Original Study

Barriers and Solutions to Improve Adolescent Intrauterine Device Access

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A B S T R A C T

Professional organizations agree that adolescents are good candidates for intrauterine device (IUD) use. The American Academy of Pediatrics and the American College of Obstetricians and Gynecologists affirm that IUDs should be considered first-line as contraceptive methods for adolescents. Although the number of teens using IUDs is growing, multiple barriers remain, including systems, and patient- and provider-level obstacles. Only through concerted efforts and a committed action plan will adolescents achieve better access to IUDs.
Key Words: IUD access, Adolescent, Perceptions, LARC

Introduction

Adolescents increasingly use long-acting reversible contraception (LARC) including intrauterine devices (IUDs). The most recent publication from the National Center for Health Statistics documents this trend: 8.2% of all adolescents aged 15-19 years were using a LARC method in 2015-2017,[1] up from 5.8% in 2011-2015.[2] Opportunities remain to increase access for adolescents who are the least likely group to use contraception and who face specific challenges in accessing LARC, specifically IUDs. Although access is critical, equally important is nondirective, noncoercive counseling to allow adolescents to make the contraceptive choices best for them. We review the landscape of IUD provision for adolescents and the context in which provision takes place. Numerous factors influence whether an adolescent is offered and accepts an IUD at the point of service. We describe adolescent access to IUDs, current barriers, and an action plan for improving access.

Adolescent Access to IUDs

Care delivery systems directly affect adolescents' access to contraception, including IUDs. Overall, the US health care system does not score high marks in facilitating adolescent IUD use. Barriers occur at the individual coverage level, the clinic level, and across health systems.

The most significant systems obstacle relates to payment for the IUD and related services. IUDs typically cost hundreds of dollars, effectively rendering them inaccessible for adolescents without adequate health insurance; nationwide in 2011-2015 only 3% of sexually active adolescents had ever used an IUD.[2] In contrast, when the Contraceptive CHOICE project, a St Louis study that made all contraceptives available at no cost to almost 10,000 women, 37% of adolescents chose an IUD.[3]

The Patient Protection and Affordable Care Act (ACA) expanded insurance coverage, decreasing the proportion of uninsured reproductive-age women by nearly 40%.[4] The ACA simultaneously reduced insurance barriers to adolescent IUD use. The most significant facilitator was the requirement for insurers to cover contraceptive services, including all Food and Drug Administration-approved contraceptive methods, without copayments, coinsurance, deductibles, or other cost-sharing measures.[5,6] The ACA also permits dependents to continue coverage by their parents' insurance plans until age 26 years. These and other provisions of the ACA were enacted beginning in 2012, and by early 2014, 87% of insured women could access the IUD with no out-of-pocket costs.[7]

Even with favorable contraceptive coverage, insured adolescents are generally covered through a parent's or guardian's policy. Although many states permit minors to consent to confidential health services including contraception and sexually transmitted infection (STI) testing and treatment without parental involvement, this confidentiality is eliminated when the policyholder (the parent) receives communications—the "explanation of benefits"—with claims information.[8] Adolescents might decide against accessing family planning services to avoid their parent/s or guardian knowing.[9] Professional organizations that support adolescent reproductive health emphasize the importance of confidential provision of health care services and insurance processes that respect confidentiality.[8,10]

Reduced availability of adolescent contraceptive services occurs with restrictions on the age of those offered care; a provider or clinic might only be licensed to care for older adolescents or have malpractice coverage restrictions.[11] Religious health system mergers further negatively affect adolescent IUD access, particularly at Catholic hospitals that

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follow the Ethical and Religious Directives for Catholic Health Care Services. The Ethical and Religious Directives prohibit contraception care.[12] Catholic health system mergers are on the rise; 40% of the largest health care systems are now faith-based.[12] Providers in religiously affiliated systems place fewer IUDs, which are often available only for noncontraceptive benefits such as heavy bleeding; providers who do not routinely insert IUDs are less likely to offer them to adolescents.[13]

Culturally, the United States still largely subscribes to the belief that increasing teen contraceptive method use increases sexual promiscuity, leading some radio and television networks to prohibit contraceptive advertisements.[14] Teaming up with the lack of positive contraception marketing is the chilling effect of contraception lawsuit advertisements; these are additional barriers for the provider and patient in considering an IUD.[15]

Adolescents' Perceptions of the IUD

An adolescent's decision to use an IUD requires awareness of pregnancy risk, motivation to prevent pregnancy, and information about contraceptive options. Beyond information, multiple factors including cultural values and influential people affect teens' contraceptive decision-making.

