



Barriers to implementation of long-acting reversible contraception: A systematic review

Jessamyn Phillips, MPH, BSN, RN & Prabjot Sandhu, DNP, FNP-C, PA-C, CNL (Assistant Professor)

ABSTRACT

Background and purpose: Long-acting reversible contraception (LARC) is one of the most effective forms of contraception available. The utilization of LARC remains low despite being recommended by major health organizations such as Centers for Disease Control and Prevention, American Congress of Obstetricians and Gynecologists, American Academy of Pediatrics, American Academy of Family Physicians, and the National Committee for Quality Assurance. Health care professionals play an essential role in the potential increased use of LARC. This review aims to highlight key barriers to the utilization of LARC and discuss interventions to address this issue.

Methods: A systematic review of 14 peer-reviewed articles focused on LARC utilization rates that help identify barriers to the utilization of LARC in current education and practice. Articles were evaluated for strength of research design using the Johns Hopkins Nursing Evidence-Based Practice Research Evidence Appraisal tool.

Conclusions: Three categories affecting LARC utilization emerged: deficits in provider education/competency, lack of hands-on training, and barriers to practice.

Implications for practice: The importance of including LARC training and education in the advanced practice nursing curriculum and providing opportunities for continuing education with LARC is demonstrated.

Keywords: hormonal implant; IUD; IUS; LARC; LARC barriers; LARC curriculum; LARC education; LARC nurse practitioner training; LARC provider training; LARC utilization rates; reversible contraception.

Journal of the American Association of Nurse Practitioners 30 (2018) 236–243, © 2018 American Association of Nurse Practitioners

DOI# 10.1097/JXX.000000000000019

Background and introduction

The average American woman spends nearly three quarters of her childbearing years trying to prevent an unintended pregnancy (Guttmacher Institute, 2016). A recent study by the Guttmacher Institute (2016) reported that about 45% of all pregnancies in the United States are unintended. Of those unintended pregnancies, 43% will end in abortion (Guttmacher Institute, 2016). In addition, unintended pregnancy in the United States is associated with negative social, financial, and personal implications for women and children affected by it (U.S. Department of Health and Human Services, 2017). It is estimated that about half of all unintended pregnancies are a result of

University of San Francisco, San Franciso, California

contraceptive failure (Polis et al., 2016; Winner et al., 2012), from either inconsistent or incorrect use. Furthermore, when no form of contraception is used, most couples have an 85% chance of experiencing pregnancy within a year (Guttmacher Institute, 2016). Within family planning, including screening, education, and administration of interventions for effective and consistent use of contraception methods, lies the foundation for the prevention of unintended pregnancy (Centers for Disease Control and Prevention [CDC], 2013).

The oral contraceptive pill is the most common form of reversible contraception used in the United States (CDC, 2016). The pill and other short-acting contraceptive agents, that is, condom, diaphragm, patch, ring, and sponge, require daily use, and the depot medroxyprogesterone acetate injection requires frequent office visits, affecting compliance by the user. These agents have failure rates ranging from 6%–24% (Association of Reproductive Health Professionals, 2014), and these rates can be higher among teenagers and high-risk subgroups (lower education level, black women, lower socioeconomic level, and previous history of unintended pregnancy), where failure is chiefly associated with inconsistent or incorrect use (Polis et al., 2016; Winner

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Correspondence: Jessamyn Phillips, MPH, University of San Francisco, School of Nursing Health and Professions, Cowell 225, 2130 Fulton Street, San Francisco, CA 94117. Tel: 415-422-4244; E-mail: jcphillips2@ dons.usfca.edu

