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Increasing Rates of LARC Utilization and Continuation through Contraceptive Counseling: An
Effective Approach for Women with Underutilization

Abstract: Unintended pregnancies in women with a substance use disorder are estimated to be nearly double that of the general population, of which negative health consequences are increased for both mother and neonate. Unintended pregnancies are preventable through the use of highly effective contraception that is less susceptible to the effects of typical versus perfect use. Long-acting reversible contraception (LARC) is ideal for this patient population. Therefore, a thorough literature review was performed to evaluate the role of contraceptive counseling on LARC uptake and continuation among women. The results indicated that contraceptive counseling does influence LARC uptake and continuation and it is an effective tool that can be utilized by primary care providers in women with underutilization.

Keywords: intrauterine device/IUD, contraception, long acting reversible contraception/LARC, substance use disorder

Increasing Rates of LARC Utilization and Continuation through Contraceptive Counseling: An Effective Approach for Women with Underutilization

Approximately 45% or 2.8 million, pregnancies per year are unplanned among women aged 15 to 44 years old.¹ Unintended pregnancies result from a lack of contraceptive use, imperfect use, or contraceptive failure. Unfortunately, poor maternal and fetal outcomes are associated with these pregnancies. Mothers are more likely to experience a delay in receiving prenatal care, have an increased risk of depression and be exposed to physical violence while pregnant, and are less likely to breastfeed.² Consequences to the neonate include low-birth weight and increased rates of birth defects.²

Women with substance use disorders (SUD) experience nearly double the rate compared with the general population, with 85% of pregnancies being unintended.³ Overall contraceptive use tends to be lower and less effective methods are preferred.⁴ Opioid use during pregnancy is associated with a lack of prenatal care, fetal death, preterm labor, and intrauterine passage of meconium.⁵ Women with opioid use disorder (OUD) are more likely to suffer from mental health conditions, experience poor nutrition, and to use other substances while pregnant.⁵

Background and Significance of LARC

Long-Acting Reversible Contraception (LARC) is a category of birth control methods inclusive of implantable and intrauterine devices (IUD) that boasts the highest rates of pregnancy prevention. For the purpose of this review, emphasis will be placed on intrauterine devices only. The IUD is more effective than all other forms of non-LARC methods such as condoms, the pill, patch, rings, and the shot. Failure rates are less than one in 100 women.⁶ The Practice Bulletin No. 186 issued by the American College of Obstetrics and Gynecology recommends that LARC methods should be routinely recommended to both nulliparous and adolescent women due to

demonstrated efficacy and safety.⁷ The practice bulletin also recommends that women at high-risk for sexually-transmitted infections should undergo STI testing, but that insertion should not be delayed for test results.⁷

Review on LARC Safety and Efficacy

The safety of intra-uterine devices has been repeatedly demonstrated in many different groups of women. Age at the time of insertion, parity, and sexually transmitted infection risk have been thoroughly evaluated in recent literature. Historically, younger women were, and continue, to not be recognized by providers as candidates for an IUD. However, there have been no demonstrated differences in adverse outcomes in younger women when compared with older women.⁸ Adverse outcomes such as pregnancy, perforation, infection, and heavy bleeding are considered rare adverse outcomes associated with IUD use. Younger women, aged 25 or younger, have demonstrated higher rates of expulsion, especially with the Copper IUD.⁸

Another safety concern regarding IUDs has been noted as increased risk of genital tract infections, potentially limiting the appropriateness of LARC methods in younger women and those at high-risk for sexually transmitted infections (STI). Recent research has shown that in women with STI risk factors, or whom had an asymptomatic chlamydial or gonorrheal infection at the time of IUD placement, were found to have no increased risk of developing pelvic inflammatory disease when compared to other contraceptive methods.⁹ Women with SUD often have several risk factors for STI including multiple sexual partners, unprotected sex, intravenous drug use, age, or a history of previous genital tract infection. This should not preclude them from this contraceptive method.

Lastly, another subgroup of women that were not traditionally identified as candidates for IUDs were women who had never given birth. Nulliparous women have not exhibited

differences in rates of infection or expulsion when compared with parous women following IUD insertion.¹⁰ However, higher rates of insertion failure and moderate to severe pain have been noted among nulliparous women.¹⁰

Methods

A comprehensive search of the available literature was performed using the databases Cochrane, CINAHL, and PubMed. Search terms included contraception or contraceptive, counseling, women, long-acting reversible contraception or LARC, intrauterine device or IUD or IUS. Limits were placed to identify the most recent and relevant literature available. Only articles published between 2013 and 2018, with women of reproductive age, that were peer-reviewed, and published in the English language were reviewed. Articles including the male gender, with a sole focus on adolescents, immediately post-partum, or included post-menopausal women were excluded. Initial yield was 37 articles. After articles were reviewed for applicability and duplicates, 13 remained. The applicable articles were then evaluated with the Johns Hopkins Nursing Evidence-Based Practice Research Evidence Appraisal Tool and prioritized by quality of evidence with five included in this review.¹¹

