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## Examining the Impact of a Pharmacists Postpartum Counseling Service; Evidence from a University Hospital

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**Key words:** pharmacy, counseling service, postpartum

### Abstract

*Purpose:* To describe a pharmacist's counseling service pertaining to methods of contraception on the postpartum unit of a university hospital and to evaluate the number of postpartum patients who desire information on contraception with the demographics of age, public or private insurance, and whether the patient was English or Spanish-speaking.

*Methods:* Retrospective cohort data analysis of postpartum women who received the option of counseling by a pharmacist or pharmacy intern at a university hospital over a year and 7 month period. There were 2,048 cases included for this study. The total number of patients who wanted information as well as pharmacist preparation time and counseling time were also noted.

*Results:* Patients who were interested in a hormonal contraception method were 3 times more likely to desire counseling compared with patients who declined information ( $p < 0.05$ ). Also, patients who wanted an implantable form of contraception were 8 times more likely to desire information compared with patients who declined counseling ( $p < 0.05$ ). Patients in the age range of 18-25, 26-30, and 31-45 years were less likely (56%, 64%, & 65%) to want counseling compared with the age range of 12-17 years (all  $p < 0.05$ ). Lastly, patients who spoke Spanish were 3 times more likely to have been counseled compared with non-Spanish speaking patients. The number of postpartum patients counseled on different contraception methods was 1,546 versus 699 patients who declined counseling. Total pharmacist preparation time totaled 160.95 hours, while total patient counseling time totaled 204.55 hours.

*Conclusion:* Overall, postpartum women who chose to be counseled by a pharmacist were considering either a hormonal or implantable method of contraception, were younger than the age of 17 and were Spanish speaking. The average amount of pharmacist preparation time spent was 4.3 minutes per patient and actual counseling time on average was 5.5 minutes per patient.

### Introduction

Choosing a method of postpartum contraception is an important process for a woman. There are numerous reasons for having a sound method of birth control during this period, only a few of which include preventing short interval pregnancies, those that occur within 6 months of the previous birth, and negative socioeconomic outcomes. To better protect mothers and babies, it is vital to avoid short inter-pregnancy intervals which have been associated with increased infant mortality as well as increased risks to maternal health<sup>1</sup>. Also, having a short interval pregnancy can increase stress on the mother and can lead to poor neonatal outcomes like intrauterine growth retardation and preterm

delivery<sup>2</sup>. The Center for Disease Control analyzed data from a 2006 Pregnancy Risk Assessment and Monitoring System (PRAMS) report and found that 88% of postpartum women admit using at least one method of contraception, but only 61.7% view that method as highly effective<sup>3</sup>. According to a study on women in Europe and America, those aged 25-44 years are aware of a wide variety of contraception choices but are most familiar with either the oral contraceptive pill or the male condom. Consequently, those are the methods most commonly used<sup>4</sup>.

Many factors contribute to whether or not a woman uses postpartum contraception and what type of method is selected. During the postpartum period, health care providers can evaluate the birth control needs of their patients. Physicians, nurses, and pharmacists are available to speak with patients, determine their specific desires for postpartum contraception, and then counsel the patient on key points about those methods. In addition, counseling sessions that

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supplement oral information with high-quality written material have been shown to improve women's satisfaction with postpartum counseling<sup>5</sup>. There are many approaches that a health care provider can take to supply postpartum women with contraception counseling, only a few of them include written material and one-on-one counseling sessions.

Numerous issues can aide or impede an individual's use of contraceptive methods including future pregnancy intentions, physical and financial access to methods, quality of care pre- and post-partum, specific attitudes towards methods and personal experience<sup>6</sup>. Currently, the Affordable Care Act mandates that health care plans provide preventative care services that have been recommended by the Department of Health and Human Services and the Institute of Medicine. Contraceptive services are included in these preventative measures since they encourage the health and well-being of women<sup>7</sup>. The Contraceptive Health Research of Informed Choice Experience (CHOICE) study found that 47% of women who received counseling by their health care provider on multiple forms of combined hormonal contraceptives (pill, patch, and ring) selected a method different than the one they originally intended<sup>8</sup>. Specific factors identified as contributing to the choice of contraception method postpartum include age, private or public insurance, language and patient preference. Thus, it is important to understand demographic trends in contraception usage in order to improve access to methods of birth control for those who desire it.

In our population at an urban University hospital, we observed that many patients want information about postpartum contraception. Our study evaluated patient demographics to determine if any trends existed that could allow a pharmacist to narrow who would most likely want postpartum counseling on forms of birth control. The time it took to perform the counseling service was also assessed. The pharmacist's time in preparation for counseling patients and the actual time spent counseling patients were documented as well. Findings indicate there is little data on the effectiveness of counseling services in the postpartum community and no literature has been found on the importance of a pharmacist's counseling service.

