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Authors: Hannah Helmy MPH, MA; Samantha Garbers, PhD; Megan Kavanaugh, DrPH; Mary Ann Chiasson, DrPH; Lisa Colarossi, PhD; Laura Jacobson, MSPH; Laura MacIsaac, MD, MPH; Judith Sackoff, PhD; Cristina Yunzal-Butler, PhD; and Hope Roobol, MPH.

About the IUD Taskforce

The NYC IUD Taskforce aims to ensure that everyone has access to a full range of contraceptive methods. The Taskforce seeks to address the systemic barriers (financial, institutional, legal, and educational) that may limit knowledge, awareness, access, and use of long-acting reversible contraceptive methods (LARCs), specifically IUDs and implants. LARCs are highly effective and safe contraception options that can be removed when no longer desired. More than 50 medical providers, educators, administrators, public health professionals, reproductive health advocates, and researchers from more than 25 New York City-based organizations currently serve on the IUD Taskforce. The IUD Taskforce's central activities are concentrated in the Taskforce workgroups, comprised of voluntary members that meet regularly.

IUD Taskforce Data Workgroup

A primary function of the Data & Monitoring Workgroup of the New York City IUD Taskforce is the identification and review of available literature and datasets on IUD use in New York City and nationally. The Data & Monitoring Workgroup is comprised of researchers, epidemiologists, information technology experts, public health practitioners and health care providers from organizations including Public Health Solutions, the New York City Department of Health and Health Hygiene and its Primary Care Information Project, the Guttmacher Institute, and Planned Parenthood of New York City, among others.

Methods

The Data Workgroup members compiled literature on IUD prevalence and time trends, continuation and removal, availability, including the influence of clinician-level factors, and use in particular subgroups from August 2013-March 2014. Articles were identified through a search of clinical and public health databases and reviewed by workgroup members to determine inclusion in the bibliography.

Prevalence and Time Trends

Using data from the National Survey for Family Growth (NSFG), Jones, Mosher, & Daniels (2012) reported on national estimates of IUD use among all women of reproductive age, comparing rates from the 1995 cycle to data collected in 2006-2010. Results showed an increase in the % of current IUD use from 0.8% to 5.6%, respectively. An analysis of NSFG data from 2002 and 2006-2010 among currently contracepting women of reproductive age by Finer, Jerman, & Kavanaugh (2012) showed a similar upward trend in reported IUD use from 2% to 3.5% to 7.7% in the years 2002, 2007, and 2009, respectively. Finer et al. (2012) found increases in long-acting reversible contraception (LARC), largely driven by the IUD, among contracepting women in almost every income, education, religious, and age group between 2002 and 2009, as well as by relationship status and among parous/nulliparous women (see also Kavanaugh, Jerman, Hubacher, Kost, & Finer, 2011). Additionally, while disparities in IUD use by race/ethnicity have been reported in the NSFG, with Latina women being more likely to report use than non-Latina white and black women, recent analyses demonstrate that these gaps are narrowing. Jones, Mosher, & Daniels (2012) reported that IUD use has increased among all racial/ethnic groups from 1995 to 2006-2010, and Finer, Jerman, & Kavanaugh (2012) found that while disparities were evident in 2002, they were almost completely eliminated by 2009. The highest levels of IUD use from the most recently available NSFG cycle were reported among women 25-39 years, married and cohabitating women, women covered by Medicaid, and religious denominations other than Catholic or Protestant. Analyzing data on age and parity together demonstrated that the majority of LARC use increases have been among women with at least one child (see also Kavanaugh et al. 2011). Similarly, Jones et al. (2012) found that IUD use increased substantially among women who had one previous birth in this time period, from 1.2% in 1995 to 10% in 2006-2010. A smaller increase in IUD use was found among women who reported two or more previous births, from 0.9% in 1995 to 7.1% in 2006-2010. Additional information about trends within subgroups will be described below.