Results of the Evidence-based Literature Review on Contraceptive Counseling

LARC Uptake

A landmark study, known as the Contraception CHOICE Project, examined the effect of reducing barriers to highly effective contraception with a larger goal of reducing unintended pregnancies.¹² Over 9,000 women of reproductive age received tiered contraceptive counseling to increase their knowledge and awareness of LARC methods and were then provided free contraception of their choosing. When barriers including education, cost, and access were reduced, 75% of women selected a LARC.¹² Interestingly, the authors also found that women

whom had selected a LARC were more like to report continuation at 12 and 24 months than those who had selected other methods (87% versus 57%; 77% versus 44%, respectively).¹² This study demonstrated that when barriers to LARC methods are removed, combined with comprehensive counseling, women prefer long acting contraception and are more likely to continue use than other non-LARC methods.

Gibbs et al. explored the effect of contraception counseling among nulliparous and adolescent women after implementing a standardized provider training.¹³ A total of 1,500 young women aged 18-25 were enrolled in either an intervention or control clinic in a cluster randomized trial, with 12-month follow-up. Among the intervention group, women were more like to receive contraceptive counseling than the control group participants and with nearly double the rate of LARC selection.¹³ Notable findings included that nulliparous women were less likely to receive contraceptive counseling (adjusted odds ratio [aOR]=.57; 95% confidence interval [CI]: .42-.79) or select a LARC (aOR=.53; 95% CI: .37-.75) than women whom had given birth.¹³ When older adolescents were compared with young adult women, they had similar rates of counseling (aOR=.85; 95% CI: .63-1.15), LARC selection (aOR=.86; 95% CI: .64-1.17) and utilization (adjusted hazard ratio [aHR]=.94; 95% CI: .69-1.27).¹³ These findings highlight the effectiveness of contraceptive counseling on LARC selection among young women. However, the results also suggest that parity may influence a provider's engagement in contraceptive counseling regarding LARC methods.

Another study evaluated the influence of evidence-based training for providers, regarding counseling and IUD insertion, on LARC uptake. The cluster randomized trial was performed among 40 clinics throughout the United States and included 1,500 enrolled women aged 18-25. Provider training at the intervention clinics included method knowledge, counseling, and

placement, while control clinics received no training. In the intervention group 71% of women reported their provider discussed LARC compared to only 39% in the control group.¹⁴ Long-acting contraception was selected by 27.9% of women in the intervention group compared with 16.8% in the control group.¹⁴ Again, the results of this study support effective contraceptive counseling on increased LARC uptake.

LARC Continuation Rates

A prospective cohort study, the effect of counseling regarding IUD self-removability on IUD uptake, satisfaction, and continuation was investigated. The six-month study was divided in two phases; the first three months, counselor provided standard contraceptive counseling compared with the addition of IUD self-removal during the last three months. Women that selected an IUD were then compared among the control and intervention group for differences in the previously mentioned outcome variables. There were no significant differences in IUD uptake, satisfaction, or discontinuation rates among women who had received counseling to include self-removal and those who had not.¹⁵ Yet, knowledge of self-removal was high prior to intervention in both groups (27% control, 43% intervention).¹⁵ An additional finding was that one third of women who had considered IUD removal reported barriers to removal such as provider discouragement and appointment availability.¹⁵ Self-removal is an important topic to consider in contraceptive counseling, especially when a woman expresses concern over contraceptive control or barriers to removal.

While satisfaction with LARC methods is higher than other methods of birth control, with comparatively high rates of continuation, the role of intensive contraceptive counseling on discontinuation rates was undetermined. Intensive and non-intensive counseling were evaluated for effect on discontinuation rates of three LARCs due to bleeding problems.¹⁶ Participants

included 297 women who had received either a hormonal IUD, non-hormonal IUD, or implant. No significant differences were seen in discontinuation rates due to bleeding disturbances in women who had received intensive counseling compared with standard counseling.¹⁶ Premature discontinuation of an IUD may lead a woman to choose a less effective form of birth control and increase her risk for unintended pregnancy. Although intensive versus standard counseling did not reduce the already low rates of discontinuation attributed to bleeding disturbances, counseling about what to expect following LARC initiation is an important strategy to prevent premature discontinuation.

