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Committee on Adolescent Health Care
Long-Acting Reversible Contraception Work Group

This Committee Opinion was developed by the American College of Obstetricians and Gynecologists' Committee on Adolescent Health Care and the Long-Acting Reversible Contraception Work Group in collaboration with Committee member Ashlyn H. Savage, MD and Sarah F. Lindsay, MD, on behalf of the Long-Acting Reversible Contraception Work Group.

Adolescents and Long-Acting Reversible Contraception: Implants and Intrauterine Devices

ABSTRACT: The phenomenon of adolescent childbearing is complex and far reaching, affecting not only the adolescents but also their children and their community. The prevalence and public health effect of adolescent pregnancy reflect complex structural social problems and an unmet need for acceptable and effective contraceptive methods in this population. In 2006–2010, 82% of adolescents at risk of unintended pregnancy were currently using contraception, but only 59% used a highly effective method, including any hormonal method or intrauterine device. Long-acting reversible contraceptives (LARC) have higher efficacy, higher continuation rates, and higher satisfaction rates compared with short-acting contraceptives among adolescents who choose to use them. Complications of intrauterine devices and contraceptive implants are rare and differ little between adolescents and women, which makes these methods safe for adolescents. Barriers to use of LARC by adolescents include patients' lack of familiarity with or understanding about the methods, potentially high cost of initiation, lack of access, low parental acceptance, and obstetrician–gynecologists' and other health care providers' misconceptions about the safety of LARC use in adolescents. Because adolescents are at higher risk of sexually transmitted infections (STIs), obstetrician–gynecologists should continue to follow standard guidelines for STI screening. They should advise adolescents who choose LARC methods to use male or female condoms consistently (dual method use) to decrease the risk of STIs, including human immunodeficiency virus (HIV). Obstetrician–gynecologists should counsel all sexually active adolescents who do not seek pregnancy on the range of reversible contraceptive methods, including LARC, and should help make these contraceptives readily accessible to them.

Recommendations and Conclusions

The American College of Obstetricians and Gynecologists (ACOG) makes the following recommendations and conclusions:

- Long-acting reversible contraceptives (LARC) have higher efficacy, higher continuation rates, and higher satisfaction rates compared with short-acting contraceptives among adolescents who choose to use them.
- Complications of intrauterine devices (IUDs) and contraceptive implants are rare and differ little between adolescents and women, which makes these methods safe for adolescents.
- Patient choice should be the principal factor driving the use of one method of contraception over another, and respect for the adolescent's right to choose or decline any method of reversible contraception is critical. A reproductive justice framework for contraceptive counseling is essential to providing equitable health care, promoting access and coverage for all contraceptive methods, and avoiding potential coercion. Obstetrician–gynecologists should use this framework and offer LARC alongside all other reversible methods to adolescents who wish to prevent pregnancy.
- New-onset abnormal uterine bleeding unrelated to initial placement of a LARC should be evaluated similarly to abnormal bleeding in non-LARC users.
- Because adolescents are at higher risk of sexually transmitted infections (STIs), obstetrician–gynecologists should continue to follow standard guidelines for STI screening. They should advise

adolescents who choose LARC methods to use male or female condoms consistently (dual method use) to decrease the risk of STIs, including human immunodeficiency virus (HIV).

This Committee Opinion has been updated to reflect newer LARC methods and data on the safety and effectiveness of LARC methods in adolescents.

Sexual Behavior and Contraceptive Use Among American Adolescents

In the United States, 42% of female and 44% of male adolescents aged 15–19 years have had sexual intercourse (1). Although there has been a recent decrease in adolescent pregnancies, 75% of adolescent pregnancies were unplanned in 2011, accounting for one-sixth of all unintended pregnancies in the United States. (2). According to available data, the United States continues to have the highest adolescent pregnancy and birth rates among developed countries (2, 3). The phenomenon of adolescent childbearing is complex and far reaching, affecting not only the adolescents but also their children and their community. The prevalence and public health effect of adolescent pregnancy reflect complex structural social problems and an unmet need for acceptable and effective contraceptive methods in this population (4).

