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EDITORIAL

Urgent need to change clinical practices about postpartum contraception

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Abstract

In the United States, maternal mortality and unintended pregnancy rates are increasing. There are growing disparities in maternal health between indigent, minority women and Caucasian women of higher socioeconomic status. Family planning has long been viewed as a solution to these problems. As reliance on permanent contraception has diminished, timely access to highly effective contraceptive methods, namely long acting reversible contraceptives, which includes the contraceptive hormonal implant and intrauterine device - has become even more important. For women in the United States and abroad, the time of delivery is the one reliable opportunity for women to receive medical care. Consistently, research has shown that providing contraception in the immediate postpartum period is safe, effective, feasible and cost effective. However, misperceptions, lack of supplies, and reimbursement issues combine to defeat attempts to provide the most effective methods of contraception during that hospitalization. We believe that it is time to tackle the problem of unintended and rapid repeat pregnancy using an evidence-based, patient-centered paradigm and to eradicate systemic barriers blocking access to contraceptive methods during hospital stay. This editorial will outline some of the more compelling evidence supporting this move and will provide insights from successful programs.

Key words: Postpartum contraception; Long acting reversible contraception; Subdermal contraceptive implant; Intrauterine device; Unintended pregnancy

Core tip: The postpartum period is an ideal opportunity to initiate highly effective contraception, yet many women leave the hospital without any contraception. Provision of highly effective contraceptives, in parti-

cular long acting reversible contraceptives, such as intrauterine devices and contraceptive implants, is safe, desired, effective and cost saving. We review the need for immediate postpartum contraception and recommend changes within the medical system to facilitate this change.

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INTRODUCTION

For the last three decades, the overall unintended pregnancy rate in the United States has been nearly constant at 50%. The 2014 estimate demonstrates that the overall rate has increased to 51%, but that greater disparities exist today than ever before. The rate of unintended pregnancy has declined to 34% among women of higher socioeconomic status (SES), but has increased to 62% among women of lower SES[1,2]. Unintended pregnancies can have severe health and economic consequences for both the mother and her fetus[3]. This is perhaps most notable among women with rapid repeat pregnancies (defined as a pregnancy 12-18 mo after delivery), which is linked to increased maternal and child morbidity and mortality[4-9]. Pregnancy rates within one year of delivery range from 6%-40% depending on the population studied, and are particularly high among adolescents[10-12].

The provision of highly effective contraception in the postpartum period serves as a partial solution to the problem of unintended pregnancy and is uniquely able to drastically reduce rapid repeat pregnancy rates. Traditionally, the only contraception offered in the immediate postpartum period has been tubal ligation or progestin only pills. This is because it has been assumed that couples will remain abstinent for at least 6 wk, as instructed by the obstetrician. The more highly effective, reversible methods of contraception typically are not offered until the six week postpartum visit. The timing of this postpartum visit itself is anachronistic; it was designed to ensure the cervix and vagina had normalized so that the women could have a pap smear and a diaphragm fitting[13]. Unfortunately, clinging to this outdated standard creates barriers to accessing effective contraceptive methods and increases the risk for unintended pregnancy for several reasons. First, up to 35% of postpartum women (often the most vulnerable ones) do not return for postpartum care[11,12]. This is due often to changing insurance status. (In the United States, prenatal care, delivery and postpartum care up to 6 wk post-delivery are covered universally for low income citizens. For undocumented residents, however, only delivery care is covered generally). Among those who do present, other barriers are often encountered, such as need to order long acting reversible contraceptives (LARC) devices (which necessitates yet another visit for placement) and lack of enthusiasm on the part of physicians. Surveys of practicing obstetrician/gynecologists and family physicians consistently show a lack of knowledge of LARC, specifically regarding intrauterine device (IUD) placement[14-17]. It is not surprising that only a fraction those desiring LARC actually receive LARC at this visit[11,18]. Indeed, Potter found that while 25% of women desired LARC postpartum, only 12% actually were able to initiate LARC within 6 mo of delivery[18]. This disconnect mostly affects women of lower socioeconomic status and women who lost insurance coverage. Finally, even if women manage to present for postpartum care and are offered effective contraceptives, the visit may be too late for some women - as ovulation may return as early as 25 d postpartum for nonbreastfeeding women[19] and many couples do not observe the recommended 6 wk of abstinence postpartum[20,21].

Provision of contraception in the immediate postpartum period has the potential to solve these problems. We hope to generate greater support for this practice by demonstrating the safety, effectiveness, patient satisfaction, and cost effectiveness of immediate initiation of top tier contraceptive methods.