Supplemental digital content is available for this article. Direct URL citations appear in the printed text and are provided in the HTML and PDF versions of this article on the journal's Web site (www.jaanp.com). Received: 18 August 2017; revised: 29 October 2017; accepted 21 November 2017

et al., 2012). Long-acting reversible contraception (LARC), such as the intrauterine device (IUD) and hormonal implant, are two of the most effective choices for contraception available, with failure rates at less than 1%, rivaling that of sterilization (Polis et al., 2016; Winner et al., 2012). Long-acting reversible contraception is 20 times more effective than oral contraception (The American College of Obstetricians and Gynecologists [ACOG], 2014). Long-acting reversible contraception is safe, cost effective, minimizes contraception adherence issues, and has the highest satisfaction and continuation among reversible methods (Luchowski et al., 2014). Long-acting reversible contraception is also recommended by ACOG and the Association of Women's Health, Obstetric and Neonatal Nurses (AWHONN), and the American Academy of Pediatrics (AAP) has recommended LARC as a contraceptive option for adolescents (ACOG, 2015; AWHONN, 2017; AAP, 2014a). However, LARC remains heavily underutilized, with less than 8% of women in the United States using this method (CDC, 2016). The purpose of this systematic review is to explore barriers to the use of LARC and discuss interventions to address this issue.

The underutilization of LARC is a multifactorial issue; system, patient, and provider barriers exist. Although the upfront cost of LARC was largely eliminated with the passing of the Affordable Care Act (ACA) (Kaiser Family Foundation, 2014), two significant barriers still exist for LARC provision. Primary care clinics have reduced readiness for the onsite implementation of LARC services, and the number of primary care providers trained on the insertion and removal of LARCs remains insufficient to meet the needs of improved access through primary care (Pace, Dolan, Tishler, Gooding, & Bartz, 2016). Misinformation regarding LARC, low provider knowledge, lack of widespread user training models, and poorly rated provider self-competency with insertion techniques remain prevalent (Harper et al., 2013). In addition, across the United States, there are no standardized training requirements for LARC in health care provider education curriculums (Auerbach et al., 2012; Greenberg, Makino, & Coles, 2013). Although most obstetricians and gynecologists receive training on LARC; this specific skill set is uncommon among general practitioners (Pace et al., 2016).

Nurse practitioner (NP) students, many of whom will serve as primary care providers for women needing sexual and reproductive health services, may be getting very little training and education around LARC. Auerbach et al. (2012) found that NP students received only two to three hours of contraception instruction and at most, 1 to 2 days in family planning clinics practicing LARC-related skills. Sexual and reproductive health is not designated as an essential core competency within NP programs (Auerbach et al., 2012; National Organization of Nurse Practitioner Faculties [NONPF], 2017), and in nonobstetric/gynecologic training programs such as advanced practice nursing programs, LARC training is not particularly required (Greenberg et al., 2013). Male and female reproductive health is identified by NONPF (2017) as a curriculum content area to support the "independent practice" competency, but the actual requirement for training and hands-on experience is not defined, possibly leaving content, training, and core competency mastery open for interpretation to individual educational institutions. This poses an issue in standardization of competency levels for graduating NPs.

Methods

A comprehensive electronic search was completed from June to July 2017 using the following databases: Cochrane Library of Systematic Reviews, CINAHL, PubMed, AHRQ Evidence Reports, MedlinePlus, and the Joanna Briggs Institute. Key words and free-text terms were entered into the databases in various combinations. The search terms used included the following: long-acting reversible contraception, LARC, IUD, intrauterine system (IUS), IUD, IUS, hormonal implant, reversible contraception, reversible birth control, provider disclosure, provider training, nurse practitioner training, and knowledge. The studies were limited to English-only articles, conducted in the United States (to be most generalizable), and published between 2012 and 2017. In addition, grey literature was searched, including Google Scholar, the CDC, the National Institute of Health, and the American College of Obstetricians and Gynecologists websites, and key secondary references listed in extracted publications were reviewed. A total of 48 published articles were discovered. Final articles were chosen only if they were peer reviewed, and measured provider knowledge, training, and education regarding LARC methods. Duplicates were eliminated and a culmination of 25 articles were examined for evidence. A total of 14 articles met all the inclusion criteria (Appendix, Supplemental Digital Content 1, http://links.lww.com/ JAANP/A3). Articles were evaluated for strength of research design using the Johns Hopkins Nursing Evidence-Based Practice Research Evidence Appraisal tool (Newhouse, Dearholt, Poe, Pugh, & White, 2007).

