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Factors Associated With Contraceptive Method Choice and Initiation in Adolescents and Young Women

Rebecca Cohen, M.D., M.P.H. [a,*], Jeanelle Sheeder, Ph.D. [a,b], Meghan Kane, M.D., M.P.H. [a,1], and Stephanie B. Teal, M.D., M.P.H. [a,b]

[a] *Division of Family Planning, Department of Obstetrics and Gynecology, University of Colorado Anschutz Medical Campus, Aurora, Colorado*
[b] *Section of Adolescent Medicine, Department of Pediatrics, University of Colorado Anschutz Medical Campus, Aurora, Colorado*

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A B S T R A C T

Purpose: The purpose of the study was to identify factors associated with uptake of contraceptive implants or intrauterine devices (IUDs) by adolescents and young women.
Methods: For this prospective cohort study, we recruited English-speaking female contraceptive initiators aged 14–24 years attending a Title X-supported, youth-focused clinic. Immediately prior to their visits, participants completed surveys assessing demographic and reproductive characteristics and awareness of, interest in, and intent to initiate specific contraceptive methods. Participants also answered questions about their social contacts' contraceptive experiences. Following the visit, participants reported the method initiated and the perceived importance of provider counseling. We used a multivariable regression model to ascertain factors associated with initiation of an IUD, an implant, or a short-acting reversible method.
Results: We enrolled 1,048 contraceptive initiators: 277 initiated short-acting methods, 384 IUDs, and 387 implants. High previsit personal acceptability of the method was associated with choosing that method for both implants and IUDs. Knowing someone who uses a specific method and likes it was predictive of personal acceptability of that method (IUD adjusted odds ratio: 10.9, 95% confidence interval: 3.8–31.1; implant adjusted odds ratio: 7.0, 95% confidence interval: 2.3–21.0). However, 10.4% of those initiating IUDs and 14.2% of those initiating implants had never heard of the method before their appointment. Even women with previsit intent to initiate a specific method found importance in contraceptive counseling.
Conclusions: Previsit personal acceptability, which was associated with social contacts' experiences, was the strongest predictor of specific method uptake in our study. However, counseling informed the decisions of those with low previsit awareness and supported patients with formed intent.

IMPLICATIONS AND CONTRIBUTION

In a clinic with few barriers to long-acting reversible contraceptive initiation, young women choose these methods with high frequency. Social contacts' positive experiences greatly influence an individual's decision to try a novel method. Still, when provided with a full menu of options, some women will choose methods with which they are unfamiliar.

Increased use of long-acting reversible contraceptive (LARC) methods decreases rates of unintended and adolescent pregnancy [1]. The American College of Obstetricians and Gynecologists [2,3], the Society of Family Planning [4], and the American Academy of Pediatrics [5] recommend LARC methods, such as intrauterine devices (IUDs) and subdermal implants, as

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* Address correspondence to: Rebecca Cohen, M.D., M.P.H., University of Colorado Anschutz Medical Campus, 12631 East 17th Avenue B198-2, Aurora, CO 80045.
E-mail address: Rebecca.h.cohen@ucdenver.edu (R. Cohen).
[1] Robert Wood Johnson University Hospital Somerset, 110 Rehill Avenue, Somerville, NJ 08876, USA.

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first-line contraception for all appropriate candidates including nulliparous women and adolescents. Despite these recommendations, LARC method use, while increasing, has remained low. From 2011 to 2013 (our study enrollment period), 7.2% of women ages 15–44 years used a LARC method, including 5.0% of women ages 15–24 years [6]. Some studies have found, however, that when barriers to access are removed, LARC uptake may be much higher [7,8]. Reasons why some women find LARC methods to be the best contraceptive options for them, and some do not, remain obscure.

The Children's Hospital Colorado Adolescent Family Planning Clinic (BC4U) is a Title X-supported clinic which serves adolescents and young adults (aged up to 24 years) and provides all Food and Drug Administration–approved contraceptive methods. Beginning in 2009, through supplemental funding, we were able to create a new family planning clinic within the adolescent medicine practice to offer all contraceptive methods without charge to the patient, usually at her initial visit. BC4U raised awareness of its services through intense social media and community provider outreach, and patients come to the clinic through self-referrals or provider referrals. Many patients hear about the clinic through their social networks. Prior to 2009, the vast majority of adolescents seen in our clinics used oral contraceptive pills or depot medroxyprogesterone acetate. Once we were able to provide same-day no-cost LARC, we noted that many more young women were choosing these methods than we expected. We undertook this study to identify factors which are associated with uptake of these highly effective methods. We hypothesized that adolescents and young women who choose IUDs and contraceptive implants differ from those who choose short-acting methods on baseline knowledge, attitudes, and beliefs and that this difference is only partially modified by information provided during the clinical visit.