Table 1. Summary of Literature Review

Authors	Method	Sample Size	Intervention	Findings
(Birgisson, Zhao, Secura, Madden & Peipert, 2015).	Prospective cohort study	10,000 women	Tiered contraceptive counseling provided by trained counselors based on efficacy	67% of women chose a LARC method (95% CI, 65.3 to 69.0). Higher continuation among LARC users compared with non-LARC users at 12 months (87% vs. 57%) and 24 months (77% vs 41%)
(Harper et al., 2015)	Cluster-randomized trial	40 Planned Parenthood clinics	Clinic training to improve providers' method-specific knowledge on counseling and placement skills	Women were more likely to choose a LARC in the intervention group intracluster correlation 0.05 (95 CI, 0.02 to 0.08). Increase in the proportion of women using LARCs in the intervention compared to control group (2.3% vs 2.0%, coefficient for difference 0.0004, 95% CI 0.003-0.004)
(Modesto, M. Bahamondes, &	Randomized-clinical trial	297 women	Intensive counseling at 45 days, 6 months, and	Continuation rates were 82.6, 81, 73.2 for the ENG-implant, ING-IUS, and TCu380A IUD

Bahamondes, 2014)			12 months following insertion	(P=0.214) Discontinuation rates were highest with the Cu IUD (P=0.008) and due to pain with both IUDs (P=0.022) There were no significant differences of women discontinuing the method due to bleeding in either group.
(Raifman, Barar & Foster, 2018)	Prospective cohort study	361 women	Counseling including IUD self-removal	No significant difference in IUD uptake rate by group (control 7% [95% CI, 6.8-7.8]; intervention 7% [95% ci, 6.4-7.5]. Control participants were more likely to consider discontinuation at 6 months (15% vs 7%: p=0.047)
(Gibbs, et al., 2016)	Cluster randomized trial	1500 women	Provider LARC training on contraceptive counseling	Young adults and adolescents in the intervention group were more likely to select a LARC than the control (73% vs 41%, 66% vs 33% respectively) Nulliparous women compared with parous women had lower rates of LARC counseling (.57; 95% CI: .42-.79), lower LARC selection (aOR=.53; 95% CI: .37-.75), and lower LARC initiation (aHR=.65; 95% CI: .48-.90)

CI= confidence interval; aOR= adjusted odds ration; aHR= adjusted hazards ratio; IUD= intrauterine device; LARC= long-acting reversible contraception

Summary of the Evidence

Contraceptive counseling plays an important role in educating women regarding available options, efficacy rates, and addressing potential concerns. Findings from the literature review

support the effectiveness of contraceptive counseling on LARC uptake and continuation across various groups of women. There are many methods of contraceptive counseling available for providers to utilize. It is crucial for the provider to be competent regarding appropriateness of use, comprehensive contraceptive counseling, and current practice recommendations. When women receive comprehensive counseling including efficacy rates, they are more likely to select a LARC method. With additional counseling on expected side effects and knowledge of self-removal, they are less likely to discontinue their LARC method prematurely. Future research focusing on contraceptive use in those with substance use disorders would be instrumental in identifying the unique needs of this specific population. Further evaluating rates of continuation would provide valuable information regarding continued efficacy and cost benefit, as well to help identify any increased risk for adverse outcomes.

Clinical Implications and Practice Recommendations

Comprehensive contraceptive counseling is indicated for every woman of reproductive age. There are disproportionate rates of unintended pregnancies among women with SUD that can be addressed through the use of effective contraceptive counseling. A discussion including all available methods of birth control, efficacy rates, use, and expected side effects increases the likelihood of a woman selecting a LARC method.

Healthcare provider access is typically increased through the participation in substance use treatment. Addiction treatment providers may be provided the optimal time to engage in contraceptive counseling through increased and regular contact with patients. Advanced Practice Registered Nurses (APRNs), in the community recovery setting, are provided a prime opportunity to address reproductive health needs, assess current barriers to effective contraceptive use, and to integrate contraceptive services within substance use treatment. The

APRN can identify any potential knowledge gaps and provide appropriate education regarding the available methods of birth control and their respective efficacies. Insertion of IUDS, contraceptive counseling, and patient follow-up are all within the APRN cope of practice.

Conclusions

Uptake, continuation, and satisfaction may all be affected through the use of effective contraceptive counseling. Long-acting reversible contraceptive methods provide many advantages including greater efficacy and longer continuation rates. There is an unmet need to offer contraceptive services to women with substance use disorder to address the disproportionately high rates of unintended pregnancies. Offering contraceptive services concurrently with substance use treatment programs, with comprehensive contraceptive counseling, provides the greatest opportunity to eliminate potential barriers to contraceptive use. Ultimately, birth control methods, known as long-acting reversible contraception, are ideal for this patient population due to the highest rates of efficacy among all birth control options.

