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RESEARCH NOTES

Pharmacists' comfort level and knowledge about prescribing hormonal contraception in a supermarket chain pharmacy

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ABSTRACT

Objectives: To compare community pharmacists' comfort levels and knowledge prescribing hormonal contraception before and after a training session and to identify perceived barriers and resources needed to prescribe hormonal contraception.

Methods: In this pre-post convenience sample survey study, all 350 pharmacists in the Mid-Atlantic Division of Kroger (which spans parts of Kentucky, North Carolina, Ohio, Tennessee, Virginia, and West Virginia) were surveyed before and after a training session. The survey consisted of several sections: 1) questions rating comfort, 2) knowledge-based multiple-choice assessment questions, 3) perceptions of barriers and resources needed to prescribe hormonal contraception, and 4) demographics. The training session was a 1-hour continuing education about hormonal contraception. Data were analyzed with the use of univariate and bivariate statistics to compare pre- and post-training survey information.

Results: Seventy-eight pharmacists completed both surveys (22.3% response rate). Pharmacists averaged 14 years in pharmacy practice, and 66.6% were female. More pharmacists (31.8%) perceived liability concern as the greatest barrier to pharmacist-initiated contraception. Pharmacist knowledge about hormonal contraception increased in some domains after the training session ($P < 0.001$). If allowed as a scope of practice in their state, the comfort level of pharmacists in prescribing any type of hormonal contraceptive significantly increased after the training session ($P < 0.004$).

Conclusion: Pharmacists have an initial lack of knowledge and perceived lack of comfort with prescribing hormonal contraception if allowed in their state of practice. A training session was identified as an effective tool and intervention to increase pharmacists' comfort levels in prescribing hormonal contraception.

Healthy People 2020 prioritizes prevention of unintended pregnancy and identifies access to contraceptive services as an area of strategic importance.[1] In 2011, nearly one-half (45%) of the 6.1 million pregnancies in the United States were unintended; nearly 5% of reproductive-age women (15-44 years) have an unintended pregnancy each year.[2] According to the American Congress of Obstetricians and Gynecologists, the most common limitations to appropriate contraception include access and cost.[3] Although patients have traditionally obtained many hormonal contraceptive products through a prescription, patients are now afforded increased access through pharmacist-initiated contraceptives in some states. Pharmacists can now overcome contraceptive access limitations in California, Oregon, Colorado, New Mexico, and Maryland by prescribing or furnishing hormonal contraception according to legislation that varies through state-specific protocols.[4-12]

California was the first state to approve the legislation of pharmacist-initiated contraceptives in 2013.[4] However, Oregon was the first state to legislate pharmacist-initiated contraceptives in January 2016, and pharmacists there have the scope of practice to prescribe oral and transdermal hormonal contraception.[5,6] As of June 2017, Oregon has expanded the contraceptive methods that pharmacists can prescribe to

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include injectable and vaginal hormonal contraception as well.[7,8] California implemented legislation in April 2016 with extensive development of the protocol, training, and implementation plans. California is the first state where pharmacists can prescribe the broadest range of hormonal contraception: oral, transdermal, injectable, and intravaginal.[4,9] In February 2017, Colorado became the third state to allow pharmacist-initiated hormonal contraception, though limited to oral and transdermal types only.[10] New Mexico pharmacists in June 2017 were granted authority to legally prescribe a broad range of hormonal contraceptives to women, similar to pharmacists in California.[11] Maryland approved pharmacist-initiated contraceptive legislation on April 8, 2017, which went into effect on January 1, 2018. Pharmacists in Maryland, however, will be limited to prescribing oral hormonal contraception.[12] Any contraceptives that have to be inserted by a trained professional, such as arm implants and intrauterine devices, cannot be obtained from a pharmacist-initiated prescription in any state at this time.