IUD Continuation and Removal

While rates of IUD continuation and removal have been reported in the literature, they are not available on a nationally representative scale, so it remains difficult to evaluate trends. In addition, most evidence is based on single institutions. An important consideration to note is that studies on continuation and removal that classify device expulsions without replacement as non-continuation of the method lead to the conclusion that nullipara and young women have lower continuation rates. Grunloh, Casner, Secura, Peipert, and Madden (2013) measured continuation rates and explored characteristics associated with discontinuation among users of the levonorgestrel IUD, copper IUD, and hormonal implant enrolled in the Contraceptive CHOICE project. At six months, discontinuation rates for these methods were 7.3%, 8%, and 6.9%, respectively. The only factor that was associated with discontinuation at six months was marital status, with unmarried women being slightly more likely to have the devices removed. Peipert et al. (2011) calculated 1-year continuation rates and levels of satisfaction among women obtaining an IUD through the Contraceptive CHOICE project (n=5,087) via a phone survey administered 12 months post-insertion. Rates of continuation were high for both the levonorgestrel and copper IUDs (88% and 84%, respectively), with comparable levels of satisfaction reported (80% for both IUDs). Among all contraceptive methods women could select through the project, IUDs and the hormonal implant conferred the highest rates of both satisfaction and continuation. These trends continued to be observed at 24 months post-insertion among enrollees in the Contraceptive CHOICE project, with the levonorgestrel and copper IUDs having the highest continuation rates of all methods offered (79% and 77%, respectively) (O'Neil, Madden, Zhao, Secura, & Peipert, 2013). Behringer, Reeves, Rossiter, Chen, & Schwarz (2011) evaluated adolescent and nulliparous women's duration of levonorgestrel intrauterine system (IUS) use from 2005-2008 within a single institution. Their analyses demonstrated that nulliparous women were not more likely than parous women to have expelled the device within two years of placement, while adolescent women were more likely than adult women to do so (though this was not statistically significant). Additionally, nulliparous women were no more likely than parous women to have their devices removed due to method dissatisfaction or desire to become pregnant within two years of placement. This was also true for the comparison between adolescent and adult women. Approximately 6% of nulliparous women and 3% of adolescent women expelled the device within two years of placement, while about 6% of nulliparous women and 10% of adolescents discontinued use within 1 year. Within 2 years, 11.5% of nulliparous women and 16.8% of adolescents discontinued use of the IUS.

IUD Availability

Results from several recent studies reveal that IUD availability varies by type of practice and funding source. Wood et al. (2013) surveyed over 400 federal health center grantees to gather information about family planning and reproductive health services offered. While almost all centers reported providing at least one contraceptive method, approximately half offered a bundle of reproductive health services that included STI testing/treatment and oral contraceptives in addition to either IUDs or hormonal implants. About 60% reported onsite prescribing and dispensing of IUDs, with 8% only offering the method via prescription. One third of respondents indicated that IUDs were available only at their largest site by referral or other arrangement. Not surprisingly, health centers receiving Title X funding reported that a significantly higher proportion of sites offered family planning services which included LARC methods as compared with those without Title X funding (64% versus 47%, respectively). Receipt of Title X funds was also associated with greater onsite availability of all contraceptive methods, including IUDs. Similarly, in a recent study of LARC accessibility in federally qualified health centers (FQHCs), Beeson, Wood, Bruen, Goldberg, Mead, & Rosenbaum (2013) found that participation in the Title X program was associated with greater onsite availability of LARC methods, particularly at the centers' largest sites. In their survey of approximately 400 FQHCs, over half of responding FQHCs' largest sites reported offering IUDs onsite, with about one third offering the method through referral. Commonly cited barriers to the onsite availability of LARC methods included the high cost of stocking the devices, the unique needs of particular populations (e.g., adolescents, undocumented immigrants), and a perceived lack of staffing and training. A study by Frost, Gold, Frohwirth, & Blades (2012) evaluated clinic performance and variation across a nationally representative sample of clinics receiving federal funding for family planning services according to their primary service focus, status of Title X funding, and administrative practice type (n=664/1294 total clinics contacted). Of particular relevance for IUD availability, survey results demonstrated that the onsite provision of both methods increased from 2003 to 2010 (from 57% to 63% for both methods), with the hormonal IUD increasing more dramatically (from 34% to 58%). Not surprisingly, IUDs were more readily available in reproductive health-focused clinics (72%) as compared with primary care-focused clinics (55%). Finally, Kavanaugh, Ethier, Jerman, & Moskosky (2013) surveyed directors from a nationally representative sample of approximately 1200 federally funded family planning clinics to assess the provision and accessibility of contraceptive services for young people in particular, finding that the majority (82%) provided the IUD onsite, primarily made possible through direct purchase of the device from the manufacturers. As other researchers have found, centers that received Title X funding and those with a reproductive health focus were more likely to report