In 2006–2010, 82% of adolescents at risk of unintended pregnancy were currently using contraception, but only 59% used a highly effective method, including any hormonal method or IUD (5, 6). Adolescents who use contraception most often use short-acting methods, such as condoms, withdrawal, or oral contraceptives. These methods have higher discontinuation and pregnancy rates compared with LARC methods (7, 8). Poor continuation coupled with higher failure rates significantly decrease the efficacy of short-acting contraception in young women (9, 10).

Adolescents have high continuation rates with LARC methods. A meta-analysis of 12 studies evaluating LARC method continuation among adolescents and women younger than 25 years found a 12-month continuation rate of 84% for LARC methods (11). The CHOICE project, a prospective cohort study of 9,256 girls and women of reproductive age (ages 14–45 years) designed to promote the use of LARC, found that 81% of adolescents aged 14–19 years continued use of a LARC method at 1 year, whereas 44% of participants continued short-acting contraceptive use (12). Continuation rates were similar among adolescent IUD and implant users. Compared with adult women, adolescents in the CHOICE project had equally high satisfaction rates with LARC methods and were not more likely to discontinue LARC methods (13). Adolescents enrolled in this study were significantly less likely to experience a pregnancy, live birth, or abortion compared with adolescents in the same age group in the general U.S. population (14).

Despite high efficacy and satisfaction rates with LARC methods, relatively few adolescents use an implant or IUD for contraception. Only 5.8% of adolescents and women aged 15–19 years have ever used a LARC method, with 3.0% ever using an IUD and 2.8% ever using a contraceptive implant (1). Age appears to influence LARC method preference, with younger adolescents (14–17 years) most commonly selecting implants and older women (18–20 years) most commonly selecting IUDs (14, 15).

Barriers to use of LARC by adolescents include patients' lack of familiarity with or understanding about the methods, potentially high cost of initiation, lack of access, low parental acceptance, and obstetrician–gynecologists' and other health care providers' misconceptions about the safety of LARC use in adolescents (16). The CHOICE project, which included scripted counseling about contraceptive efficacy and eliminated cost barriers, found that more than two thirds of females aged 14–20 years chose a LARC method (15).

Long-Acting Reversible Contraceptives

There are several LARC options available for use in the United States. At present, there are four different levonorgestrel-releasing IUDs (LNG-IUD) of varying size, cost, dosage and duration of use, one copper-containing IUD, and one subdermal implant (Table 1)*. Data indicate that the Paragard (the copper IUD), Mirena, and the contraceptive implant all are effective beyond their FDA-approved durations of use (17). Extended-use studies are ongoing for Liletta, and data are not yet available for the newer devices such as Kyleena and Skyla.

"Quick Start" Initiation

Because delays in contraceptive method initiation may be a barrier to contraception for adolescents, same day initiation ("quick start") should be considered for most adolescents. All contraceptive methods (including LARC) can be started anytime, including on the day of the contraceptive counseling visit, if there is reasonable certainty that the patient is not pregnant. Risk of pregnancy can be assessed using patients' history and urine pregnancy tests (18). When there is uncertainty about pregnancy, the benefits of starting most hormonal contraception (implant, injection, combined hormonal contraceptives, and progestin-only pills) likely exceed any risk, and a pregnancy test should be repeated in 2–4 weeks. If there is uncertainty about a luteal phase pregnancy, an LNG-IUD should not be inserted until the clinician is reasonably certain that the patient is not pregnant. The copper IUD may be inserted within 5 days of unprotected intercourse for emergency contraception (19). Additional information about "quick start" initiation is available in the ACOG-endorsed Center for Disease Control and Prevention's (CDC) *U.S. Selected Practice Recommendations for Contraceptive Use* (18).

