

Improving women's access to injectable contraceptives

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Injectable contraceptives are among the most reliable forms of birth control. They have gained popularity as a preferred contraceptive method by women in sub-Saharan Africa. But unfortunately, women who choose injectable contraception are less likely to continue using their method than women who choose some other forms of birth control.

The most common injectable contraceptive is depot-medroxyprogesterone acetate (DMPA). Why do so many women stop using it? According to a study conducted by the World Health Organization (WHO), a third of first-time users stopped using DMPA because of side effects.¹ In most women DMPA causes menstrual changes, such as prolonged or irregular bleeding or amenorrhea. Other side-effects are weight gain, headaches, dizziness, and mood changes. About 90% of DMPA users report at least one side-effect during the first year of use.

However, side-effects alone do not explain DMPA's low continuation rates in sub-Saharan Africa. Injectable contraceptives generally are at a disadvantage, because of the way healthcare providers manage requests for reinjection by women who are late for their follow-up appointments.

Injectable contraceptives may have adverse effects on fetal development, so a healthcare provider must be sure that a client is not pregnant when she receives an injection. Clinics in low-resource settings typically lack adequate stocks of pregnancy tests. For this reason, when a client arrives late for a reinjection, the provider is likely to tell her that she must wait until her next menses. Of the significant proportion of women who are late for appointments and are denied reinjection, many never resume the method.

New research shows that it is extremely unlikely that a woman who misses her appointment will become pregnant during the 4 weeks after the date her reinjection was due. Given this finding, WHO recently revised its recommendation for reinjection of DMPA.

In April 2008, WHO extended the length of the so-called 'grace period' – the time during which a woman may safely receive a 'late' injection – to 4 weeks. The new best practice for DMPA is that a woman can receive an injection up to 4 weeks after (or 2 weeks before) her scheduled reinjection date.² This modification should make it easier for women to continue using injectable contraceptives.

Injectables: safe and easy to use

Various forms of injectable contraceptives have been available for more than 20 years. These long-acting drugs are administered intramuscularly, and they prevent pregnancy

by suppressing ovulation and by thickening the cervical mucus for up to 3 months per injection.

Injectables fall into two categories: a progestin-only version and a combined form that contains estrogen and progestin. The progestin-only form, which is the most popular, requires reinjection every 2 or 3 months, depending on the product.

Two forms of progestin-only contraceptives are available: norethisterone enanthate (NET-EN) and DMPA. About 14 million women worldwide use DMPA as their primary family planning tool.³

DMPA is favoured over other methods because it is inexpensive, easy to use, and relatively noninvasive. It does not require a daily routine, and it frees a woman from having to protect herself against pregnancy at the time of sexual contact. Extensive research has confirmed this method's safety and also its reversibility. (Although DMPA delays a woman's return to fertility by an average of 10 months after her last injection, it does not render her permanently infertile.)

Not only nurses and physicians but also pharmacists and trained community health workers can administer DMPA injections safely, in settings as informal as a patient's home.⁴ This flexibility is unusual among provider-controlled methods of contraception.

Late becomes never

Despite the method's advantages, low rates of continuation persist. Most research on the use of injectable contraceptives has assumed that women who stop using the method do so by choice. But new research by scientists at Family



A community-based family planning worker in Madagascar is being trained to provide the injectable depot-medroxyprogesterone acetate (DMPA).

Health International (FHI) suggests that providers play an important role.

In 2005, FHI conducted a cross-sectional survey of 1042 users of injectable contraceptives at 10 public health clinics in South Africa. Researchers examined the discontinuation of DMPA by women who favoured the method but who arrived late for their scheduled reinjections.⁵

The scientists found that women in the survey had been given little information about the consequences of being late for reinjection. Perhaps as a result, between 29% and 42% did arrive late – regardless of whether they lived in a rural or urban setting. Almost all of these women (even those who were late by more than 2 weeks) expected to receive a reinjection the day they saw their providers. Two-thirds of the women who were late for their reinjections were denied – a figure that includes those who were within the 2-week grace period recommended by WHO at that time. The survey found that providers told none of the women they turned away about the grace period.