Awareness of Pregnancy Risk

Comprehensive sexual education in public schools, including explanation of pregnancy risk, is not federally mandated in the United States. The prevalence of abstinence-only until marriage education programs, required to teach that "a mutually faithful monogamous relationship in the context of marriage is the expected standard of human sexual activity" and to discuss contraceptive methods only in terms of their failure rates is prevalent in public schools.[16] Evidence supports the positive effects of comprehensive sex education on use of contraception and reduced frequency of unprotected sex, STIs, and pregnancy.[16] A recent study showed that explanations of contraceptive methods were included in only 61% of high school curricula.[17,18]

Motivation to Prevent Pregnancy

Teenagers might have ambivalence about their desire to be pregnant or have a child, influencing their use of contraception. When asked, "If you got pregnant now, how would that make you feel," 61% of 9,158 15- to 19-year old girls responded they would be very upset, 28% would be a little upset, and 11.3% would be a little or very pleased.[2] Such ambivalence highlights the importance of assessing pregnancy intention in contraceptive counseling. Cultural factors influence adolescents' desire for contraception and decision-making around parenting and pregnancy. Providers must listen to and respect the priorities and values of each patient, avoiding coercion for any specific contraceptive method, and avoiding shaming of pregnant adolescents. Recently, the "National Campaign to Prevent Teen and Unplanned Pregnancy" renamed its organization "Power to Decide," reflecting a changed focus from teen pregnancy to individual choice and a reproductive justice-based counseling framework.[19]

Contraceptive Information and Influence

Adolescents obtain contraception information from many sources, including school-based sex education, friends, family, partners, and the media. Although few large studies have specifically examined adolescent awareness of LARC, data show that 50%-80% of adolescents have never heard of an IUD.[20,21]

Adolescents value information from medical professionals and desire information from their providers about the "adjustment period" of irregular bleeding and/or cramping, and anticipatory guidance to alleviate side effects and increase acceptability.[22] Some young women cite their mothers' opinions as essential to their decision for an IUD.[23] Mothers are more likely to find pills, injections, and condoms acceptable for their teenage daughters than IUDs, citing concerns about the invasiveness of the method.[24] The experience of peers might be more valuable to a teen than the recommendation of a medical professional.[15,17,23] Adolescents trust their friends' physical experiences, and might ask their peers questions such as, "How does it feel inside?"[15] One study showed increased likelihood of contraceptive use by a high school student when a higher proportion of classmates used contraception.[25]

The media informs and influences contraceptive decision-making: the Internet is the top resource for contraception among teens.[14] Widespread availability of app-based contraceptive information, reproductive health Web sites, and online videos offer adolescents confidential information.[26,27] The media often depicts sex as carefree, casual, and commonplace, not highlighting STI prevention and contraception, or the consequences of unprotected sex.[28] Some public health efforts have inserted storylines about contraception into popular TV programs, with post-release surveys indicating an immediate increase in viewer knowledge.[14]

Intimate partners influence contraceptive use. In heterosexual relationships, a lack of male partner education might result in exclusive use of male-controlled, less effective contraceptive methods like condoms and withdrawal. More than a third of men have never heard of an IUD; some teens cite partner concerns as a barrier to IUD use.[29] Lack of an intimate partner similarly influences contraceptive choice, and "not being in a relationship" is cited as a reason for not using an IUD.[30] In an age group in which sexual partners might change frequently, some teens opt for "user-controlled" methods that are easier and less costly to stop and restart as needed.[31]