**Brand names referenced in the document are used purely for product identification purposes and do not imply endorsement.*

Table 1. Long-Acting Reversible Contraceptive Methods ⇦

Brand Name	Medication and Device Type (Dose)	Initial Rate of Release (micrograms/day)	FDA-approved Duration of Use	Potential Efficacy Beyond FDA-approved Duration	Identifying Characteristics	Size of Device (Horizontal x Vertical, mm)	Inserter Tube Diameter (mm)	Percentage of Women Experiencing an Unintended Pregnancy in the First Year of Use (Typical Use)*
Kyleena	LNG-IUD (19.5 mg)	17.5	5 years	N/A	Blue strings; silver ring	28 x 30	3.8	0.20[†]
Liletta	LNG-IUD (52 mg)	19.5	4 years	+1 year[‡]	Blue strings	32 x 32	4.4	0.20[†]
Mirena	LNG-IUD (52 mg)	20	5 years	+2 years[§,‖]	Gray strings	32 x 32	4.4	0.20[†]
Skyla	LNG-IUD (13.5 mg)	14	3 years	N/A	Gray strings; silver ring	28 x 30	3.8	0.20[†]
Paragard	Copper T380A IUD (380 mm^2)	NA	10 years	+2 years[¶]	White strings	32 x 36	4.01	0.80
Nexplanon/ Implanon	Etonogestrel single-rod contraceptive implant (68 mg)	60–70	3 years	+1-2 years[‖,#]	N/A	40 x 2	N/A	0.05

Abbreviations: FDA=U.S. Food and Drug Administration, IUD=intrauterine device, LNG=levonorgestrel.

*Trussell J. Contraceptive failure in the United States. Contraception 2011;83:397–404.

[†]For all LNG-IUDs

[‡]Creinin MD, Jansen R, Starr RM, Gobburu J, Gopalakrishnan M, Olariu A. Levonorgestrel release rates over 5 years with the Liletta® 52-mg intrauterine system. Contraception 2016;94:353–6.

[§]Rowe P, Farley T, Peregoudov A, Piaggio G, Boccard S, Landoulsi S, et al. Safety and efficacy in parous women of a 52-mg levonorgestrel-medicated intrauterine device: a 7-year randomized comparative study with the TCu380A. IUD Research Group of the UNDP/UNFPA/WHO/World Bank Special Programme of Research, Development and Research Training in Human Reproduction. Contraception 2016;93:498–506.

[‖]McNicholas C, Swor E, Wan L, Peipert JF. Prolonged use of the etonogestrel implant and levonorgestrel intrauterine device: 2 years beyond Food and Drug Administration-approved duration. Am J Obstet Gynecol 2017;216: 586.e1–6.

[¶]Wu JP, Pickle S. Extended use of the intrauterine device: a literature review and recommendations for clinical practice. Contraception 2014;89:495–503.

[#]Ali M, Akin A, Bahamondes L, Brache V, Habib N, Landoulsi S, et al. Extended use up to 5 years of the etonogestrel-releasing subdermal contraceptive implant: comparison to levonorgestrel-releasing subdermal implant. WHO study group on subdermal contraceptive implants for women. Hum Reprod 2016;31:2491–8.

Counseling, Consent, Confidentiality, and Cost

Adolescent contraceptive counseling may require attention to the unique concerns of adolescents about informed consent, confidentiality, parental involvement, and insurance coverage or cost. A reproductive justice framework for contraceptive counseling is essential to providing equitable health care, promoting access and coverage for all contraceptive methods, and avoiding potential coercion (4). Specifically, obstetrician–gynecologists should use this framework and offer LARC alongside all other reversible methods to adolescents who wish to prevent pregnancy (4). See Committee Opinion No. 710, *Counseling Adolescents About Contraception*, for more information (20).

Obstetrician–gynecologists should engage adolescents who wish to prevent pregnancy in shared decision-making and provide information on the benefits and risks of all contraceptive methods. Contraceptive counseling should include anticipatory guidance for adolescents and their parents or guardians regarding possible menstrual changes, side effects, and noncontraceptive benefits such

as management of irregular or abnormal uterine bleeding and treatment of dysmenorrhea (17).

Coercive provision of LARC has been used as a means of fertility control in marginalized women (21). Patient choice should be the principal factor driving the use of one method of contraception over another, and respect for the adolescent's right to choose or decline any method of reversible contraception is critical. Obstetrician–gynecologists should recognize that potential sources of coercion could include parents, partners, clinicians, and peers. In addition, obstetrician–gynecologists should be cautious that their own enthusiasm for LARC may be an additional source of coercion (22, 23).