Results

After careful review of the literature, three categories describing the research and current knowledge emerged. These categories were identified as deficits in provider education/competency, lack of hands-on training, and barriers to practice.

Deficits in formal provider education/competency

Without strict rules and criteria about the specific training to be included in all health care provider education regarding contraception, there is substantial variance around how schools deliver this material. The educational delivery model, the number of years a clinician has

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practiced, and the availability of robust continuing education have potential influence on the provision of LARC.

Luchowski et al. (2014) examined LARC practices, training, knowledge, and beliefs, especially among obstetrician-gynecologists. A survey of over 1200 fellows from ACOG revealed that 95% of respondents provide IUDs on a regular basis. In addition, 92% had received residency training on IUDs, but only 50% had received training on hormonal implants. Sixty percent of respondents reported continuing education on one LARC method within the past two years. Thirty-one percent of respondents reported a lack of insertion training on hormonal implants as a barrier to the provision of LARC (Luchowski et al., 2014). Recent continuing education on LARC was strongly correlated with increased hormonal implant insertion, knowledge of LARC, and other practices that encourage LARC.

Philliber et al. (2014) examined how the length of licensure may affect providers' beliefs, attitudes, and practices regarding LARC and the extent to which providers understood consistent and accurate information about LARC. The survey of 114 providers (physicians, physician assistants, NPs, and midwives) found that clinicians with the most years practicing were not as likely to be trained in LARC insertion; however, these clinicians reported being more comfortable with insertion procedures than clinicians with more recent licensure. In addition, newly practicing clinicians demonstrated a lack of understanding about appropriate criteria when selecting women eligible for LARC, such as the single rod implant. Despite being more comfortable with insertion procedures, more experienced clinicians were less likely to accurately identify subgroups of women who were good candidates for LARC per the recommendation of guiding agencies (Philliber et al., 2014). These findings make a strong argument for strengthening continuing education measures among more experienced clinicians on LARC methods. More insertion training during clinical education is warranted to promote competency with LARC use, irrespective of years in practice.

Kavanaugh, Jerman, Ethier, and Moskosky (2013) investigated family planning facilities' accessibility for teens and young adults and potential barriers to the provision of LARC for this age group. The study examined 1,196 family planning facilities from a national database provided by the Guttmacher Institute. A four-page questionnaire gathered data about the facility, client caseload, and the types of contraceptive services offered to the patient population. The response rate of the survey was 52%, with the highest facility response rate by Planned Parenthood at 80% (Kavanaugh et al., 2013). The results revealed that 56% of the facilities discussed IUDs with young women either "often" or "always," and 40% of the facilities discussed implants "often" or "always." The study demonstrated that 47% of providers felt that there were two common barriers to the provision of LARC in young adults: one being personal concerns about IUD use in the population and second being limited training and competence with insertion of LARC methods (Kavanaugh et al., 2013).

Collier, Rosenthal, Harris, Lucas, and Stanwood (2014) examined provider knowledge and implant practices of LARC in two federally qualified health centers in New Haven, Connecticut. Surveys of 90 providers who primarily served low-income women revealed that about half of all women's health providers were trained to insert hormonal implants. Only 15% of adult primary care providers had received formal education regarding hormonal implants and 20% of primary care providers regularly discussed hormonal implant options in contraceptive counseling with their clients (Collier et al., 2014). An observational finding of this study was a long wait time for insertion of LARC compared with other methods, potentially up to 3 weeks, related to the need for a referral for insertion (Collier et al., 2014). This further demonstrated a significant barrier related to the lack of training and comfort with LARC methods. Deficits in provider training and overly restrictive practice patterns may affect contraceptive implant use among low-income women, who are at high risk of unintended pregnancy (Collier et al., 2014). This can be addressed through increasing formal education and training of LARC before licensure as well as continuing education for more experienced providers.

