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Review article

Cost as a Barrier to Long-Acting Reversible Contraceptive (LARC) Use in Adolescents

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A B S T R A C T

Cost is a major barrier to adolescents' ability to obtain long-acting reversible contraception (LARC). By reviewing the available literature on this issue, we provide a framework to understand how insurance coverage, out-of-pocket expenses, parental involvement, and recent pregnancy can impact access. We provide examples of cost-free access to LARC for adolescents, such as the Contraceptive CHOICE Project. Universal coverage for contraception, without cost-sharing, could increase use of LARC among adolescents resulting in fewer unintended pregnancies, improved health outcomes, and considerable cost savings to the healthcare system.

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Despite a significant decline since the early 1990s, the United States still has the highest rates of teen pregnancy and birth among comparable countries. Most pregnancies to teens are unintended. Unintended pregnancy among adolescents is associated with higher school dropout rates, lower educational attainment, and lower income. For example, approximately 50% of teen mothers receive a high school diploma by 22 years of age, compared with 90% of women who had not given birth as a teenager [1]. In addition, births from unintended pregnancy are at high risk for low birth weight, preterm birth, and other adverse outcomes [2].

Increasing the use of long-acting reversible contraceptive (LARC) methods, intrauterine devices (IUDs) and implants, is one important strategy to reduce the rates of unintended pregnancy [3,4]. LARC methods, including the IUDs and the etonogestrel (ENG) implant are excellent methods for adolescents, and adolescent satisfaction and continuation with LARC use is comparable to older women [5].

Cost is a major barrier to contraceptive use, especially the use of LARC. Contraception and family planning are important

aspects of preventive health care to women. In addition, family planning is the epitome of prevention and is cost-saving to the healthcare system [6]. Contraceptive use, in general, has been estimated to save nearly \$19 billion in direct medical cost each year [7]. LARC methods are the most effective [8] and among the most cost-effective methods of contraception [9,10]. However, IUDs and implants are used infrequently by adolescents (See Table 1) [11]. The high up-front cost of contraception, and LARC methods in particular, is one of the most important barriers to use. Provision of no-cost contraception has been demonstrated to significantly reduce the teen birth rate, abortions, and repeat abortions [12].

This article will address cost as a barrier to LARC use in adolescents. Additionally, we will provide data from several reports that assess use of LARC when cost barriers are removed.

Methods

We performed a PubMed search of the English language literature using CONTRACEPTION, COST, BARRIERS, and ADOLESCENTS as search terms. Abstracts of all relevant articles were reviewed by a single author (D.E.) before complete texts were reviewed. References from these publications were examined to identify additional sources not identified in the original search. We supplemented this search by contacting experts in

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Table 1

Proportion of adolescents using contraception by method type and associated typical use failure rates

Method	15–19 Years	20–24 Years	% Experiencing unplanned pregnancy During first year of typical use
Implant ^a	1.8	1.5	.05
IUD	3.5	5.8	.2–.8
DMPA	2.6	5.1	3
Pill	53.9	47.9	8
Ring	3.5	6.2	8
Condom	22.7	24.5	15
Withdrawal	3.9	5.1	27

DMPA = depot medroxyprogesterone acetate; IUD = intrauterine device.

^a Original data grouped implant, Lunelle, contraceptive patch. Adapted from: Mosher WD, Jones J. Use of contraception in the United States: 1982–2008. National Center for Health Statistics. Vital Health Statistics; 2010(11); and Hatcher et al. [56]

the field. When literature specific to adolescents was not available, we extrapolated findings from published research on all reproductive-aged women.

Paying for LARC: Insurance Coverage, Parental Consent, and Postpregnancy

For women and adolescents with limited or no contraceptive coverage, the up-front cost of the device and insertion procedure for LARC is often prohibitive. The average wholesale price of the devices is reported to be \$844 (LNG-IUD; Mirena), \$718 (Cu-IUD; ParaGard), and \$791 (implant; Implanon). These figures do not include the additional costs of the office visit or insertion procedure [10]. The total bill for a patient to initiate a LARC method generally exceeds \$1000 [13]. Even when patients do have insurance coverage, their out-of-pocket costs can influence whether they obtain a LARC method. A retrospective cohort study of 98 privately insured women in Philadelphia, with more than half under 30 years of age, demonstrated that women who had greater than a \$50 out-of-pocket cost were 11-times less likely to obtain an IUD than women who had to pay less than \$50 [14]. In a separate study of 298 women who presented with an unintended pregnancy seeking abortion services, including 136 women under age 25 (45.6%), nearly one in four (24%) reported the cost of contraception as the reason they were not using a method to prevent pregnancy [15].

Insurance Coverage for LARC

The amount an individual may have to pay for a LARC device, insertion, and removal varies considerably by state, region, clinical setting, and whether an adolescent has insurance coverage. Adolescents may pay for contraceptive services in a number of ways: (1) parents' insurance—either employer-based or privately purchased; (2) a government-funded program such as Medicaid or a Title X family planning clinic; or (3) self-pay. A recently published study of women between 18 and 30 years of age noted that both expense of the methods and insurance coverage are significant concerns [16]. At present, 28 states require insurers to cover all FDA-approved contraceptive drugs and devices. West Virginia is the only state that specifically excludes minor dependents from contraceptive coverage. Twenty states allow employers and insurers to refuse coverage

based on moral or religious beliefs, which could further limit access to LARC [17].