IMMEDIATE POSTPARTUM CONTRACEPTION IS SAFE

The World Health Organization (WHO) and the Centers for Disease Control and Prevention (CDC) have provided clear guidance regarding the safety of immediate postpartum contraception. All progestin only methods are Category 1 (no contraindication) in nonbreastfeeding women and Category 2 (benefits outweigh risk) in breastfeeding women. Only combination methods containing estrogen are unsafe for at least 21 d postpartum due to associated risk for venous thromboembolic event (VTE)[22-24]. For women with known risk factors for VTE, initiation of combination hormonal methods should be delayed even longer until 42 d.

Frequently, breastfeeding women have been denied immediate postpartum hormonal contraceptive methods due to concerns about decreasing milk supply and/or passage of hormone into the breast-milk. Multiple studies have demonstrated that progestin only methods, including Depot Medroxyprogesterone Acetate (DMPA) and the etonogestrel implant do not delay lactogenesis[25], impede milk production[26] or adversely impact overall breastfeeding continuation rates and success[20,27,28]. Moreover, infant growth and development is not affected by hormonal contraceptives, even when provided in the immediate postpartum period[25]. The levonorgestrel (LNG) IUD is less well studied. One small study suggests that

breastfeeding rates are lower among women receiving immediate postplacental LNG IUD compared to delayed insertion, though this was a secondary analysis of data designed to evaluate IUD continuation rates[12]. There are not data regarding infant growth and development with use of a LNG IUD placed immediately postplacental. However, given that the systemic dose of progestin is significantly lower with either DMPA or the entonogestrel implant, there is little basis for concern about any adverse impact the LNG IUD could have on infant growth and development.

The placement of intrauterine devices in the immediate postpartum period (within 10 min of placental expulsion) has been shown to be safe by many metrics. Immediate postplacental IUD placement has been researched in multiple settings internationally and with multiple types of IUDs, including Lippes Loops, Delta T, Delta Loop, Gyne T, CuT380A and LNG IUD[29-39]. These studies consistently show there is no increased risk of infection with immediate postplacental placement, though women diagnosed with chorioamnionitis, chlamydia or gonorrhea in pregnancy without evidence of a negative test of cure, or ruptured membranes for more than 24 h are not candidates for immediate postplacental IUD due to infection risk[23,34,37]. No increase in perforation rates has been reported when compared to interval insertion at 6-8 wk postdelivery[37]. Postpartum pain and bleeding also do not differ when comparing women receiving immediate postplacental IUDs and women receiving no contraceptive method[34].

The risk of expulsion with postplacental IUD insertion is higher than seen with interval insertion at 6-8 wk postdelivery. The reported expulsion rate varies significantly in the literature, ranging from to 0.3% to 24%[30,32-39]. This increased risk of expulsion appears to depend on mode of delivery and interval between placental delivery and IUD placement. Studies of IUDs placed immediately after a vaginal delivery show expulsion rates of 20%-24%[31,34,36]. When the IUD is placed at the time of a cesarean section, expulsion rates are typically lower (0.3%-5%) and similar to those seen with interval placement at 6 wk postpartum[29,34,36,40]. Additionally, placement that occurs greater than 10 min after delivery of the placenta is associated with higher rates of expulsion than placement less than 10 min after placental delivery[31,41,42]. These findings appear consistent across multiple types of IUDs, indicating that the question of which IUD to place should be made based on patient preference and IUD availability. While the risk of expulsion may be higher with immediate postplacental IUD insertion, this risk must be weighed against the patient's risk of not returning for interval insertion. For many women with minimal access to care, the expulsion risk is worth taking. While specialized training is needed to place IUDs in the immediate postpartum setting, short didactic sessions with residents have demonstrated excellent outcomes[43].

The placement of contraceptive implants in the postpartum period is more straightforward. The implant can be inserted at any time during the hospital stay. The insertion technique and associated risks with placement in the immediate postpartum period are no different than those associated with interval placement.

PROVISION OF IMMEDIATE POSTPARTUM CONTRACEPTIVES PREVENT RAPID REPEAT PREGNANCY

Multiple studies demonstrate that contraceptive continuation rate at 6 mo and at one year post-delivery are higher among women who received LARC in the immediate postpartum period than in women who receive delayed LARC placement at the six week postpartum visit[29,35,37,44,45]. More impressive is the data demonstrating that provision of immediate postpartum contraceptive implants decreased repeat pregnancy rates at one year postpartum, despite the fact that 14% had discontinued the implant at 12 mo postpartum[10]. When evaluating women who wanted permanent contraception in the immediate postpartum period, women who did not undergo a tubal ligation had higher rates of pregnancy when compared to women who did not desire permanent sterilization postpartum despite both groups having similarly low attendance at the postpartum visit[46].

