber and thus improve ease and speed of availability. The

product currently FDA approved for OTC sale is 1.5 mg of levonorgestrel, packaged as Plan B®.[3] Due to the political, moral, and ethical debates surrounding EC, it is necessary to understand the attitudes and beliefs of pharmacists who may or may not be willing to sell the product. The press has reported stories of pharmacists refusing to sell EC and pharmacies refusing to carry it based on moral or political objections.[4-7] It is therefore important to better understand pharmacists' knowledge, attitudes, and beliefs regarding EC because they are likely to have important implications with respect to patient access.

## 2. METHODS, RESULTS, SIGNIFICANCE

**Methods:** A survey with 46 items assessing respondent characteristics, knowledge, and attitudes/beliefs was created based primarily upon two previously published surveys.[8,9] The respondent characteristics section contained 11 items. The knowledge section contained 17 statements where respondents were asked to mark "true," "false," or "I don't know." The attitudes/beliefs section contained 18 items using a 5-point Likert scale ranging from "strongly agree" to "strongly disagree." Contact was initially attempted via e-mail and/or a postcard to all 2,601 registered Kansas pharmacists asking for participation in the survey online. The online response rate was low (<4%); therefore pharmacists were mailed a paper copy with a return envelope. Pharmacists were instructed only to complete this survey if they had not already responded online. The overall response rate was 22.4%. Data were analyzed using SPSS version 15.0 software and *t* test, chi-square, and ANOVA as appropriate; statistical significance was set at  $p \leq 0.05$ .

**Results:** The overall mean knowledge score was 57% ± 20, however scores were higher in persons working in settings where EC is actually sold, 61% ± 18 vs. 49% ± 21, p<0.001. As expected,

respondents who felt they had a professional obligation to learn about EC did have a significantly higher mean knowledge score than those who did not,  $59.4 \pm 18.56$  vs.  $35.4 \pm 22.70$ ,  $p < 0.001$ . Similarly, respondents who felt comfortable with their training about EC had a significantly higher mean knowledge score than those who did not feel comfortable,  $68.3 \pm 14.98$  vs.  $49.34 \pm 20.07$ ,  $p = 0.001$ . The knowledge question with the lowest accuracy, 28%, asked about notifying authorities in cases of sexual assault. While 74% correctly answered that EC is not the same thing as RU-486 and 81% correctly answered that EC will not interrupt an established pregnancy, only 37% correctly identified the primary mechanism of action of EC as delaying/preventing ovulation. Sixteen percent thought the primary mechanism of action was to interrupt an established pregnancy and 5% stated they did not know its mechanism of action.

A majority of pharmacists would dispense EC in cases of rape (80%), incest (79%), and regardless of the situation (62%) with 62% considering it to be part of their professional responsibility and 80% stating they would refer to another pharmacist if they chose not to dispense. Willingness to dispense "regardless of the situation" was influenced by religion, political affiliation, population size, and age. Catholics and non-Catholic Christians were less likely to dispense than respondents without a religious affiliation, 52%, 71%, and 93% respectively,  $p < 0.001$ . Conservatives were less likely to dispense than moderates or liberals, 45%, 81%, and 97% respectively,  $p < 0.001$ . Pharmacists practicing in communities with  $< 100,000$  population were less likely to dispense than those working in communities with  $\geq 100,000$  population, 52.1% vs. 68.5%,  $p = 0.018$ . The 36-55 year old age range was slightly more likely to dispense EC,  $p = 0.049$ . Gender did not appear to influence willingness to dispense,  $p = 0.770$ .

Although a majority of pharmacists were willing to dispense, concerns were expressed such as dispensing it without knowledge of the patient's past medical history (61%), providing adequate counseling due to the patient's emotional status (60%), use as a regular form of birth control (44%), medical liability (41%), promoting unsafe sex (37%), and legal liability associated with checking the patient's age (36%). Respondents were not significantly concerned with loss of patronage if they did dispense EC (6%) or with potential side effects of EC (16%).

**Significance:** Although offering medication counseling is required for prescription medications,

there is no *legal* obligation for counseling with OTC products. However, because EC is being sold without a prescription or intervention from a prescriber, most people would agree that pharmacists should be knowledgeable about the product's risks and benefits and be able to appropriately counsel patients just as they would for any other OTC product.[3] Therefore the low knowledge scores found in this survey are a significant finding.

Based upon the open comment section, this survey generated a significant amount of emotion on both sides of the issue. Pharmacists' willingness to dispense EC was found to be multi-factorial. Smaller communities have fewer pharmacies, sometimes only one. Therefore pharmacists unwilling to dispense EC in these communities may greatly reduce patient access. The results of this study are significant when considering whether the OTC status has eased or further limited the access of EC to the public. The results of this study may also help facilitate important discussion that could proactively mitigate potential conflicts or knowledge deficits regarding EC.

### 3. CONCLUSION

Overall, knowledge of Kansas pharmacists regarding EC is low and should be strengthened. While the majority of pharmacists are willing to dispense EC, a significant number did express concerns indicating this may be causing some professional ethical stress deserving of statewide discussion.

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