Biggs, Harper, Malvin, and Brindis (2014) aimed to examine LARC provision in California. Physicians, NPs, physician assistants, and certified nurse midwives participating in California's family planning Medicaid Program, which covers the medical costs of LARC, were mailed a survey concerning their LARC beliefs and practices (Biggs et al., 2014). Five hundred eighty-seven providers comprised the final sample. Respondents of the survey showed knowledge deficits in the appropriate identification of patient populations suitable for an LARC method. For example, many of the clinicians in the survey eliminated women with a history of pelvic inflammatory disease, nulliparous women, teenagers, and women with a history of ectopic pregnancy as appropriate candidates for an IUD. The results indicate that there is a significant need for continuing education on LARC methods, targeted trainings for those providers serving high risk populations, and further educational methods on updated practice guidelines, as demonstrated by these clinicians who were unfamiliar with the hormonal implant and lacked evidence-based practice knowledge concerning the utilization criteria for LARC methods.

Effect of hands-on training

If advanced practice providers do not receive LARC training and insertion practice as part of clinical competencies in the academic setting, providers will need training in the field for this skill set. Several studies

examined the effect that hands-on training had for providers who either did not receive formal training for LARC in the academic setting or did not have enough practice to feel confident with techniques for LARC insertion. Whether hands-on training is received during academic education or during formal practice, this intervention is beneficial to the increased provision of LARC.

A cluster-randomized trial to reduce pregnancy rates across the United States with the use of LARC was conducted by faculty at the University of California, San Francisco (UCSF) (Harper et al., 2015). The implementation of an evidence-based training intervention for LARC at multiple reproductive health clinics aimed to increase the access and provision of LARC within the community. The participants included nurse practitioners at 40 reproductive health clinics in which 20 clinics were randomly assigned the intervention of LARC insertion training and counseling, whereas the control group of 20 clinics received no training or counseling. The clinics provided both family planning services as well as abortion services. The cost of LARC remained unchanged through the course of this study. The study found that the intervention group had higher rates of contraceptive counseling for LARC methods, 71% versus 39% in the control group, and more women selected LARC in the intervention group than the control group, 28% and 17%, respectively (Harper, et al., 2015). Fifteen hundred women met the criteria, being 18-25 years old with the desire for birth control counseling, and became participants in the study. Secondary outcomes included a lower pregnancy rate than the control group, 7.9 versus 15.4 per 100 person years (Harper, et al., 2015).

Additional research, conducted by faculty at UCSF, examined the impact of provider training on utilization rates of the IUDs (Lewis, Darney, & Thiel de Bocanegra, 2013). The Family Planning, Access, Care, and Treatment (FPACT) program is the largest family planning program in the United States for Medicaid recipients and serves nearly 1.4 million women a year (Lewis et al., 2013). Through the study, the state of California offered 249 clinicians of the FPACT program 10 training sessions that focused on the skills and education required for successful and competent IUD insertion. Before the training sessions, 61% of the participants reported no training during residency on the insertion of LARC and 75% reported personal discomfort in inserting the IUD device. Provider knowledge was assessed using pre- and posttraining surveys. After the training, providers increased their understanding of suitable candidates for IUDs from 58% to 81%. In addition, the data demonstrated an increase in IUD insertions by 64% compared with only 15% in the sites that did not participate (Lewis et al., 2013).