WOMEN ARE SATISFIED WHEN PROVIDED IMMEDIATE POSTPARTUM CONTRACEPTION

Women who receive immediate postpartum contraception are as satisfied or more satisfied with their methods than women undergoing delayed insertion[29,39]. When using the continued use of contraceptive method as a marker for patient satisfaction, we likewise find that more than 80% women receiving immediate postpartum LARC continue using it a year after placement[35,37,44,45]. This is significantly higher than the approximately 50% continuation rate for combination oral contraceptive pills[47]. Less is known about the continuation rates of DMPA when provided in the immediate postpartum period. Finally, contraceptive side effects occur at equal rates when comparing immediate and delayed postpartum contraception initiation[48].

IMMEDIATE POSTPARTUM CONTRACEPTION IS COST EFFECTIVE

Provision of contraception has consistently been shown to be cost effective. Recently, two separate studies have found that immediate postpartum contraception is not only cost effective, but it is cost saving. Han *et al*[49] found that every dollar spent to provide immediate postpartum etonogestrel implants to adolescents saved $6.50 within two years post-delivery. These findings factored in a high discontinuation rate (14%)

among those receiving the implant in the immediate postpartum period and still noted cost savings by providing immediate postpartum implants. Washington *et al*[50] looked at immediate postplacental IUD placement and found a cost savings of $282540 per 1000 women over 2 years. Perhaps more interestingly, these cost savings persist even if the expulsion rate of immediate postplacental IUDs is inflated to 38%.

WHY THE DELAY?

The medical evidence regarding health, safety, cost and patient satisfaction supports the use of immediate postpartum contraception. Yet, several barriers prevent the wide adoption of immediate postpartum contraception. In many locations, access to contraceptives and access to healthcare providers trained to provide contraceptives limits the ability to provide this service. Additionally, as many hospitals are owned by religiously affiliated organizations, there are more restrictions placed on what contraceptives, if any, may be provided to women. From an ethical perspective, every woman considering her delivery hospital options should be informed during her prenatal care of any deliberate institutional policies that would prohibit her access to postpartum contraception. Failure to do so is equivalent to sending a trauma victim to a hospital without emergency services. Regarding permanent contraception, women receiving state or federally funded health coverage must sign consents for the procedure at least 30 d in advance. Again, this presents a great challenge for women lacking access to routine health care as it requires not only that the patient have initiated prenatal care early in pregnancy, but also that her provider discussed contraception, including sterilization, in a timely manner. Additionally, the delivering provider must have a copy of this consent at the time of delivery in order to provide sterilization. Finally, the surgical staff must available and willing to provide the procedure. These logistical challenges reduce the chances a women will obtain a tubal ligation. Research shows only 54% of women requesting postpartum tubal ligation obtain the procedure. Of those that did not undergo tubal ligation, 37% identified problems with informed consent paperwork as the reason[51,52]. Perhaps the greatest barrier to the provision of immediate postpartum contraception is the lack of reliable hospital reimbursement. Most insurance companies in the United States reimburse for prenatal care, delivery and postpartum care as a global package. This ensures that, while tubal ligations are covered by insurance during the inpatient stay, any LARC device placed during hospitalization is not covered by insurance companies. Indeed, only placement in the outpatient setting during the postpartum visit is reimbursable.

Change within the healthcare system is difficult and slow, but it is possible. Two barriers in particular seem ripe for transformation. First, medical providers are being better educated about both the safety of immediate postpartum contraception and the actual technique of providing postplacental IUDs. Contraceptive implants require only that the provider undergo a brief 2-3 h training course for certification. As referenced above, surveys demonstrate there is still a lack of knowledge among providers and their staff regarding LARC, but there has been improvement. More recent graduates generally are more knowledgeable about immediate postpartum contraception and LARC. Clinicians will need to remember to include counseling on contraception, including sterilization, during prenatal visits so that a plan can be in place for each patient at the time of delivery. Second, the payment scheme for delivery needs to be altered to allow hospitals to be reimbursed for immediate postpartum contraception. This has been accomplished in eleven states in the United States by creating a separate Medicaid billing code for immediate postpartum contraception coverage.

CONCLUSION

The evidence clearly demonstrates the need for improving the provision of immediate postpartum contraception, given its safety, high continuation rates, low failure rates and high satisfaction. Most importantly, providers need to be vocal advocates. We need to advocate for what is right for the patient and eliminate outdated practices that are clearly inferior. We need to press for immediate postpartum contraceptive coverage by all third party payors in all states so that women can receive the best care regardless of where they live and what insurance they have.

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