References

1. Finer L. B., & Zolna MR. (2016). Declines in unintended pregnancy in the United States, 2008-2011. *N English Journal of Med.* 374(9), 843–852.
2. U.S. Department of Health and Human Services & Office of Disease Prevention and Health Promotion (ODPHP). (2014). *Healthy people 2020: Family planning*. Retrieved from <https://www.healthypeople.gov/2020/topics-objectives/topic/family-planning?topicid=13>
3. Heil, S. H., Jones, H. E., Arria, A., Kaltenbach, K., Coyle, M., Fischer, G., Stine, S., Selby, P., Martin, P. R. (2011). Unintended pregnancy in opioid-abusing women. *Journal of Substance Abuse Treatment*, 40(2), 199-202. doi:10.1016/j.jsat.2010.08.011
4. Terplan, M., Hand, D. J., Hutchinson, M., Salisbury-Afshar, E., & Heil, S. H. (2015). Contraceptive use and method choice among women with opioid and other substance use disorders: A systematic review. *Preventive Medicine*, 80, 23-31. doi:10.1016/j.ypmed.2015.04.008
5. Committee on Obstetric Practice & American Society of Addiction Medicine. (2017). *ACOG committee opinion: Opioid use and opioid use disorder in pregnancy*. Retrieved from <https://www.acog.org/Clinical-Guidance-and-Publications/Committee-Opinions/Committee-on-Obstetric-Practice/Opioid-Use-and-Opioid-Use-Disorder-in-Pregnancy?IsMobileSet=false>
6. Office of Population Affairs. (2019). Intrauterine device. Retrieved from <https://www.hhs.gov/opa/pregnancy-prevention/birth-control-methods/iud/index.html>

7. American College of Obstetricians and Gynecologists. (2017). Practice bulletin number 186: Long-acting reversible contraception: Implants and intrauterine devices. *Obstetrics and Gynecology*, *130*, 251–69.
8. Jatlaoui, T. C., Riley, H. E. M., & Curtis, K. M. (2017). *The safety of intrauterine devices among young women: A systematic review*.
doi://doi.org/10.1016/j.contraception.2016.10.006
9. Jatlaoui, T. C., Simmons, K. B., & Curtis, K. M. (2016). The safety of intrauterine contraception initiation among women with current asymptomatic cervical infections or at increased risk of sexually transmitted infections. *Contraception*, *94*(6), 701-712.
doi:10.1016/j.contraception.2016.05.013
10. Foran, T., Butcher, B. E., Kovacs, G., Bateson, D., & O'Connor, V. (2018). Safety of insertion of the copper IUD and LNG-IUS in nulliparous women: A systematic review. *European Journal of Contraception & Reproductive Health Care*, *23*(5), 379-386. doi:10.1080/13625187.2018.1526898
11. Dang, D., & Dearholt, S. (2017). *Johns Hopkins nursing evidence-based practice: model and guidelines*. 3rd ed. Indianapolis, IN: Sigma Theta Tau International
12. Birgisson, N. E., Zhao, Q., Secura, G. M., Madden, T., & Peipert, J. F. (2015). Preventing unintended pregnancy: The contraceptive CHOICE project in review. *Journal of Women's Health* (15409996), *24*(5), 349-353. doi:10.1089/jwh.2015.5191
13. Gibbs, S. E., Rocca, C. H., Bednarek, P., Thompson, K. M. J., Darney, P. D., & Harper, C. C. (2016). Long-acting reversible contraception counseling and use for older adolescents and nulliparous women. *Journal of Adolescent Health*, *59*(6), 703-709.
doi:10.1016/j.jadohealth.2016.07.018

14. Harper, C. C., Rocca, C. H., Thompson, K. M., Morfesis, J., Goodman, S., Darney, P. D., . . . Speidel, J. J. (2015). Reductions in pregnancy rates in the USA with long-acting reversible contraception: A cluster randomised trial. *Lancet, 386 North American Edition*(9993), 562-568. doi:10.1016/S0140-6736(14)62460-0
15. Raifman, S., Barar, R., & Foster, D. (2018). Effect of knowledge of self-removability of intrauterine contraceptives on uptake, continuation, and satisfaction. *Women's Health Issues, 28*(1), 68-74. doi:10.1016/j.whi.2017.07.006
16. Modesto, W., Bahamondes, M. V., Bahamondes, L. (2014). A randomized clinical trial of the effect of intensive versus non-intensive counseling on discontinuation rates due to bleeding disturbances of three long-acting reversible contraceptives. *Journal of Human Reproduction, 29*(7), 1393-1399. doi:10.1093/humrep/deu089