FHI's study reveals that provider practices were, in one way or another, affecting the continuation rates of women who wished to use the method. Part of the problem may have been logistical barriers to following WHO's 2004 *Selected Practice Recommendations for Contraceptive Use*. These recommendations advised the provider to give an injection to a woman who was up to 2 weeks late for her appointment, but cautioned that the provider should first rule out pregnancy for a woman who returned after the 2-week grace period.

Ruling out pregnancy can be a stumbling block in places where pregnancy tests are scarce. In these situations, a provider is likely to tell a client who is late for her appointment to return during her next menses, often without providing an alternative contraceptive. But many women have to wait as long as 6 months or more before they menstruate, because of the unpredictable effects of injectables on the menstrual cycle.² Some of these women simply abandon the method altogether.

Extending grace

Although healthcare providers are concerned about pregnancy in women who return late for reinjections, the probability that a woman will become pregnant in the first 4 weeks after her reinjection appointment is extremely low.

In 2008, researchers at FHI published a study that examined the use of DMPA among 2290 women in Uganda, Zimbabwe, and Thailand. Some women were late for their reinjections, so the scientists were able to compare the risk of pregnancy for different reinjection intervals. (DMPA's manufacturer recommends reinjection every 13 weeks.) The study found no pregnancies in the 2-week

window following week 13, and only one pregnancy was recorded when the window was expanded to 4 weeks. No pregnancies were recorded between weeks 18 and 26, either – not surprising, because ovulation often returns later for women who stop using injectables. The authors concluded that extending WHO's current grace period for reinjection of DMPA from 2 to 4 weeks would not increase the risk of pregnancy.⁶

In response to the results of this study (and others), WHO convened an expert working group in April 2008 to review the existing guidelines for the provision of injectable contraceptives. Forty-three participants from 23 countries examined systematic reviews of evidence from the most recent research and ultimately published an update to the guidelines. The recommendation on the grace period for reinjection of DMPA was changed from 2 weeks to 4 weeks. (It is important to note that the updated guidelines do not extend the routine interval between DMPA injections.)

The guidelines also state that even if a woman is more than 4 weeks past her scheduled appointment, she can receive an injection if the provider is reasonably sure that she is not pregnant. A woman can be assumed not to be pregnant if she has not had sex at all, if she has been using condoms consistently and correctly in the 4 weeks since her scheduled reinjection date, or if she is fully breastfeeding a child who is younger than 6 months and she has no menses.⁷

References

1. Said S, Omar K, Koetsawang S, et al. A multicentred phase III comparative clinical trial of depot-medroxyprogesterone acetate given three-monthly at doses of 100 mg or 150 mg: I. Contraceptive efficacy and side effects. *World Health Organization Task Force on Long-Acting Systemic Agents for Fertility Regulation. Special Programme of Research, Development and Research Training in Human Reproduction. Contraception* 1986; 34: 223–35.
2. World Health Organization (WHO). *Selected Practice Recommendations for Contraceptive Use*. Geneva, Switzerland: WHO, 2008.
3. Family Health International (FHI). *Injectable Contraceptives. Contraceptive Technology and Reproductive Health Series*. Research Triangle Park, NC: FHI, 2008.
4. Stanback J, Mbonye AK, Bekiita M. Contraceptive injections by community health workers in Uganda: a nonrandomized community trial. *Bull World Health Organ* 2007; 85: 768–73.
5. Baumgartner JN, Morrioni C, Mlobeli RD, et al. Timeliness of contraceptive reinjections in South Africa and its relation to unintentional discontinuation. *Int Fam Plann Perspect* 2007; 33: 66–74.
6. Steiner MJ, Kwok C, Stanback J, et al. Injectable contraception: what should the longest interval be for reinjections? *Contraception* 2008; 77: 410–14.
7. World Health Organization Department of Reproductive Health and Research (WHO/RHR) and Johns Hopkins Bloomberg School of Public Health/Center for Communications Programs (CCP), INFO Project. *Family Planning: A Global Handbook for Providers*. Baltimore, MD and Geneva, Switzerland: CCP and WHO, 2007.

Web resource

<http://www.inforhealth.org/injectables>

The *Injectables Toolkit*, maintained by the INFO Project at the Johns Hopkins Bloomberg School of Public Health, offers evidence-based information and guidance on injectable contraceptives for healthcare providers and other health professionals.



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