Adolescent Misperceptions

Persistent myths or misperceptions surround IUD use. The Centers for Disease Control and Prevention (CDC) publishes evidence-based contraceptive guidance, the US Medical Eligibility Criteria for Contraceptive Use (MEC),[32] and the US Selected Practice Recommendations for Contraceptive Use.[33] Although the US MEC recommends IUDs

for adolescents,[32] teens might think they are ineligible because of age or nulliparity, in part reflecting the opinions of many providers.[13] Some adolescents cite comorbid conditions (such as migraines, incorrectly) as contraindications to IUD use.[30,34]

Concerns about pelvic infection and infertility remains one of the largest obstacles to a positive perception of IUDs among adolescents and providers.[20,23] IUD use does not appear to affect fertility.[35] Pelvic inflammatory disease (PID) is not a consequence of the IUD. PID is mediated by infection of the upper genital tract from STI cervicitis; the rate of upper genital tract infection is not affected by the presence of an IUD. A cervical pathogen at the time of IUD placement might lead to PID; the risk is low with treatment. CDC guidance recommends same-day STI testing and IUD placement.[33] Counseling regarding dual contraceptive method use is important to reduce the risk of STIs in teen IUD users.[17]

Adolescents and providers share concerns about difficult IUD placements and greater pain after placement for nulliparous teens compared with older, parous women. One study showed a 96% success rate at first attempt at IUD placement in adolescents, with failure and expulsion not related to age, parity, or IUD type. Fewer than 2% of required ultrasound examination, dilation, or other interventions for successful placement.[36] Also, adolescents and older women are equally likely to continue using an IUD at 12 months.[37]

Provider Training and Perceptions of the IUD

Providers are the ultimate arbiters of IUD use for teens—after adolescents' contraceptive decision-making process results in the choice of an IUD and after navigating systems factors, they must find a provider willing and trained to place the IUD. Although all patients face this barrier, adolescents are particularly vulnerable at the point of service: attitudes about contraception and IUDs differ on the basis of the patient's age, and adolescents are more likely to receive health services from providers who have less familiarity with IUDs.

In 2012, the American College of Obstetricians and Gynecologists (ACOG) explicitly endorsed IUDs as first-line contraception for teens.[38] Although the American Academy of Pediatrics (AAP) has endorsed provision of contraceptives by pediatricians for many years, it updated its recommendations in 2014, consistent with ACOG guidance to include IUDs as first-line contraception for adolescents.[39] The 2014 AAP Policy Statement on Contraception recommends that “Pediatricians develop a working knowledge of contraception to help adolescents reduce risks of and negative health consequences of unintended pregnancy.” Further, the AAP guidance notes that “Given the efficacy, safety, and ease of use, LARC methods should be considered first-line contraceptive choices for adolescents.”[39] Pediatricians are encouraged to consider receiving training in LARC, or to identify providers in their communities to whom to refer adolescent patients for LARC insertion.

Numerous studies, before and after the publication of the AAP guidelines, examined pediatricians’ attitudes and practice relative to IUDs; all are limited by low response rates. In a 2013 survey of 167 Massachusetts pediatricians, over half reported abstinence as their favored method of contraception for adolescents.[40] Fewer than 20% of respondents would discuss IUDs as an option. Being a younger female provider increased the chance of discussing an IUD, as did the scenario of a teen with a previous birth or abortion. A large percentage of pediatricians lacked training in IUD insertion and over 30% had legal and parental concerns. Others had non-evidence-based concerns about infertility. Another 2013 study cited lack of knowledge and concerns about infertility as major barriers to prescribing IUDs among Chicago pediatrics residents.[41] A 2012 survey of New York City school-based health providers that included pediatricians, nurse practitioners, social workers, and health educators showed that although 77% indicated that IUDs were safe for adolescents, only 55% would recommend them to adolescents.[42] In this group specifically focused on adolescent health, 18% would not recommend IUDs for teens younger than the age of 20 years and 25% would not recommend them for teens who had not been pregnant.

A retrospective review of medical records of 200 insured Minnesota teen mothers showed an average of 2.7 primary care visits in the year before pregnancy.[43] Medical records lacked documentation of sexual activity or contraception in 50% of visits; 35% of adolescents were prescribed any contraceptive method. Obstetrician-gynecologists (OB-GYNs) were most likely to counsel and prescribe contraception, followed by family medicine physicians, then pediatricians.