Coverage for contraception among private insurers varies greatly. The Guttmacher Institute surveyed private insurers regarding contraceptive coverage and demonstrated that in those states where a contraceptive coverage mandate exists, more women could expect coverage for methods with high up-front costs [18]. The same study compared results with a 1993 survey of private insurance and noted that IUD coverage increased significantly from 32% to 94% of plans overall [18]. A 2004 survey of 250 benefit managers who oversee employee-based insurance programs revealed 40% of companies cover IUD device cost, 42% cover insertion costs, and 35% cover removal costs (whereas 81% cover oral contraceptives) [19]. The variability in private insurance coverage creates uncertain costs for the individual and may impact adolescents' ability to obtain LARC. In addition, adolescents may be reluctant to use their parents' insurance for fear of needing to explain or defend their behavior [3]. In our experience, there also may be fear of potential retribution from their parents, such as physical abuse or being asked to leave the home.

Studies have demonstrated that coverage of contraception is cost-effective and does not significantly increase the cost of providing health care from the perspective of the insurance company [20]. In fact, a recently published report from the U.S. Department of Health and Human Services noted that although direct costs of providing contraception do not add more than .5% to premium costs, it is actually cost-saving overall [21]. There are numerous examples of private insurance companies expanding coverage of contraception in order to comply with the previously mentioned state mandates without needing to increase premium costs to individuals [21]. Publicly funded government insurance programs and family planning services have been estimated to save significant amounts of money by providing contraception [22]. One study estimates that such programs prevent 1.94 million unintended pregnancies, including 400,000 teen pregnancies, with an overall cost savings of approximately \$4 for every \$1 spent on publicly funded family planning services [23,24]. An analysis of cost savings (from averted unintended pregnancies and subsequent births) from the California family planning program demonstrated that LARC methods provide the most savings at \$15.90 and \$7.24 per dollar spent on the implant and IUDs, respectively [24]. Although the implant used in this study was Norplant (levonorgestrel implant), we believe efficacy and continuation and subsequent cost savings would be similar for the etonogestrel implant.

Adolescents who seek LARC paid for by government insurance programs most likely are receiving this service through Medicaid or a Title X family planning clinics. These programs are designed to provide assistance to those who may not otherwise have access to health care and family planning services. The cost-sharing burden on the patient in these programs is generally less than private insurance with many patients receiving services at no cost. A retrospective cohort review of 4,237 teens who sought care at a state-funded family planning clinic in New York concluded that eliminating the cost of contraception is associated with more adolescents receiving contraception and selection of more effective methods [25]. In 2006, adolescents represented 25% of clients at publicly funded family planning centers totaling nearly two million women under age twenty [26]. Although LARC methods may be available at little or no cost to adolescents through Medicaid and Title X, there is significant

variation with regards to availability of methods and access to trained clinicians who are comfortable providing these methods to adolescents.

The landscape of laws regarding contraceptive coverage for private insurance is rapidly changing. President Obama's health plan, the Affordable Care Act, contains an Amendment on Women's Health that requires all FDA-approved contraceptives be covered with no cost-sharing to patients. At present, the contraceptive coverage requirement and other aspects of the Affordable Care Act are being challenged in state and federal courts by some religious organizations, but it appears that new private health insurance plans written after August 1, 2012 will be required to provide no-cost contraception to patients with limited exceptions [6,27–29].

Parental Consent for Contraceptive Services

Teens may be able to seek family planning services without consent of their parents, but this, too, is dependent on whether the teen is receiving care from government versus private insurance programs. Federal regulations stipulate that teens may seek contraceptive services from Medicaid and Title X programs without parental consent [30]. However, the regulations on parental consent for teens seeking family planning with private insurance vary from state to state. There are 21 states that explicitly allow teens to seek family planning services without parental consent; 25 states allow this in certain circumstances; and 4 states have no policy regarding this issue [31]. Although it may be possible for teens to obtain services without parental consent, it does not mean they can afford services without financial assistance from their parents or that their parents will not become aware of services rendered by their private insurance. This issue has been reflected in the U.S. Supreme Court's ruling that extended the constitutional right to privacy to a minor's decision to seek and initiate contraceptives. The ruling noted that although parental involvement in such decisions was desirable, requiring such involvement would likely result in fewer numbers of at-risk adolescents receiving services [23].