#### Methods (study design and recruitment)

This is a retrospective cohort data analysis of postpartum women who received the option of counseling by a pharmacist or pharmacy intern at the University of Alabama Hospital at Birmingham (UAB) over a period of 1 year and 7 months. Postpartum status was defined as a woman of any age who had delivered a baby by vaginal or cesarean section

who had not yet been discharged from the hospital. Potential study participants were identified from the hospital discharge log and included all women regardless of age, spoken language or insurance status. Since this process was performed during the normal scope of the pharmacists work day, no patients were excluded from being offered counseling and informed consent was not attained due to the retrospective nature of this data analysis. The pharmacist or intern documented the age and insurance status of the new mother as well as any pertinent patient information that would contraindicate certain contraception options (such as a history of a deep vein thrombosis (DVT) preventing the use of estrogen containing contraception products<sup>9</sup>). The pharmacist or intern then visited the woman in her hospital room to see if she would like information on various methods of contraception (oral contraceptive pill, ring, patch, injection, rod, or intra uterine device (IUD)). It was noted what method of contraception the patient wanted and if they accepted or declined counseling. The total number of patients who wanted information, pharmacist preparation time and actual counseling time were also noted. The pharmacist gave a general overview of the method and gave pamphlets on the birth control of interest. These pamphlets were available in English or Spanish.

A data collection form was used to document the age, insurance, contraception method of interest and whether or not the patient was counseled. We investigated what methods were most utilized by specific age ranges, type of insurance and spoken language (English vs. Spanish-speaking). The patients categorized by their demographics who utilized a pharmacist's counseling service compared to those who did not were also analyzed. The analysis files for this study were created using excel spread sheet and all statistical analysis were conducted using STATA version 13. A separate data collection form was used to document how many patients were counseled, how many patients were not counseled, the pharmacist preparation time and counseling time. Pharmacist preparation time included going through patient profiles to note patient demographics and to gain a sense of the patient's medical history to make sure that they did not have any contraindications to certain methods of contraception (such as obesity, smoker, or prior history of DVT). Measures of central tendency were used to compute averages regarding the total pharmacist preparation time and counseling time. The institutional review boards at Samford University and UAB Hospital approved this study.

#### Results

A total of 2,048 cases are included in this study. Because of incomplete information (e.g. no insurance recorded or no

method of interest specified), 788 cases were excluded. Other cases were excluded due to outliers such as being Chinese; having Moyamoya disease; using natural family planning; preferring abstinence; using the Essure method; desiring bilateral tubal ligation or vasectomy; or due to religious reasons. Demographic characteristics of the patients are listed in [Table 1](#). Of the 2,048 patients approached for counseling, 73.8% of them desired counseling by a pharmacist, while 26.2% declined it. The most popular form of contraception that patients wanted counseling on was hormonal methods (oral contraceptive pills, patch, ring, and injection) at 51.6%, 27.8% of patients wanted information on implantable forms of birth control (rod and IUD) and 20.6% wanted no information on any form of contraception. The use of barrier methods was not included in this study since pharmacists do not counsel on these particular forms. [Table 1](#) lists the demographic information of the study participants.

According to the logistic regression analysis, patients who were interested in a hormonal contraception method were 3 times more likely to desire counseling compared with patients who declined information ( $p < 0.05$ ). Also, patients who wanted an implantable form of contraception were 8 times more likely to desire information compared with patients who declined counseling ( $p < 0.05$ ). Patients in the age range of 18-25, 26-30, and 31-45 years were less likely (56%, 64%, & 65%) to want counseling compared with the age range of 12-17 years (all  $p < 0.05$ ). Lastly, patients who spoke Spanish were 3 times more likely to have been counseled compared with non-Spanish speaking patients ( $p < 0.05$ ). All information is summarized in [Table 2](#).

The number of postpartum patients counseled on contraception methods over a 19 month period was 1,512 versus 536 patients who declined counseling. Total pharmacist preparation before the counseling sessions totaled 160.95 hours, while total patient counseling totaled 204.55 hours. The pharmacist spent on average 4.3 minutes per patient in preparation time and 5.5 minutes per patient in counseling time, giving a total of 9.8 minutes spent on each patient that was counseled.

### Discussion

The number of patients who accepted counseling by a pharmacist is encouraging. By evaluating trends in this data, it would be useful for other hospitals to develop pharmacist counseling services to target younger patients and Spanish speaking patients for postpartum contraceptive counseling. One study from 2006 noted that more than 4 out of 5 unintended pregnancies occurred in women 19 years of age or younger<sup>10</sup>. Pharmacists interested in counseling should be

proficient in hormonal methods as well as implantable forms of birth control. There was no statistically significant difference between public or private insurance when it came to whether or not a patient wanted to be counseled.