Adolescents obtain health care services from a variety of providers including pediatricians, advanced practice providers, OB-GYNs, and family medicine physicians. Training and perceptions of IUDs often differ according to discipline. In a 2010 publication, just less than half of 15- to 16-year-old adolescent girls were estimated to receive care from their pediatrician.[44] Of older adolescents, approximately a third each received care from OB-GYNs, family medicine physicians, and pediatricians, outlining the importance of all provider groups in adolescent contraceptive access.[45] Adolescents were 3 times as likely to be interested in using an IUD if they heard about it from a health care provider.[46] Since the AAP policy statement, a survey of pediatricians showed that most counseled teens about contraception, two-thirds counseled about LARC, and 4% inserted LARC.[44]

Qualitative studies have examined OB-GYNs’, pediatricians', and family medicine providers’ concerns in more detail. An interview study of Midwestern pediatricians showed that most perceived IUDs to have serious adverse side effects for teens and were not well tolerated.[47] Interviews of family medicine physicians, pediatricians, and OB-GYNs showed that knowledge/skills for IUD insertion, easy referral, a supportive environment and IUD availability all influence the likelihood a physician will counsel about and insert LARC.[48] Most pediatricians generally had less knowledge and some discomfort with contraception prescription. Although most respondents were patient-centered in their contraceptive counseling, the author noted a paternalistic approach to counseling about IUDs, offering this method to monogamous adolescents judged to be mature, responsible, and reliable.[49]

Surveys of OB-GYNs show an increase in knowledge and LARC insertion rates over time. In 2000, 66% of ACOG Fellow survey respondents would not recommend IUDs to nulliparous women, and 84% would not recommend IUDs to nonmonogamous women.[50] By 2014, most offered IUDs to a broader range of women; 81% were placing more IUDs than they had 5 years ago, but still only 43% considered adolescents good candidates for the IUD.[13,51] Continuing education led to an expansion of IUD insertion practices to include adolescents and nulliparous women. Receiving training in residency and younger physician age correlated with the number of IUDs placed in the previous year.

A recent national survey of senior residents in OB-GYN, Family Medicine, and Pediatrics showed that most received at least some training in LARC.[52] OB-GYN senior residents were most comfortable counseling about (100%) and inserting (86%) hormone-containing IUDs, followed by Family Medicine (79% and 18%) and Pediatrics (25% and 0%). OB-GYN residents were more likely to recommend LARC for a nulliparous adolescent patient; 83% of Pediatric residents desired additional training in LARC.

An Action Plan to Improve Access

Access to a wanted IUD can be enhanced through comprehensive sexual health education/information, better education and provider training, and health care systems changes and improved clinic processes (Table 1).

Improving Adolescent Perceptions and Knowledge

Strategies to improve adolescent perceptions of IUDs must start with a better understanding of pregnancy risk. Even when young people desire to avoid pregnancy, they often underestimate their risk. Improving knowledge can come through media, particularly Web sites like bedsider.org and beforeplay.org where adolescents can find teen-friendly and accessible contraceptive information. Providing comprehensive sexuality education with inclusive contraceptive information gives adolescents the knowledge necessary for contraception decision-making. Respecting adolescents' pregnancy and contraception preferences through reproductive justice-based counseling could increase trust and acceptance. Media, in conveying accurate medical knowledge and public health content about sex, contraception, and pregnancy, could play a role in empowering young women. As public health efforts harness the growing influence of media to reach teens, trusted adults and providers might dispel "media myths." Partners should be included in education efforts.