Statewide protocols are not the only mechanism for pharmacists to expand their scope of practice. Pharmacists in Ohio, Washington, and DC are also allowed to prescribe hormonal contraception under collaborative practice agreements.[13,14] Currently, there are many other states that are actively involved in trying to implement or pass such legislation. Tennessee, New Jersey, and Hawaii already have approved legislation for pharmacists to prescribe hormonal contraception, but the laws have not been implemented.[15-17] Legislation is proposed for pharmacists to prescribe hormonal contraception in Illinois, Minnesota, Missouri, New Hampshire, and South Carolina.[18,19] With such movement across these states, it is the foreseeable future that pharmacists across many states will be able to prescribe hormonal contraception.

In the United States, 17 to 22 million women could potentially benefit from the provision of pharmacist-initiated hormonal contraception. In a national survey on women's attitudes and interest about pharmacist-initiated hormonal contraception, 63% of the women thought that hormonal contraception should be available without a prescription and 68% stated that they would personally access hormonal contraception through the pharmacy.[20] Health care providers have supported increased access to hormonal contraception as an important public health service and have suggested that pharmacy access could be accomplished through pharmacist education and training.[21] With such support for pharmacist-initiated contraceptives from patients and physicians, it is important to understand pharmacists' comfort and knowledge about this new prescribing authority as it expands across the United States.

Pharmacists are trained and have expertise in the area of comprehensive contraception counseling; however, they may not be fully comfortable with the complete authority to prescribe hormonal contraception for patients.

Objectives

The main objectives of this study were to compare community pharmacists' comfort levels with and knowledge about prescribing hormonal contraception before and after a training session and to identify perceived barriers and resources needed to prescribe hormonal contraception.

Methods

In this pre-post survey-based study, a convenience sample of all 350 pharmacists from 118 pharmacies in the Mid-Atlantic Division of Kroger (which spans parts of Kentucky, North Carolina, Ohio, Tennessee, Virginia, and West Virginia) were surveyed before and after a training session through Qualtrics. The survey assessed the following: 1) comfort, 2) knowledge, 3) perceptions of barriers and resources needed to prescribe hormonal contraception, and 4) demographics. Likert-type scale questions were used to evaluate comfort with prescribing by contraceptive type, comfort with prescribing through different legislative mechanisms, and comfort with knowledge about hormonal contraception. Comfort-level questions were assessed with the use of the following key: extremely comfortable (EC), somewhat comfortable (SC), neither comfortable nor uncomfortable (N), somewhat uncomfortable (SUC), or extremely uncomfortable (EUC). Pharmacists were asked 8 multiple-choice questions about hormonal contraception to assess their knowledge. Pharmacists' perceptions of barriers and resources were assessed by ranking a list of barriers and resources from most to least important, and pharmacists were given a free-text option to add any other barrier or resource that was not listed. Demographic information gathered included gender, years of pharmacy practice, state of practice, and pharmacist position.

The pre-training survey was sent via e-mail at 2 weeks and then 3 days before the training session to gather baseline (pre) data. Pharmacists developed a unique code identifier known only to them to enable data comparisons before and after the training session. After completion of this survey, pharmacists participated in a broad 1-hour training session on hormonal contraception. Results from the pre-training survey were not incorporated in the development of the training session.

The training session that pharmacists participated in was a 1-hour Accreditation Council for Pharmacy Education (ACPE)-accredited continuing education live lecture session. The training session was designed by one of the authors (I.L.) and incorporated an overview of hormonal contraception, including a review of the menstrual cycle, different types of hormonal contraceptives with a focus on those that pharmacists can initiate in other states, adverse effects of different oral contraceptives, dosing of hormonal contraceptives as related to different concentrations of estrogen and progestin, and choice of therapy as related to other medical conditions. The training session also reviewed the patient care process for pharmacists to prescribe hormonal contraception, drawing from the existing Kroger Oregon protocol. The training session was delivered at Kroger's 6 district meetings by each respective district's PGY1 Community-based Pharmacy Resident. The post-training survey was sent via e-mail 3 days after and again 1 week after the training session.

Data collected were analyzed with the use of univariate and bivariate nonparametric statistical tests to compare pre- and post-training survey results. Specifically, the Wilcoxon signed rank test was used to compare pre-post differences in comfort levels after the training program. Statistical significance was defined a priori as a P value of < 0.05. Pre-training surveys were not included if post-training surveys were not completed, as identified by the unique identifier code. The