Providing intrauterine devices to women at risk of sexually transmitted infections

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Concerns about infection and infertility have surrounded the use of the intrauterine device (IUD) for many years. Although recent rigorous studies have largely shown that these concerns are unfounded, health care providers in some parts of the world—especially where sexually transmitted infections (STIs) are common—have been reluctant to provide IUDs because of difficulties in testing or screening women for STIs.

A simple, new algorithm may help providers identify women who live in areas of moderate to high STI prevalence, but who are at low risk of STIs, and therefore may be good candidates for IUD use. Although the algorithm was developed and validated based on data from a range of countries, it may not be perfectly suited for every setting. Local health officials may wish to tailor it to their local contexts, if resources are available.

Reviewing the research

STIs, particularly chlamydial infection and gonorrhea, are the main preventable causes of infertility. These diseases typically attack the inner lining of the cervix first. If untreated, they can ascend to the upper genital tract by moving through the uterus to the fallopian tubes and, in some women, to the ovaries and abdominal cavity. Infection of the uterus, fallopian tubes, or ovaries—also known as pelvic inflammatory disease (PID)—can block or damage the fallopian tubes, causing infertility.[1]

The concern that IUDs are associated with PID has remained a barrier to IUD use, in part because of findings from flawed studies in earlier decades. However, these studies were later found to have strong biases that distorted their results. Reproductive health experts now agree that use of the IUD, by itself, appears to have no significant effect on PID or subsequent fertility.[2]

A recent systematic review of 365 articles related to IUDs, STIs, and PID identified six studies—including two from Africa—that specifically determined rates of PID in women with an STI versus women without an STI at the time of IUD insertion.[3] Rates of diagnosed PID were higher among women with chlamydial infection or gonorrhea than among those without these cervical infections at the time of insertion. However, the risk was minimal in both groups (ranging from 0% to 5% among women with an infection versus 0% to 2% among women without an infection). The difference between groups was statistically significant in only two of the six studies.

In 2003, an expert working group reviewed these findings to help evaluate the World Health Organization's medical eligibility criteria for use of the copper IUD. These evidence-based international guidelines were updated in 2004, but the recommendation that women with chlamydial infection, gonorrhea, or purulent cervicitis not have an IUD inserted remained the same.[4]

Other medical eligibility criteria for IUD use in the context of STIs were revised in 2004. For example, although IUD insertion was not usually recommended for women

Table 1 World Health Organization guidelines for use of the copper intrauterine device in the context of sexually transmitted infections

Condition	Category for initiation	Category for continuation
Current chlamydial infection, gonorrhea, or purulent cervicitis	4	2
Other sexually transmitted infection (excluding HIV and hepatitis)	2	2
Vaginitis (including trichomoniasis and bacterial vaginosis)	2	2
Increased risk of sexually transmitted infections	2/3*	2

Categories: 1=no restriction for use; 2=method may be generally used, as the advantages of use generally outweigh the theoretical or proven risks; 3=use not usually recommended unless more appropriate methods are not available or acceptable, as the theoretical or proven risks usually outweigh the advantages of use; 4=method should not be used.

*Specific category depends on the level of individual risk of a sexually transmitted infection.

Adapted from: World Health Organization. *Medical Eligibility Criteria for Contraceptive Use*. Third edition. Geneva, Switzerland: Reproductive Health and Research, World Health Organization, 2004.

at increased risk of STIs in the past, current guidelines recommend that initiation only be restricted if a woman's individual risk of STIs is high (see Table 1).

Defining levels of risk

Scientists at Family Health International have developed and validated a simple algorithm that can be used to determine a woman's level of STI risk, and so determine whether she is a good candidate for the IUD.[5]

Screening women for STIs can be problematic in settings where diagnostic laboratory tests are unavailable or too costly. In the past, authorities have recommended that providers in these settings use simple algorithms based on clinical symptoms to help detect symptomatic STIs. Although these algorithms have been useful in some circumstances, this syndromic approach has not been very effective for detecting cervical gonorrhea and chlamydial infections because these infections are often asymptomatic in women.[1]

The new algorithm differs from earlier screening approaches in several important ways. First, it was designed to identify appropriate candidates for IUD use, so its primary goal is to distinguish women at low risk, rather than high risk, of STIs. And it is based on criteria that providers can pinpoint by simply talking with clients, rather than by performing a clinical examination. The algorithm also differs from many others in that it was developed and validated with data from different regions.

The algorithm was developed from data gathered from contraceptive users living in areas with a moderate to high prevalence of STIs in Kenya, Zimbabwe, Jamaica, and the United States. The scientists identified five characteristics that predicted risk of chlamydial infection and gonorrhea among these women: (1) being younger than 25 years, (2) living apart from a sexual partner, (3) having less than a secondary school education, (4) recent bleeding or spotting between periods or after sex, and (5) having had recent unprotected sex with one or more partners.

A simple checklist allows providers to ask the right questions during a clinical interview to determine which of the five characteristics describe a client. The client's answers determine whether she has a low, moderate, or high risk of having an STI. In general, clients with more characteristics are more likely to have an STI.

The algorithm was validated using data from contraceptive users in Uganda and Thailand. It worked well at predicting women with a low risk of cervical infection—generally, those with a probability of infection below 5%. In Uganda, for example, the overall prevalence of cervical infections was about 4% in the population studied. However, only about 1% of women determined to be at low risk of STIs (compared with 8% determined to be at high risk) actually had a cervical infection confirmed by laboratory testing.

In clinical practice, providers should feel comfortable offering a woman an IUD or referring her for IUD insertion if the algorithm determines that she is at low risk of a cervical infection. A woman considered to be at high risk can be given prophylactic antibiotics at the time of IUD insertion, be presumptively treated for an STI and then offered an IUD, or be counselled to use another contraceptive method, depending on her access to medication. Care for a woman at moderate risk should be individualised depending on the background prevalence of cervical infections in her area.

Tools for providers

http://www.fhi.org/en/RH/Pubs/servdelivery/checklists/iud/index.htm
The *Checklist for Screening Clients Who Want to Initiate Use of the Copper IUD* is based on the World Health Organization's medical eligibility criteria, which can be used to identify women who can safely initiate IUD use. This checklist can be used in any setting. It addresses all conditions that are relevant for IUD insertion.

http://www.maqweb.org/iudtoolkit/
The *IUD Toolkit*, created by members of the U.S. Agency for International Development's Maximizing Access and Quality Initiative, is a comprehensive resource including evidence-based information, guidance on best practices, and tools related to the IUD.

References

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