Gibbs et al. (2016) examined the impact of LARC insertion training for providers, especially in the adolescent population. A cluster-randomized trial of 40 Planned Parenthood health centers across the United States demonstrated that when researchers provided a half-day continuing education training for providers, which included updated guidelines for LARC, hands-on training with IUD and hormonal implants, and application of content through case studies, adolescents who received care in intervention clinics, were three times as likely to discuss LARC methods with a provider and twice as likely to choose an LARC method. This study demonstrates the importance of provider hands-on training and education in appropriately identifying adolescents as qualified candidates for LARC. Historically, guidelines for utilization of LARC in adolescents have not been clear, leading to misconceptions and the application of overly restrictive criteria for young women who are appropriate candidates for LARC. The AAP recommends that providers counsel adolescents on the most effective forms of contraception and endorses LARC methods as a first-line contraceptive choice in this population (AAP, 2014b).

Murphy, Stoffel, Nolan, and Haider (2016) examined specific barriers to the provision of LARC in adolescents by pediatricians, family medicine providers, and advanced practice nurses. These barriers included clinician confidence in LARC, availability of financial and hands-on training support for LARC, and patient-specific counseling on LARC. Through survey, results demonstrated a lack of provider training on LARC and poor access to LARC devices as significant barriers to its implementation. Providers revealed that if they lacked appropriate LARC knowledge or were unable to resolve an adolescent's uncertainties regarding LARC, they were less likely to counsel or provide LARC within this patient population. Many providers conveyed confusion over appropriate candidates for LARC and even attributed this confusion to outdated information. All providers indicated that additional training on LARC insertion and ample opportunity for insertion practice were warranted and would help with the provision of LARC.

Practice barriers

Other factors that affect the provision of LARC are practice-related barriers. Potential characteristics that result in barriers influencing LARC provision include the following: the type of health care center or practice setting (Jacobson et al., 2016), types of providers present in the practice setting, that is, family medicine, internal medicine, or women's health practitioners (Murphy et al., 2016), location such as urban vs. rural setting (Jacobson et al.), and the number of visits a facility requires for LARC insertion (Kelly, Cheng, Carlson, & Witt, 2017). Several studies have examined practice characteristics, which serve as barriers to LARC insertion.

Greenberg et al. (2013) examined provider and practice barriers associated with the provision of LARC, especially

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among the adolescent population. More than 900 members of the Society of Adolescent Health and Medicine were surveyed. The survey revealed that 30% of the sample reported providing any LARC service. The strongest predictor of LARC provision among the sample was exposure to LARC training. Practices that had more women's health and family medicine providers were more likely than internal medicine practice providers to offer LARC. Practices that had an increased number of trained residents were more likely to provide LARC services for both IUDs and hormonal implants in the adolescent population (Greenberg et al., 2013).

Recently, researchers in New York City aimed to examine practice-level factors that might influence the provision of the IUD (Jacobson et al., 2016). Although primary care providers have not traditionally been viewed as sexual and reproductive health care providers, they do play an essential role in addressing contraceptive needs. The study reviewed 253 primary care practices and found significant differences in LARC practices between independent primary care practices and community health centers. A review of the electronic health record in independent primary care practices revealed that less than 10% of internal medicine and pediatric providers had inserted an IUD each year (Jacobson et al., 2016). Community health centers were found to have higher odds of providing IUD insertions than independent practices. Given that primary care providers and independent practices serve a variety of patient populations and will most likely address contraceptive needs for these populations, proper education, training, and access to onsite LARC resources is warranted.

Gilmore et al. (2015) investigated key facilitators and barriers to the provision of LARC in school-based health centers (SBHCs). The authors reported that most clinicians identified concerns of competency about the insertion and removal of LARC methods as well as the fear of harming a client, given the lack of training. Negative attitudes about LARC methods were cited from schoolbased health care providers. Parents, teachers, and clinic managers were misinformed about LARC, especially the safety and efficacy of the methods and who were appropriate candidates. The management of LARC education and training in SBHCs is individually determined by onsite facilitators of these programs. To create safer and more effective models of LARC utilization in adolescents, the process of training these providers could be standardized. Providing hands-on training and experience with LARC insertion for nurse practitioners should influence a successful program for the provision of LARC services.