Improving Provider Perceptions and Training

Improving perceptions starts with education during provider training programs, including evidence-based contraceptive curricula for all primary care providers who offer women's health care. Consistent with the AAP, ACOG,

Table 1
Action Plan for Improving Adolescent IUD Access

Action Item	Action Plan
Health care delivery systems	Reduce administrative bureaucracy by limiting the number of insurers
	Revise payment policies that penalize single-visit counseling and reimbursement
	Reduce the effect of religious mergers
	Revise insurance explanation of benefits to promote confidentiality
	Provide flexible hours that allow before and after school clinic access
	Create same-day and walk-in contraception appointments for adolescents
Training and IUD provision	Increase pelvic exam and IUD training and simulation for practicing providers
	Access post-professional IUD training through organizations such as Upstream.org or the Clinical Training Center for Family Planning (ctcfp.org)
	Improve contraceptive curriculum across specialties: advanced practice providers, pediatrics, family medicine, obstetrics and gynecology
	Encourage education and use of the CDC's evidence-based guidance, the US Medical Eligibility Criteria, and US Selected Practice Recommendations for Contraceptive Use, as the standard for contraceptive guidance
	Use scripting for benefits/myth-busting and side effects of contraceptives during the clinic visit
	Create single-visit protocols for same-day IUD insertion with STI testing, if indicated
	Understand the principles of reproductive justice-based counseling expressed by the National Women's Health Network and Sistersong LARC statement of principles*
	Determine the IUD "expert" for the practice and consider scheduling most IUD visits with that provider
	Encourage interprofessional learning/training for all relevant specialties (pediatrics, family medicine, OB-GYN) in IUD insertion and reproductive justice-based counseling
	Encourage contraceptive counseling training like "One-Key Question" from Power to Decide†
Perceptions of adolescents	Advocate for comprehensive sex education with evidence-based contraception information
	Promote accurate teen-friendly media sites‡
	Use noncoercive, shared decision-making approach in contraceptive counseling
Research agenda	Determine the efficacy and sustainability of provider training in contraceptive counseling and IUD insertion
	Assess the content and practice of provider counseling and its effect on contraceptive choice and patient satisfaction
	Explore the use of internet/media sources in contraceptive education as well as the effect of patient-facing Web sites on contraceptive choice
	Identify the effect of partner or parent contraceptive education on patient contraceptive choice
	Explore opportunities to reduce health inequities in reproductive health outcomes among women of color

CDC, Centers for Disease Control and Prevention; IUD, intrauterine device; LARC, long-acting reversible contraception; OB-GYN, obstetrician-gynecologist; STI, sexually transmitted infection.

* Statement of principles: https://docs.google.com/document/d/1ID4cEuaV1oSAXSWdJmSi4YMs5TLCGhnomjOX0In5odU/edit.

† Power to Decide Web site.

‡ Planned Parenthood Federation of America's "Spot on Period Tracker" app (also with contraception info); CDC's "Contraception" app (US Selected Practice Recommendations (US SPR) for Contraceptive Use, 2016, for providers); www.bedsider.org/; www.beforeplay.org/; www.stayteen.org/.

and American Academy of Family Practice endorsements, providers across disciplines should receive education and training in IUD counseling and insertion and adapt their clinical practices to facilitate adolescent IUD use. "Power to Decide," a strong advocate for adolescent access to contraception offers counseling and contraception education resources for providers. "Power to Decide" endorses and provides training in "One Key Question," in which providers ask the question, "Do you want to become pregnant in the next year?" and counsel accordingly.[53]

Initiatives to increase provider training are under way. As routine pelvic examinations become less common, simulation training and standardized patient encounters gain importance. Technology advances have led to a range of high- and low-fidelity simulation models for learning the adolescent pelvic examination[54,55] IUD insertion simulators significantly improve comfort with the procedure among practicing providers at ambulatory health centers.[56] Several organizations offer dedicated IUD skills training sessions and up-to-date resources for on-site and online training opportunities (Table 2).

Additionally, IUD access will improve with provider use of evidence-based CDC guidance (US MEC and US Selected Practice Recommendations for Contraceptive Use) to determine eligibility for the IUD and best practices for IUD insertion including how to rule out pregnancy, needed tests and examinations, and need for follow-up exams. Other national resources include nonprofit organizations that support adolescent access to contraception and have patient-facing and provider-facing content.