Just as adolescents have the right to choose or decline LARC, they also have the right to discontinue LARC without barriers. Initial contraceptive counseling should include anticipatory guidance for discontinuation, including the need for a future visit with an appropriately trained clinician for removal and the costs associated with removal. Additionally, if an adolescent makes an informed decision to discontinue LARC, the obstetrician–gynecologist should facilitate removal.

Protecting adolescents' confidentiality is important because fears around parental disclosure can serve as a barrier to reproductive health care. In a majority of states, adolescents have the right to receive contraceptives, including LARC methods, without parental consent. Obstetrician–gynecologists should be familiar with local laws concerning provision of contraception to minors. Information regarding these laws can be found at www.guttmacher.org/state-policy/explore/overview-minors-consent-law. Obstetrician–gynecologists also should inform patients that some billing practices, such as explanation of benefits notifications, can compromise confidentiality (24). Although some adolescents may not want to use parental insurance benefits for LARC because of confidentiality concerns, others may be uninsured or have insurance that excludes coverage for LARC. In these cases, referral to a clinic with Title X or other public funding (www.opa-fpclinicdb.com) may be appropriate for adolescents in order to improve access and maintain confidentiality.

Because adolescents are at higher risk of STIs, obstetrician–gynecologists should continue to follow standard guidelines for STI screening. They should advise adolescents who choose LARC methods to use male or female condoms consistently (dual method use) to decrease the risk of STIs, including HIV.

Guidance for Adolescent Health Care Providers to Address Common Misconceptions

Myths and misinformation from patients, parents, and clinicians have been a barrier to adolescent LARC access. Training and continuing education programs should address common misconceptions and review the key safety evidence and benefits of adolescent LARC use.

Intrauterine Devices

Intrauterine Devices Are Safe to Use Among Adolescents

Intrauterine devices are safe for adolescents, with very low rates of complications such as pelvic inflammatory disease (PID) or uterine perforation (25). The American College of Obstetricians and Gynecologists, the American Academy of Pediatrics, the Centers for Disease Control and Prevention (CDC), and the Society of Family Planning support the use of LARC by adolescents (26–28) (Table 2). The risk of PID with IUD placement is 0–2% when no cervical infection is present and 0–5% when insertion occurs with an undetected infection (29). The risk of PID is highest in the first 20 days after IUD insertion (relative risk of 9.7 cases per 1000 woman–years of use) but the overall absolute risk of PID is small at 1.6 cases per 1000 woman–years of use (29–31). With long-term use, levonorgestrel IUDs may lower the subsequent risk of PID by thickening cervical mucus and thinning the endometrium (32–34).

Sexually active adolescents should be screened for gonorrhea and chlamydial infection at the time of IUD insertion based on current CDC guidelines (18). It is appropriate to screen for STIs and place an IUD on the same day. Screening and awaiting results before IUD insertion do not decrease the risk of postinsertion PID (35), but could delay initiation of highly effective contraception and increase the risk of unintended pregnancy. Routine antibiotic prophylaxis is not recommended at the time of IUD insertion (17, 18). If an STI is diagnosed after the IUD is in place, it may be treated without removing the IUD (17, 18, 36, 37).

Uterine perforation is a very rare complication of IUD insertion. A systematic review summarizing retrospective cohort data and insurance claims data demonstrated that adolescents are not at higher risk of perforation compared with women. The risk of uterine perforation for adolescents and women is approximately 0.1% (25).

Intrauterine Devices Do Not Increase an Adolescent's Risk of Infertility

Infertility is not more likely to occur after IUD discontinuation than after discontinuation of other reversible methods of contraception (31). Baseline fecundity returns rapidly after IUD removal (38). In a large case–control study that examined determinants of tubal infertility, the presence of chlamydial antibodies (not previous IUD use) was associated with infertility (39). A prospective study that compared 12-month pregnancy rates of 69 participants aged 18–35 years from the CHOICE project who had discontinued their IUD with 42 former non-IUD users found no difference in pregnancy rates or time to pregnancy between the groups (40).