Overall, this research agrees with existing literature that health care providers must be proactive in addressing their patients' birth control needs in the postpartum period<sup>6</sup>. The postpartum period is an important time for underinsured, low-income and immigrant women to obtain contraception because of insurance coverage for those who might otherwise be unable to access the health-care system<sup>11</sup>. Compared to black and white teenagers, Latina teenagers are less knowledgeable about methods of contraception. Therefore, it is important to recognize that the Latina population has a higher need for information about birth control<sup>12</sup>. In addition, Latinas have less social support from family and friends when it comes to using contraception when compared to Caucasians<sup>13</sup>. Likewise, adolescents under the age of 18 should be targets for contraception counseling and follow-up since they are particularly at risk of discontinuing contraception. Reasons for discontinuation of contraception include termination of insurance coverage, difficulty in communicating with parents, and method switching which leads to gaps in use<sup>12</sup>. Also, it is important to note that 10% of adolescent girls in the US become pregnant each year and among those who give birth, 16-30% of them are pregnant again within one year<sup>14</sup>.

It is important for all health care providers to give accurate information about contraception that is specific to each patient's particular desires. A Cochrane Database review found that many women who have just given birth feel they are provided contraception counseling "as part of a checklist." Also, women may prefer to talk about birth control along with other health issues<sup>15</sup>, which makes a pharmacist who is equipped with the knowledge of medicines, side effects, and different disease states a fantastic choice to meet these patients' wishes. One study does bring up the issue that receiving contraceptive counseling postpartum does not necessarily lead to increased long-term use by patients. Recognizing this dilemma shows practitioners that more research is required to establish the optimal way of ensuring education and access to women after childbirth<sup>16</sup>. Pharmacists may provide the information that is necessary to patients postpartum as well as supply unique counseling tools that may lead to better patient compliance.

There are several limitations to this study. Due to staffing issues, not every single postpartum patient at the hospital during this time period was offered contraceptive counseling

by a pharmacist. In addition to staffing issues, the counseling service was not performed every day due to some days having an increased work load that required the pharmacists' time. Also, there was variability in the pharmacist performing the counseling service as well as the patients who were counseled. The counseling service was only provided in English and Spanish. Furthermore, sometimes other health professionals had already counseled the patients or answered questions about contraception which eliminated the need for pharmacist counseling. This study does not evaluate whether or not the patient chose to start the contraceptive method discussed and also did not follow up with the patient to see if she was using a method 6 months postpartum.

### Conclusion

In conclusion, postpartum women who chose to be counseled by a pharmacist were considering either a hormonal or implantable method of contraception, were younger than the age of 17 and were Spanish speaking. Furthermore, the average amount of pharmacist preparation time spent was 4.3 minutes per patient and actual counseling time on average was 5.5 minutes per patient, totaling just less than 10 minutes spent on each patient. This study shows that a counseling service could easily be incorporated into a pharmacist's daily schedule on a postpartum hospital unit. These results could be recognized and applied to other counseling services and hospitals to benefit postpartum patients all over the country.

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**Table 1:** Demographic characteristics of study participants

Group	Number of Women (%)
<b>Accepted counseling</b>	
Yes	1,512 (73.8)
No	536 (26.2)
<b>Contraception of choice</b>	
Hormonal <sup>a</sup>	1,058 (51.6)
Implantable <sup>b</sup>	569 (27.8)
None	421 (20.6)
<b>Age range</b>	
12-17	113 (5.5)
18-25	1,069 (52.2)
26-30	497 (24.3)
31-45	369 (18.0)
<b>Type of insurance</b>	
Public <sup>c</sup>	1,526 (74.5)
Private <sup>d</sup>	417 (20.4)
Dual <sup>e</sup>	20 (1.0)
None	85 (4.1)
<b>Language</b>	
English	1,956 (95.5)
Spanish	92 (4.5)

<sup>a</sup> Hormonal forms of contraception include oral contraceptive pills, patch, Nuvaring, and Depo Provera injection.

<sup>b</sup> Implantable forms of contraception include the Implanon Rod and Mirena IUD.

<sup>c</sup> Public insurance includes Medicaid, Medicare, and Veteran’s Administration Tricare.

<sup>d</sup> Private insurance includes BCBS, Viva, United, and Cigna.

<sup>e</sup> Dual insurance includes patients who had both public and private insurance.

**Table 2:** Logistic regression analysis of individual predictors of accepting counseling among entire cohort

Group	Odds Ratio	95% CI	P-value
<b>Contraception of choice</b>			
None	Reference	--	--
Hormonal	3.834	2.94-4.99	<0.05
Implantable	8.493	6.06-11.90	<0.05
<b>Age range</b>			
12-17	Reference	--	--
18-25	.463	.261-.821	<0.05
26-30	.364	.200-.662	<0.05
31-45	.351	.191-.647	<0.05
<b>Type of insurance</b>			
None	Reference	--	--
Public	.641	.349-1.176	0.151
Private	.584	.307-1.112	0.101
Dual	.653	.187-2.267	1.502
<b>Language</b>			
English	Reference	--	--
Spanish	3.729	1.755-7.923	<0.05