Smith, Harney, Singh, and Hurwitz (2017) conducted a study in a large Massachusetts health system, which aimed to examine how provider specialty and clinic factors may influence the provision of LARC, especially in the

adolescent population. Within the system, LARC methods were highly accessible, and various training methods were used across multiple provider types. Using a crosssectional design, authors analyzed data from electronic health records of over 5,000 women aged 15-21 years. The data confirmed increased LARC utilization in adolescents aged 20–21 years versus the 15–19 age group. Statistical analysis of provider degree, provider sex, and clinic characteristics did not reveal significant association with LARC provision. However, providers who were in training or newly practicing were more likely to provide an LARC to the younger adolescent (Smith et al., 2017). Practices with newly trained clinicians may be benefitting from increased LARC use in the younger adolescent age group vs long-standing providers, establishing a need for enhanced training models for matured practitioners.

Kelly, Cheng, and Carlson (2017) conducted a crosssectional survey of 390 advanced practice registered nurses (APRNs) who were either nurse practitioners or nurse midwives, which aimed to investigate opinions and practices of such providers surrounding LARC use. The survey revealed that 84% of providers used LARC; however, only 16% of those surveyed were inserting more LARC than the previous 5 years (Kelly et al., 2017). The survey conveyed a longer wait time for LARC with decreased utilization rates. The biggest predictor of LARC placement was the opportunity to receive an LARC in one visit (Kelly et al., 2017). Finally, most APRNs surveyed had received continuing education on LARC methods within the past two years. The results verify that recent training for providers affected LARC usage rates positively (Kelly et al., 2017), supporting clinical practice training as a benefit, even when the academic institution may not provide a rigorous opportunity for learning.

Discussion

American College of Obstetricians and Gynecologists, AAP, and AWHONN support the use of LARC in most women as a highly effective form of contraception, given its low failure rates and ease of adherence. However, the support and knowledge around LARC methods has not influenced a higher utilization rate. Guidelines and recommendations for LARC usage have been in place for numerous years (Kelly et al., 2017); yet, system, provider, and patient barriers persist. This literature review examined well-documented barriers to the provision of LARC: provider training, observed lingering misinformation, and verified the need for institutional educational competency requirements and improved continuing education measures for training.

Lack of provider competency and weak dissemination of best practice surrounding LARC yield further barriers. By not having adequately trained providers, the insertion of an LARC becomes less likely for discussion and utilization as a first-line method. Lack of insertion training

was frequently reported among advanced practice nurses as the reason behind not inserting LARC for clients (Kelly et al., 2017; Gilmore et al., 2015; Murphy et al., 2016; Harper et al., 2013; and Luchowski et al., 2014). It is very possible that when untrained professionals are screening or counseling candidates on birth control methods, LARC may not be properly discussed because of the lack of confidence in actual provision of LARC methods. Although best practice for contraception management includes full counseling regarding all methods, the provider who lacks knowledge is less likely to discuss and educate patients based on their own aptitude.

Further studies have demonstrated that the possible delay in getting LARC influences its provision (Jacobson et al., 2016; Collier et al., 2014; and Kelly et al., 2017). Given the lack of training, many providers may choose not to insert an LARC, rather refer to another provider. Kelly et. al (2017) noticed that for every additional visit required for LARC insertion, the number of LARCs placed decreased by 27% for hormonal IUDs and 32% for hormonal implants. If providers were fully trained and competent, wait times may be reduced using same-day LARC insertion techniques. Referring candidates to another facility for contraception management poses delays in care, access, and establishing the trust of the provider. Follow-up visits and additional requirements to gain effective contraception methods leads to the lack of regular use and adequate protection against unintended pregnancy.

Inadequate continuing education on the latest practice guidelines and recommendations leads to a lower rate of correctly identified candidates eligible for LARC (Murphy et al., 2016; Kavanaugh et al., 2013; and Biggs et al., 2014.) Poor confidence of screening techniques creates a gap in care for this patient population, increasing vulnerability for unintended pregnancy. The makers of LARC devices share a responsibility to support meaningful training and education on LARC for increased utilization. Organizations that support the use of LARC in various populations such as ACOG, AWHONN, and AAP should similarly participate in disseminating knowledge to key providers responsible for providing LARC. Conventional methods of special hands on conferences and lectures, as well as nonconventional methods using online webinars and CME activities prompting increased awareness of LARC will be effectual.