Intrauterine Devices May Be Inserted Without Difficulty in Most Adolescents and Nulliparous Women

Intrauterine device insertion has not been shown to be more difficult in adolescents compared with older

Table 2. U.S. Medical Eligibility Criteria for Contraceptive Use* ⇦

Condition	Cu-IUD	LNG-IUD	Implants
Age			
Menarche to less than 20 years	2	2	1
Parity			
Nulliparous	2	2	1
Parous	1	1	1
Postpartum (including cesarean delivery)			
Less than 10 minutes after delivery of placenta (breastfeeding)	1	2	-
Less than 10 minutes after delivery of placenta (not breastfeeding)	1	1	-
10 minutes after delivery of placenta to less than 4 weeks after delivery (breastfeeding or nonbreastfeeding)	2	2	-
4 weeks or greater after delivery (breastfeeding or nonbreastfeeding)	1	1	-
Postpartum sepsis	4	4	-
Postpartum			
Nonbreastfeeding (any time postpartum)	-	-	1
Breastfeeding, less than 30 days postpartum	-	-	2
Breastfeeding, 30 days or more postpartum	-	-	1
Postabortion			
First trimester (including immediately after spontaneous or induced abortion)†	1	1	1
Second trimester (including immediately after spontaneous or induced abortion)†	2	2	1
Immediate postseptic abortion	4	4	1

Abbreviations: Cu-IUD, copper-containing intrauterine device; LNG-IUD, levonorgestrel-releasing intrauterine device.

*Categories: 1 = A condition for which there is no restriction for the use of the contraceptive method; 2 = A condition for which the advantages of using the method generally outweigh the theoretical or proven risks; 3 = A condition for which the theoretical or proven risks usually outweigh the advantages of using the method; 4 = A condition that represents an unacceptable health risk if the contraceptive method is used.

†IUDs can be inserted immediately after spontaneous or induced abortion.

Modified from Curtis KM, Tepper NK, Jatlaoui TC, Berry-Bibee E, Horton LG, Zapata LB, et al. U.S. medical eligibility criteria for contraceptive use, 2016. MMWR Recomm Rep 2016;65(RR-3):1–103.

women or in nulliparous patients compared with parous women. In a cohort of 1,177 adolescents and women aged 13–24 years, successful IUD placement was achieved on first attempt in 96% of patients. The majority of the IUDs were placed by an advanced practice clinician (41).

Most women experience some degree of discomfort during IUD insertion. Obstetrician–gynecologists should provide anticipatory guidance regarding pain that may occur during and after insertion. Provision of additional analgesia during IUD insertion should be individualized and may include nonsteroidal antiinflammatory drugs (NSAIDs), narcotics, anxiolytics, or paracervical blocks. The most effective method of pain control has not been established yet (42, 43). One study demonstrated that women who received oral naproxen 1 hour before IUD insertion did not have reduced pain with IUD insertion but did have reduced pain after insertion (44). A paracervical block using 1% lidocaine was shown to reduce pain scores among nulliparous adolescents and women aged 14–22 years undergoing IUD insertion, although administration of the block did not improve overall satisfaction with insertion (45). Misoprostol

should not be routinely used before IUD insertion because it has not been shown to reduce pain or enhance ease of insertion and has been shown to increase cramping and nausea (18, 43, 46).

Placement of the Skyla IUD and the Kyleena IUD may be easier and less painful than the Mirena IUD because of a smaller insertion tube diameter (see Table 1). In phase II clinical trials, cervical dilation was performed more frequently for the Mirena IUD compared with the Skyla IUD and the Kyleena IUD (9.4% versus 3.9%, *P*=.004) and participants rated placement of the Skyla IUD and the Kyleena IUD as either "no pain" or "mild pain" more often compared with the Mirena (72.3% versus 57.9%) (47). Participants in this study were aged 21–40 years and approximately 20% of the women were nulliparous (47).

Intrauterine Device Expulsion Is Uncommon in Adolescents

Intrauterine device expulsion rates range from 2% to 10% for all IUD users (48). A retrospective review of 2,138 adolescents and women aged 13–35 years with an IUD showed that younger females (aged 13–19 years) and nulliparous women were not more likely to experience expulsion than older or parous women (overall expulsion rate of 6%). However, when expulsion did occur, the younger females were more likely to experience partial expulsion than the older cohort (49). Another retrospective review of 684 females, 27% of whom were adolescents, did not find a significantly different rate of IUD expulsion between adolescents and adults at 6 months after placement (9% versus 6%, respectively, *P*=.7) (50). A prospective study of 1,117 adolescents who underwent IUD placement at a university clinic found an expulsion rate of 3.0% at 6 months after placement (41).