Providers are beginning to understand the benefits of LARC use and have liberalized criteria for eligible candidates as evidenced by increased adolescent LARC use (8.2%) in the most recent National Center for Health Statistics[1] data. Adolescents remain the demographic group most likely not to use contraception. Improved residency education for all providers who offer care to adolescents as well as a larger emphasis on continuing education in all disciplines might help reduce barriers to provider-mediated LARC access. Education and training should emphasize shared decision-making and the importance of nondirective counseling about all methods to empower adolescents to make the best choices for them.

Improving IUD Access through Clinics

Multiple-visit clinic protocols prevent some motivated adolescents from receiving a desired IUD. One study of Medicaid-insured women showed that only 54% received a desired IUD with a 2-visit protocol.[57] Clinics sometimes require multiple visits for financial reasons, including concerns about nonpayment or reduced payments for same-day services, or because they do not routinely stock IUDs on site.[20] ACOG recommends that insurer payment policies support same-day IUD provision.[58] Clinics might also cite medical reasons, such as awaiting STI screening results, as the rationale for delaying IUD insertion to a subsequent visit. Same-day STI screening and IUD insertion is safe and is recommended by ACOG and the CDC.[59–61]

Clinic policies and processes can also reduce adolescent IUD access.[20] Most outpatient visits are scheduled during working hours, the same time that most adolescents are at school. Missed classes might trigger parent or guardian notification, further undermining adolescent autonomy and compromising confidentiality. Even if an adolescent schedules a clinic visit at the end of the day, transportation and other logistical challenges add barriers, and strict late policies discourage adolescents from seeking care. Flexible clinic hours and walk-in contraception appointments can increase access.[62]

For adolescents without insurance or who have confidentiality concerns, the Title X Family Planning program provides family planning funding for low-income individuals and allows un- and underinsured adolescents to access contraceptive services confidentially and at reduced or no cost. Approximately 80% of federally qualified health centers with Title X funding have IUDs available on site.[63]

Some communities recognize these systems barriers and have created programs to expand IUD access for adolescents. An example occurred in downtown Atlanta, Georgia, where a public-private partnership using the Title X program created a teen-friendly reproductive health center.[64] This center offers same-day contraception initiation, weekend and walk-in appointments, and confidential services for adolescents. The Colorado Family Planning Initiative, which similarly partners with the Title X program and the Colorado Department of Public Health, has improved access throughout the state with impressive results.[65]

Table 2
Sources of IUD Insertion Training

Resource	Description
ACOG LARC Program clinical education and training site (www.acog.org/About-ACOG/ACOG-Departments/Long-Acting-Reversible-Contraception/LARC-Clinician-Education-and-Training)	Comprehensive list of clinical training opportunities for all LARC methods
National Clinical Training Center for Family Planning (www.ctcfp.org/larc-link)	Office of Population Affairs-funded clinical training center; offers regional training and a comprehensive list of on-site and online LARC training resources
Beyond the Pill (Beyondthepill.ucsf.edu/training)	Program of the Bixby Center for Global Reproductive Health; offers on-site and online LARC training
Family Planning conferences • ACOG Annual Clinical and Scientific Meeting • Contraceptive Technology • North American Forum on Family Planning • North American Society for Pediatric and Adolescent Gynecology Annual Clinical and Research Meeting	Women's health-focused conferences that often include hands-on IUD training workshops

ACOG, American College of Obstetricians and Gynecologists; IUD, intrauterine device; LARC, long-acting reversible contraception.

Next Steps

IUDs are safe, well tolerated, and offer adolescents contraceptive and noncontraceptive benefits. Although adolescent LARC use is slowly on the rise, adolescents continue to face disproportionate barriers to IUD access and use. Improving access to IUD use includes universal access to health care, including contraception, and removal of payment barriers to IUDs, such as revising reimbursement policies that penalize a single visit for contraception counseling and initiation. Advocacy will help ensure all adolescents have confidential and affordable access to contraception with elimination of barriers such as insurance explanation of benefits. A strong research agenda to determine influences on adolescent contraceptive use, best counseling techniques, and approaches to reducing adolescent health inequities is imperative. Only with implementation of a multipronged strategy can we look forward to improving adolescent IUD access.

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