onsite IUD dispensing, as compared with other delivery modes (e.g., prescription-only). Additionally, differences regarding availability of the IUD reflect the distribution of payor by type of practice and funding source. Findings from the NSFG demonstrate that insurance coverage appears to play a role in IUD prevalence, with Medicaid and uninsured individuals reporting greater use of the method as compared to privately insured patients (Finer, Jerman, & Kavanaugh, 2012). From 2002 to 2009, there was a marked increase in reported IUD use among privately insured women (1.9% and 7%, respectively), but disparities remain among private, Medicaid, and uninsured women in 2009 (private: 7.1%; Medicaid: 11.5%; none: 8.1%). Xu, Macaluso, Ouyang, Kulczycki, & Grosse (2013) conducted a retrospective analysis of annual IUD insertion rates between 2002-2008 using nationally representative claims data from US women 15-49 years of age with employer-sponsored insurance plans that covered IUD insertions. Over the specified time period, IUD insertion rates increased from 1.6/1000 women of reproductive age to 9.8/1000, though substantial variations were observed by state. Insertion of the levonorgestrel IUD largely drove the increase in insertions. Insertions increased at about the same rate across all age groups, although the increase was the largest among 25-34 year old women (from 3.1/1000 to 17.9/1000). Additionally, the Affordable Care Act (ACA) is also likely to have a considerable impact on access and potential increased uptake of IUDs as the law allows, or will in the near future, many American women to obtain IUDs without cost-sharing under the provision to offer Women's Preventative Services (U.S Federal Register, 2013). However, in a recent analysis of changes in consumer cost-sharing for family planning methods, Finer, Sonfield and Jones (2013) called for more rigorous oversight and enforcement of the no-cost sharing provisions of the ACA to ensure that the intention to increase access to contraceptives is realized, especially for methods like the IUD.

The IUD Taskforce's Policy Workgroup has also developed a white paper on Medicaid reimbursement of IUDs in New York State which may be of interest.

The document will be accessible at: http://www.iudtaskforce.org/resources_and_tools/iud-taskforce

Clinician-Level Factors [influencing availability]

Provider knowledge, attitudes, and behaviors regarding counseling and offering the IUD are a significant influence on IUD use, with numerous factors associated with recommending this method. Dehlendorf, Grumbach, Vittinghoff, Ruskin, & Steinauer (2011) conducted an RCT to explore the effects of race/ethnicity and socioeconomic status (SES) of patients on providers' recommendations for an IUD. Providers viewed videos of standardized patients with differing demographic characteristics (race/ethnicity, education, and current job) and gynecologic history (e.g., history of PID, previous birth vs. nulliparous) who were seeking contraceptive counseling/services and afterwards were asked if they would recommend the levonorgestrel IUD to them. The profile for all patients was a 27 year-old in a monogamous relationship not seeking to become pregnant for several years with normal blood pressure, a negative GC/CT test, normal Pap test, and health insurance that would cover all contraceptive methods. The researchers found that low SES whites were less likely to receive a recommendation for the IUD than high SES whites.

Recommendations did not differ by SES for black and Latina patients. Additionally, low SES black and Latina patients were more likely to receive a recommendation than low SES whites. These patterns held only when patients did not have other perceived risk factors for IUD (nulliparity, previous history of PID). Potential reasons for these patterns included stereotypical perceptions about risk of infertility among low and high SES women and the ways in which these perceptions may play out differently for minority patients. Other studies have attempted to estimate the proportion of IUD inserting providers and identify characteristics associated with those who do/do not insert. A survey of 3500 family physicians conducted by Rubin, Fletcher, Stein, Segall-Gutierrez, & Gold (2011) found that providers who do insert IUDs had more knowledge and expressed greater comfort discussing them, and were more likely to believe that their patients were receptive to IUDs. Family physicians sampled were also more likely to currently insert IUDs if they inserted them during residency. Greenberg, Makino, & Coles (2013) found similar results in their survey of provider members of the Society for Adolescent Health and Medicine (SAHM) on respondents' self-reported provision of LARC methods and associated provider and practice-level characteristics. About one third of respondents reported the provision of LARC, with those providers having received residency training in obstetrics and gynecology or family medicine being more likely to do so. Exposure to procedural women's health training was the strongest predictor of LARC provision, particularly with regard to the IUD. In logistical regression models, practices in an urban location were also associated with LARC provision. Lastly, Kohn, Hacker, Rousselle, & Gold (2012) administered a knowledge and attitudes-based survey about IUDs to NYC school-based health center staff serving high school students from various disciplinary backgrounds. They found that about 50% of all respondents would recommend an IUD to a patient below the age of 20. Staff was less likely to recommend an IUD to patients with a history of a recent STD, earlier PID, and those who reported not being in a monogamous relationship, reflecting significant barriers for patient access due to misinformation about risks and incorrect beliefs about patient eligibility. While knowledge was high overall regarding the safety of IUDs for adolescents

and appropriateness of use in nulliparous women, providers' likelihood to recommend this method did not necessarily align.