Methods

This study was approved by the University of Colorado Multiple Institutional Review Board before initiating participant recruitment. All female English-speaking patients between the ages of 14–24 years presenting for a contraceptive initiation visit at BC4U between August 2011 and February 2013 were eligible to participate in the study. Patients were offered the questionnaire before seeing a provider. A waiver of parental consent allowed patients aged 14–17 years to consent to participation without parental involvement. After consent was obtained, participants completed a computer-assisted self-interview (CASI) survey on an iPad using REDCap [9] software. REDCap allowed for immediate download of deidentified responses and for branching of questions based on respondent answers, thus streamlining the questionnaire by eliminating questions that were not relevant to the respondent. The CASI previsit survey was comprised of questions related to participants' demographics, educational background, relationship and pregnancy experiences, and contraceptive behavior. The survey also assessed attitudes toward pregnancy and contraception, awareness of social contacts' contraceptive experiences, self-reported personal acceptability of LARC method use, and intent to initiate a specific method at the visit. Whenever possible, we used questions asked in previous surveys of contraceptive attitudes and behaviors [10,11]. The CASI technique improves reporting of sexual risk-taking behavior in similar settings when compared to clinician interviews [12] and has enhanced internal consistency and fewer missed questions than pen and paper interviews [13].

After completing the previsit CASI survey, the study participant was seen by a clinic provider as per the normal standard of care. The clinical visit including contraceptive counseling and initiation was not altered or standardized for this study. Survey answers were not available to providers. All methods were offered free of charge to patients following Quick Start protocols. Following the clinical visit, the CASI postvisit survey assessed the method chosen at the visit and perceived provider influence on contraceptive choice. Demographic data not obtained through the survey were abstracted from the electronic medical record for consenting participants.

We calculated descriptive statistics of previsit questionnaire items to understand the range of knowledge, attitudes, and beliefs regarding contraceptive methods. We then compared IUD initiators, contraceptive implant initiators, and initiators of short-acting reversible contraceptive (SARC) methods. SARC methods included oral contraceptive pills, the transdermal patch, the vaginal ring, and injectable depot medroxyprogesterone acetate. Women who chose exclusively coitally dependent methods (natural family planning, withdrawal, condoms) were not included as either LARC or SARC users. We analyzed demographic characteristics as well as pregnancy attitude, contraceptive awareness, social network experience, LARC method acceptability, and influence of provider counseling to determine factors that differed significantly between groups. Demographic variables considered as possible predictors of method initiation included: age ($<$20 years vs. $\geq$ 20 years), age at coitarche ($<$16 years vs. $\geq$ 16 years), race, employment/student status, previous pregnancy, parity (nulliparous vs. parous), current male sexual partner (yes vs. no), relationship status (single, dating, or married/cohabitating), prior use of contraception, and prior use of LARC. Awareness was measured when participants were asked to indicate methods they had heard of previously. Method-specific questions were asked to patients who reported that they had heard of each method. We asked "On a scale from 0–10, how much do you like the idea of using (a specific method) for yourself?" which was previously used by Whitaker et al. [11,14] in their studies of an educational intervention regarding IUDs. Whitaker et al. called this variable "positive attitude." We call it "personal acceptability" because it is composed of both an attitude toward the method and comfort with using it oneself, which potentially incorporates patient knowledge, cultural values, attitudes, and prior experiences. Among those who had heard of the method, responses were consolidated into three categories: low, moderate, and high acceptability. We defined high previsit personal acceptability as a response of 8–10 on the scale, moderate acceptability as a response of 4–7, and low acceptability as a response of 0–3. Attitude toward pregnancy included importance of avoiding pregnancy (four-point scale from "very important" to "not at all important"), emotional response if she found out she was pregnant at the visit (five-point scale from "very upset" to "very pleased"), and future pregnancy intent ($<$3 years, $\geq$3 years). Social network effect was assessed by the questions "Do you know someone who uses (method) and likes it?" and "Do you know someone who uses (method) and does not like it?" Women who responded affirmatively to either of these questions were asked whether that person was a friend, family, themselves, or someone else. These answers were not mutually exclusive. Influence of provider counseling was assessed on the postvisit survey on a four-point scale (1 = information received