Among adolescents enrolled in the CHOICE Project, expulsion rates at 12 months and at 36 months were approximately 10% and 19% respectively, which was approximately twice the risk for women older than 20 years. Although expulsion rates were higher in the adolescents, nulliparity did not affect risk of expulsion (51). These expulsion rates for adolescents were notably higher than in most other studies and may be explained partially by the mechanism of data collection in this study. Expulsion rates for the copper IUD are slightly higher than for LNG-IUDs (49, 51). Prior expulsion is a risk factor for repeat expulsion, but should not be considered a contraindication if the adolescent desires another IUD and counseling is provided on the higher risk of expulsion (approximately 30%) of the second IUD (52, 53).

Intrauterine Devices Cause Changes in Bleeding Patterns

Obstetrician–gynecologists should counsel adolescents using IUDs to expect changes in menstrual bleeding, especially in the first months of use. The copper IUD may cause heavier menses. Nonsteroidal antiinflammatory drugs are effective for the treatment of dysmenorrhea or bothersome bleeding from the copper IUD (17).

Many women using one of the LNG-IUDs will have a decrease in bleeding over time that will lead to lighter bleeding, spotting, or amenorrhea. Lower dose devices have lower rates of amenorrhea and also may have higher rates of unscheduled bleeding. As with the copper IUD, evidence supports treating bleeding and spotting associated with LNG-IUD use with NSAIDs (17). In one randomized placebo-controlled trial, naproxen significantly reduced bleeding and spotting days in the first 12 weeks of Mirena IUD use, whereas transdermal estradiol significantly increased bleeding and spotting (54). However, another trial found that tranexamic acid and mefenamic acid did not alleviate nuisance bleeding during the first 90 days of Mirena IUD use (55).

Young women with bleeding concerns that coincide with LARC initiation rarely require extensive evaluation (17). For more information, see Practice Bulletin No. 186, *Long-Acting Reversible Contraception: Implants and Intrauterine Devices* and the CDC's *Selected Practice Recommendations for Contraceptive Use* (17, 18). New-onset abnormal uterine bleeding unrelated to initial placement of a LARC should be evaluated similarly to abnormal bleeding in non-LARC users. The differential diagnosis remains similar, including complications of pregnancy, infection, and gynecologic malignancy. Additionally, a new change in bleeding may indicate partial IUD expulsion in adolescents, and placement should be assessed with examination and possibly ultrasonography. An IUD located within the cervix is partially expelled, and given the increased risk of complete expulsion, the IUD should be removed (and replaced if the patient desires). Ideal management of low-lying IUDs is less clear; a shared decision-making approach between the patient and the obstetrician–gynecologist or other gynecologic care provider based on symptoms and other considerations is most appropriate. For additional information, see Committee Opinion No. 672, *Clinical Challenges of Long-Acting Reversible Contraceptive Methods* (43).

Contraceptive Implants

The Contraceptive Implant Has Minimal or No Effect on Bone Density or Weight

A prospective study of etonogestrel implant users showed no difference in the change in bone mineral density compared with copper IUD users after 2 years of use (56). Most evidence suggests that implants do not have a significant effect on body weight. A small percentage of women (2.3%) in the clinical trials for the etonogestrel implant discontinued use because of reported weight gain; however, actual weight gain was not documented (57). The mean weight change after 1 year was 2.1 kilograms for 130 women with implants who were monitored in the CHOICE Project. After adjusting for age and race,

this weight change was not statistically different from women using an IUD in this study (58). In contrast, depot medroxyprogesterone acetate injections have been associated with weight gain and with overweight adolescents more susceptible to weight gain than normal-weight adolescents (59).

Contraceptive Implants Cause Changes in Bleeding Patterns.