Qualitative studies complement these quantitative findings and lend more insight into providers' attitudes about providing LARCs to specific subgroups of women, specifically adolescents and women having abortions. In depth interviews with 28 family physicians, pediatricians and ob-gyns in New York City revealed that enablers to IUD counseling and provision include knowledge that nulliparous adolescents are appropriate IUD candidates (capability) and opportunity factors, such as (1) a clinical environment supportive of adolescent contraception, (2) IUD availability in clinic, and (3) the ability to insert IUDs or easy access to an someone who can (Rubin et al, 2013). Factors enabling motivation include belief in the overall positive consequences of IUD use; this is particularly influenced by a physicians' perception of adolescents' risk of pregnancy and sexually transmitted disease. Focus groups of staff in six family planning centers who work with adolescent clients across the country indicated that common challenges to providing LARC-specific services to younger patients included extra time required to counsel young patients about LARC methods, outdated clinic policies requiring multiple visits to obtain IUDs, and a perceived higher removal rate among young women (Kavanaugh et al, 2013). In telephone interviews of 20 clinicians and 24 health educators at 25 abortion care practices across the country, respondents indicated that LARC methods often were not included in contraceptive counseling for women at high risk of repeat unintended pregnancy, including young and nulliparous women (Morse et al, 2012). Barriers to provision were usually expressed in terms of financial cost—to patients and clinics—and concerns about impact on the smooth flow of clinic procedures. Education and encouragement from professional colleagues regarding LARC, as well as training and adequate reimbursement for devices, were considered critical to changing clinical practice to include immediate postabortion LARC provision.

IUD Use in Certain Subgroups

Adolescent and Nulliparous Women

IUD use has historically been low among adolescent and nulliparous women for a variety of reasons; however, revised guidelines endorsed by the American College of Obstetrics & Gynecologists (ACOG) and the World Health Organization (WHO) strongly support the use of this method among virtually all women, including teens and women who have never given birth. Since 2002, IUD use among both groups has increased, though recent studies suggest that adolescents have experienced a larger increase overall. Using NSFG data from 2002 and 2006-2010 cycles, Whitaker, Sisco, Tomlinson, Dude, & Martins (2013) compared proportions of IUD use among sexually active women between the ages of 15 and 24 and performed logistic regression to identify factors associated with IUD use among this age group. IUD use increased among both younger (15-19) and older (20-24) adolescents, from .2% to 2.5% among the younger cohort and 2% to 5.4% among the older cohort for the years 2002 and 2006-2010, respectively; however, the increase noted in the younger cohort was entirely attributable to 18-19 year olds. Finer, Jerman, & Kavanaugh (2012) reported a similar though greater increase in LARC use among 15-19 year olds, from 1.5% in 2002 to 4.5% in 2009. Additionally, Whitaker et al. (2013) found that adolescents and young women reporting a previous birth and/or pregnancy were much more likely to report IUD use compared with nulliparous women. No significant increases in ever use of an IUD were observed among nulliparous women in the specified time period. IUD use also increased from 2002 to 2006-2010 among women with government-funded health care plans (e.g., Medicaid), from .9% to 9.8%. Young women with Medicaid/other government health insurance had increased odds of ever use of an IUD when compared with women with no insurance, but not to privately insured women. Young black women were less likely to report IUD use than white non-Hispanic women and all women whose mothers who received at least a high school education were more likely to report IUD use. A systematic review by Dean & Grimes (2009) found that continuation rates of IUDs at 1-year among adolescents range from 48% to 88%, with rates at 2-years ranging from 49% to 73%. As Peipert et al. (2011) and O'Neil et al. (2013) found, these rates are generally similar or better to those for oral contraceptives in available studies. Expulsion rates among adolescents vary widely in the literature as well, from 5%-22% over observation periods ranging from 6 to 48 months, although factors such as age, parity, and type of device were inconsistently controlled.

Young women's knowledge and attitudes about LARC methods may serve as barriers to their use. Kavanaugh et al. (2013) conducted in-depth interviews with clients ages 16-24 at six family planning centers across the country and found that one quarter of the young women perceived their young age as rendering them ineligible for LARC methods. Clients, most of whom had at least heard of the IUD, indicated that the "forgettable" nature of the methods and their duration were some of LARC's most significant advantages while fear of pain associated with both insertion and removal and negative side effects were disadvantages. In 18 focus groups of 106 young women ages 18-30 across a rural, Midwestern state, many felt that LARC methods were not appropriate methods for teens and erroneously believed that they were associated with infection and infertility (Spies et al. 2010). Respondents indicated that benefits associated with other contraceptives were not associated with LARC.