Challenges in Obtaining LARC After Pregnancy

Provision of LARC immediately after a pregnancy, whether postpartum or postabortion, is advantageous for adolescents. Numerous studies have demonstrated the safety of providing LARC shortly after delivery or abortion. These studies of IUD insertion within 10 minutes after placental delivery (whether by vaginal or cesarean) and provision of the contraceptive implant prior to discharge after delivery have included adolescents and adults, but none have focused specifically on adolescents [32–36]. Similarly, the studies of provision of LARC immediately postabortion were not specific to adolescents, but did include them [37–40]. Because adolescents are likely to be highly motivated to use contraception following a pregnancy, they should have access to the most effective methods precisely at this time. Providing LARC after pregnancy is a critical intervention time to prevent repeat unintended pregnancy [41]. Because adolescents are likely to use less effective methods [11,42], increasing the use of the most effective methods (IUDs and implants) could substantially decrease the rate of unintended pregnancy in this population.

Providing contraceptive services immediately postpartum and postabortion may not always be possible. Regulations

prohibiting insurance coverage for abortion services make it difficult to provide LARC and other contraception in the same clinical setting and at the same time as an abortion. This is particularly troubling given that many women do not return for a separate follow-up contraceptive visit after an abortion [43]. These regulations and restrictions may also apply to private insurance, Title X, and some Medicaid programs with variation by state. A survey of abortion providers conducted in 2009 demonstrated that although 69% offered LARC in their clinic, immediate postabortion placement of IUDs and implants occurred at only 36% and 17% of clinics, respectively [44]. The authors noted that state policies can significantly impact coverage for contraception and the likelihood of LARC use. The most frequently reported barrier to postabortion LARC provision was the high cost of the methods [44]. Where contraceptive coverage mandates for private insurance exist, immediate post-abortion LARC was more likely to be provided (OR = 2.7, 95% CI 1.2–6.2) [44]. Extending insurance coverage of LARC methods to the immediate postpartum or postabortion period can increase LARC use [45].

Provision of LARC in the postpartum period is also dependent on an adolescents' source of healthcare coverage—private versus public. Although most employer-based private insurance includes coverage of maternity care, many individual health insurance policies do not cover immediate postpartum LARC [46]. Adolescents who do not have access to private insurance will often qualify for Medicaid coverage of their prenatal care, delivery, and postpartum care. Medicaid routinely covers contraception, but as described previously, there is significant variation with regards to availability and access to LARC. Postpartum provision of LARC methods to adolescents would be ideal, but rules governing global payments for delivery and postpartum care do not provide for a compensation mechanism for the devices and insertion fees. As a result they are asked to return for contraceptive care at their routine postpartum visits. However, many will not return for a postpartum visit before the resumption of sexual activity [47]. To ensure adequate prevention of repeat unplanned pregnancy, adolescents should be encouraged to initiate contraception prior to resuming sexual activity [48]. Although it varies from state to state, many women may lose Medicaid coverage shortly after delivery, which has been identified as one of the key barriers to adolescents' use of contraception postpartum [49,50].

Examples of LARC Use Among Adolescents Without Cost Barriers

Much can be learned from programs that have been established and implemented to remove cost barriers to LARC. Two examples include the Iowa Initiative and the Contraceptive CHOICE project in St. Louis, Missouri.

Iowa initiative

In 2007, a privately funded program in Iowa was launched with a goal of increasing family planning services and use of LARC through improved funding of Title X clinics. This initiative addressed education, advocacy, and access barriers, in addition to removing cost barriers. The program demonstrated a 218% increase in the number of women in Iowa Title X clinics using an IUD as their primary method of contraception and an 829% increase in implant users. Additionally, in just 3 years,

unintended pregnancy and abortion rates decreased by 5% and 19%, respectively. A benefit-cost analysis from this program concluded that over 5 years the cost savings in preventing unintended pregnancy was greatest among teen mothers. The cost savings for a young woman aged 14–19 years was \$17.23 for every dollar spent on contraception [51].

The contraceptive CHOICE project

In 2007, the Contraceptive CHOICE Project began recruiting women into a large prospective cohort study. The goals of this project were to: (1) promote the use of LARC methods by removing all cost and access barriers; and (2) reduce the number of unintended pregnancies in the region by providing contraception to 10,000 women. All contraceptive methods were provided at no cost for the duration the participant was in the project (2–3 years). In the contraceptive CHOICE project, in addition to removing cost barriers, participants received counseling regarding all contraceptive options. Counseling began with a standardized “script” informing women that IUDs and implants were the most effective contraceptive methods [52]. Seventy-five percent of participants in the CHOICE project chose LARC methods (compared with 8.5% nationally) [53]. Adolescents chose LARC at a rate similar to older participants; however, younger adolescents (ages 14–17 years) favored the implant over the IUD [5]. In addition, satisfaction and 12-month continuation rates were much higher in LARC users compared with women using non-LARC methods [54]. A recent analysis of the CHOICE Project evaluated contraceptive continuation among teens aged 14–19 years and young women aged 20–25 years compared with women older than 25 years of age. CHOICE demonstrated that both teens and young women have high rates of continuation and satisfaction equal to that of older women [55].

Summary

Cost is a major barrier to adolescents' ability to obtain LARC. Improved access to the most effective contraceptives promotes healthier outcomes for adolescents and considerable cost savings to the healthcare system. Universal coverage for contraception without cost-sharing could help remove access barriers to adolescents use of LARC.

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