Obstetrician–gynecologists should counsel adolescents who choose an implant for contraception to expect changes in menstrual bleeding patterns throughout the duration of use. In an analysis of 11 clinical trials, including 942 etonogestrel implant users of all ages, the most common bleeding pattern was infrequent bleeding in 33.3% of 90-day cycles, followed by amenorrhea in 21.4% of cycles. Prolonged bleeding occurred in 16.9% of cycles and frequent bleeding occurred in 6.1% of cycles (57). Change in bleeding pattern is the most common reason for implant discontinuation, but early discontinuation rates among adolescents are generally low at approximately 10% within the first year (60). Anticipatory guidance regarding bleeding patterns may improve satisfaction and rates of continuation. There are no clinical parameters or risk factors that aid in predicting bleeding patterns. However, the bleeding pattern women experience in the first 3 months is broadly predictive of future bleeding patterns (61).

There is limited evidence demonstrating that interventions to treat irregular bleeding patterns are of benefit. Oral contraceptive pills have been shown at least to temporarily interrupt bleeding episodes (62). The CDC recommends consideration of the following two treatment options: 1) NSAIDs for short-term treatment (5–7 days), and 2) hormonal treatment (if medically eligible) with low-dose combined oral contraceptives or estrogen for short-term treatment (10–20 days) (18). Limited clinical trial data suggest that, compared with placebo, mefenamic acid, mifepristone in combination with ethinyl estradiol, mifepristone in combination with doxycycline, and doxycycline alone decrease the length of bleeding episodes in implant users (63–65). More research is needed to determine whether these or other interventions affect long-term continuation or the acceptability of the implant and if these regimens are safe for long-term use. New-onset abnormal uterine bleeding not associated with initial placement should be evaluated similarly to abnormal bleeding in non-LARC users and to that of IUD users with abnormal uterine bleeding.

Postpartum Long-Acting Reversible Contraception Initiation

The American College of Obstetricians and Gynecologists supports immediate postpartum LARC insertion (ie, before hospital discharge) as a best practice, recognizing its role in preventing rapid repeat and unintended pregnancy (17, 66). Adolescents are at high risk of a short interpregnancy interval, which is associated with lower rates of maternal educational achievement and employment and higher rates of preterm birth and small-for-gestational-age infants (67–69). Adolescents who use LARC methods after their first delivery are at significantly lower risk of repeat adolescent pregnancy (70–72). Insertion of an IUD or implant immediately postpartum ensures reliable contraception for adolescents when they are highly motivated to prevent pregnancy and are already in the health care system, and it is cost effective in decreasing rapid repeat pregnancy (73). Lack of insurance coverage for inpatient LARC insertion has been an obstacle to immediate postpartum LARC initiation; however, since 2013 increasing numbers of state Medicaid programs have begun covering this service (74). For additional information, including clinical guidance, see Committee Opinion No. 670, *Immediate Postpartum Long-Acting Reversible Contraception* and Practice Bulletin No. 186, *Long-Acting Reversible Contraception: Implants and Intrauterine Devices*.

Postabortal Long-Acting Reversible Contraception

Insertion of an IUD immediately after first-trimester or second-trimester uterine aspiration and after completed medication-induced abortion should be offered routinely as a safe and effective option for postabortion contraception (17, 27) (Table 2). Immediate IUD insertion after confirmation of completed medication-induced abortion or after first-trimester uterine aspiration is associated with low expulsion rates, high continuation rates, and low risk of complications. Intrauterine device insertion immediately after second-trimester abortion is associated with higher expulsion rates compared with first-trimester postabortion insertion (17).

Insertion of a contraceptive implant on the same day as first-trimester or second-trimester uterine aspiration or on the initial day of medication-induced abortion should be offered routinely as a safe and effective option for postabortion contraception (17). The risk of abortion failure with placement at the time of mifepristone administration for medication-induced abortion is low and similar to the baseline medication-induced abortion failure rate (75).

Conclusion

Long-acting reversible contraceptive methods have higher efficacy, higher continuation rates, and higher satisfaction rates compared with short-acting contraceptives among adolescents who choose to use them. Complications of IUDs and contraceptive implants are rare and differ little between adolescents and women, which makes these methods safe for adolescents. Obstetrician–gynecologists should counsel all sexually active adolescents who do not seek pregnancy on the range of reversible contraceptive methods, including LARC, and should help make these contraceptives readily accessible to them.

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