Continuation of the IUD among adolescents has been reported less frequently than among adult women in the available literature. Alton, Brock, Yang, Wilking, Hertweck, & Loveless (2012) examined the probability of IUD retention, associated differences between younger and older adolescents (below 18 and 18-21), and risk factors related to IUD removal, expulsion, and infection among this population over an 8-year period at three clinic sites (private, Title X, and community-based). Approximately 50% of the <18 women and 72% of the 18-21 group still had their IUD at 5 years. Those in the <18 group were more likely to have their devices removed or expelled. Additionally, nulliparous adolescent women were at higher risk of expulsion (though age independent of parity was not a statistically significant factor). While the continuation rate was lower among the <18 group, it was higher than reported OCP continuation rates among this age group.

Abortion Patients

The time immediately following an abortion procedure represents an important opportunity to discuss and make available a full range of highly effective methods, including IUDs; however, immediate post-abortion contraception is often not provided for a variety of reasons. A systematic review by Steenland, Tepper, Curtis, & Knapp (2011) evaluating the safety and effectiveness of IUD insertion immediately post-abortion found that it is not associated with an increased risk of negative outcomes when compared with no insertion and/or other contraceptive method use after the procedure or later IUD insertion. While low overall, IUD expulsion rates are higher with insertions that take place after abortions completed later on in the pregnancy (late first-trimester/second trimester as compared with early first trimester/first trimester). Several studies have attempted to demonstrate the relative impact of providing IUDs immediately following the procedure versus in a follow-up appointment. Bednarek, Creinin, Reeves, Cwiak, Espey, & Jensen (2011) conducted a randomized controlled trial (RCT) to determine whether women receiving an immediate versus delayed (2-6 weeks) post-abortion insertion for a procedure within the first trimester were more likely to have the device expelled and to assess continuation and repeat pregnancy rates for both groups. While the expulsion rate was slightly higher among the immediate insertion group at 6-months (5% versus 2.7%), it was not statistically significant. Continuation rates of the IUD were higher among the immediate insertion group (92% versus 77% for the delayed group), and the only subsequent pregnancies that occurred (n=5) were among the delayed insertion group, in women who never received the device (P=0.07). Lastly, Cremer et al. (2011) conducted a RCT to compare immediate versus delayed (2-4 weeks later) insertion of the Paragard IUD in women following a second trimester abortion in order to assess continuation of the method 6 months after the procedure, the proportion of subjects using other forms of contraception, repeat pregnancy, and expulsion rates. Women who received an immediate insertion were significantly more likely to have an IUD at 6 months compared to those offered an insertion 2-4 weeks after the abortion. Among those participants who did not receive a same-day IUD insertion, there were 8 repeat pregnancies. Additionally, satisfaction rates among women who received a same-day IUD insertion were high (91%) and the reported rate of expulsion was low (2.2%).

Postpartum Women

The postpartum period may also represent an ideal time during which to re/initiate contraception, with IUDs offering a convenient and highly effective reversible option while women are already using the health care system. Kapp & Curtis (2009) conducted a systematic review to determine whether available literature indicates an increased risk of adverse events (e.g., perforation, infection, pain, bleeding, and/or expulsion) associated with copper IUD insertion within 48 hours postpartum. No studies of levonorgestrel-releasing IUDs were identified. Evidence from the included studies, which varied in quality, indicates no increased risk of complications among women who receive an IUD insertion in the specified postpartum period; however, reported expulsion rates were higher among women who received a delayed postpartum insertion as compared to immediate insertion and the latter when compared to interval insertion. Additionally, lower expulsion rates were observed among women receiving an immediate insertion after cesarean delivery as compared with those who received an immediate insertion after a vaginal delivery. An earlier Cochrane review (Grimes, Schulz, Van Vliet, & Stanwood, 2002) attempted to evaluate the efficacy of IUD insertion within 10 minutes after placental expulsion using available literature. No RCTs that compared immediate postpartum insertion with delayed or interval insertion were available, though included studies demonstrated the safety and effectiveness of immediate postpartum insertion. Evidence from available studies also indicated that expulsion rates were higher among immediate postpartum insertions than with interval IUD insertion.

For a list of IUD essential reading visit: http://www.iudtaskforce.org/resources_and_tools/iud-taskforce

For further information, please visit our website: IUDTaskforce.org

Or email us at: IUDTaskforce@healthsolutions.org

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**For further information, please visit our website: IUDTaskforce.org
Email us at: IUDTaskforce@healthsolutions.org.**