Primary care providers such as NPs serve a critical role in sexual and reproductive health across the lifespan and contraceptive management education. Thorough training for LARC use should be addressed as part of the reproductive health curriculum. Lewis et al. (2013) found skill-based trainings for IUD insertion as an instrumental part in increasing provider knowledge, confidence, and competency with LARC. In addition to skill-based training, the reproductive health curriculum for NP programs should include a didactic component, a guided training component, and a minimum number of hands-onsimulation-based insertion experiences. For example, the apprenticeship model, see one, do one, teach one, has historically driven the education standards and training guidelines for physicians (Bartz, Paris, Maurer, Gardner, & Johnson, 2016). Perhaps a similar model for NP programs would better prepare NPs for the insertion and provision of LARC methods.

The studies included in this review included multidisciplinary health care providers, but were not all specific to advanced care nurse providers. Looking across the practice disciplines, however, the evidence clearly remains strong that lack of education and hands-on training are the primary barriers to the increased utilization of LARC. In the absence of hands-on training and continuing education, providers are unsure or misinformed on insertion techniques and the latest practice guidelines. Each practice setting will likely have independent variables influencing the provision of LARC, but by training and educating an advanced practice provider on LARC in the academic setting, the provision of LARC for appropriate candidates is more likely.

Implications for practice

Access to highly effective and reliable methods of contraception is key to reducing the unintended pregnancy rate. The presence of trained, competent LARC providers is paramount to the administration of such methods. Research has demonstrated that LARC uptake would significantly increase if access barriers were removed (Secura, Allsworth, Madden, Mullersman, & Peipert, 2010). A decline in unintended pregnancy rates is possible with the use of methods associated with decreased failure rates. Although there are system and patient barriers to the provision of LARC, lack of adequate advanced practice provider training should not be a barrier for women trying to access LARC. The review has illustrated a weak link between best practice guidelines and true clinical practice involving LARC methods as a result of inconsistent training experiences, competency requirements, and standardized curriculum patterns. With 89% of NPs practicing primary care (American Association of Nurse Practitioners, 2017), they are likely managing sexual and reproductive health and need to position themselves to be able to insert LARC on request to strengthen evidence-based practice. Although continuing education measures will always be an important strategy for translating best practice guidelines and updates, providing training opportunity for LARC methods before clinicians exiting the academic setting could greatly reduce provider-level barriers to LARC.

Conclusion

LARC is one of the most effective forms of pregnancy prevention beyond abstinence and sterilization and is

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highly underutilized in the United States (Harper et al., 2015). With the passing of the ACA and an influx of women of reproductive ages, there should be more concern regarding the barriers that stand in the way of effective contraception management (Lewis et al., 2013). Longacting reversible contraception will take time to disseminate across the United States; however, clinical LARC experts have projected that the utilization of LARC would at least double if barriers were removed (Winner et al., 2012). The review illustrates the necessity of increased provider training and knowledge of LARC methods through curriculum and continuing education enforcement. By increasing provider training and knowledge about LARC in the academic setting and making sexual and reproductive health an essential competency, significant barriers to the provision of LARC could be reduced. Methods that are highly effective and easy to use, such as LARC, can significantly affect the unintended pregnancy rate, and NPs are in a perfect position to deliver this intervention to improve outcomes (Gilmore et al., 2015; Lewis et al., 2013; Harper et al., 2015).

Acknowledgments: The author acknowledges Dr. Christina Nardi, DNP, FNP-C for her support and helpful critique of this work.

Competing interests: The authors report no conflicts of interest.

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The authors and planners have disclosed that they have no financial relationships related to this article.

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