

Intrauterine Devices (IUDs)

Suggested Narrative

Note to presenter: Use this opportunity to make any comments before beginning the presentation. Introduce yourself and the topic and be sure to let the audience know how you would like to structure the discussion (i.e., take questions during the presentation or hold them until the end). There are several additional notes to the presenter that appear in the narrative. These notes of clarification may be of use to your audience.

Slide 1

Introduction

This presentation offers an overview for family planning providers of the intrauterine device, or IUD. The goal of this presentation is to offer the most current scientific knowledge available on IUDs. With this knowledge providers, in turn, can help each family planning client make a voluntary, informed choice about the contraceptive method that is best for her. The presentation is not intended to be a substitute for training on how to insert IUDs or manage IUD complications, even though both of these subjects are briefly discussed.

After a brief introduction, the presentation is divided into three sections. First, there is an overview of IUDs; second, there is a section on client screening and counseling; and third, there is a discussion of IUD insertion guidelines and the management of side effects and complications. ■

Slide 2

IUD/IUCD Use

The IUD, also known in some places as the intrauterine contraceptive device or IUCD, is one of the world's most widely used family planning methods. It is the second most commonly used form of contraception, ranking second only to female sterilization. The IUD is the most commonly used form of reversible contraception. As shown in this slide, about 100 million women worldwide use the IUD for fertility control. Currently, sixty-seven percent of IUD users live in China. However, IUD acceptance is growing in other parts of the world. ■

Slide 3

IUD Safety

Although the IUD is an effective contraceptive method, many clients and providers remain reluctant to accept it due to lingering safety concerns. Recent research shows, however, that modern IUDs are safe and effective when providers follow important guidelines for client selection and insertion. The elements that are crucial in providing high quality care for IUD use include: appropriate screening, informative counseling, adequate infection prevention measures during insertion by a well-trained and experienced provider, and proper follow-up care. ■

Slide 4

Overview of IUDs

Included in this overview is information on different types of IUDs, their mechanisms of action, IUD characteristics, and ways to reduce risks of possible complications. Specifically, we will discuss the risks of pelvic inflammatory disease, perforation of the uterus, ectopic pregnancy and expulsion. ■

Slide 5

Early IUDs

The first IUDs were developed at the beginning of this century, although widespread acceptance has only occurred in recent decades. Modern IUDs have been used widely since the 1960s and have been modified and redesigned to improve their safety and →

efficacy. As this slide shows, IUDs have been developed in various shapes and sizes and made from various types of materials, including plastic and stainless steel. Many women continue to use some of these older devices successfully, such as the Lippes Loop and the Chinese stainless steel ring, with some remaining in place until menopause. ■

Slide 6

Copper IUDs

This slide shows some of the newer copper IUDs in current use. IUDs are generally characterized in two ways — by their shape and by the materials from which they are made. In the late 1960s, researchers found that adding copper to the plastic frames made IUDs safer and more effective than earlier devices. The copper released into the uterine cavity increases the contraceptive efficacy of the IUD. These newer IUDs are smaller, cause fewer side effects, and are less likely to be expelled than most of the older versions.

Most IUDs being inserted today are shaped like a T with copper wires or bands on the plastic stem and arms. The TCu 380A is currently one of the most widely distributed copper IUDs in the world.

Although some older IUDs are still being used in parts of the world, this presentation will focus on the newer copper-releasing IUDs. At the end of the presentation, we will briefly discuss two IUDs that release hormones instead of copper. ■

Slide 7

Mechanisms of Action of Copper IUDs

All the mechanisms of action of copper-bearing IUDs are still not completely understood. However, researchers believe that the main mechanism of action of copper-bearing IUDs is the prevention of fertilization. The presence of the IUD in the uterine cavity creates a local inflammatory reaction that appears to prevent sperm from reaching the fallopian tubes. In addition, copper-bearing IUDs release →

copper inside the uterus and the fallopian tubes, enhancing the debilitating effect on sperm. Studies have generally found that sperm are not as viable among IUD users, compared to other women.

Originally, it was thought that IUDs produced changes in the uterus that either destroyed a fertilized egg or prevented a fertilized egg from implanting in the uterus. However, it appears that the IUD effectively interrupts the reproductive process before implantation by preventing fertilization. The evidence suggests that fewer sperm reach the site of fertilization in women using IUDs than in women who are not using the device, and, for women using copper devices, the sperm may not be able to fertilize the egg. In two studies of women using mainly copper IUDs, there was evidence of fertilization in less than 1 percent of their cycles. In those few cases where fertilization does occur, the IUD may prevent pregnancy by interfering with implantation in the uterine cavity. However, in most cases the evidence has shown that copper IUDs act prior to fertilization. ■

Slide 8

Contraceptive Failure Rates

Copper-bearing IUDs are among the most effective contraceptive options available. In particular, users of the TCU 380A experience very low failure rates, only about one percent. This slide shows the difference in contraceptive failure rates for different contraceptive methods. For each method the left-hand point, indicated by the yellow rectangles, shows how effective a method can be when used both correctly and consistently. The right-hand point, indicated by the red rectangles, shows how effective the method is during actual or typical use. This typical use rate is based on results from studies done in the United States among what are considered to be typical users. Typical users include those who may or may not use the method correctly and consistently. ➔

As can be seen on the slide, the difference between the rates for correct and consistent use and typical use is greater for some methods than for others. For methods such as oral contraceptives and condoms there is a greater difference between the two rates. This is because these methods depend heavily on the user receiving adequate instructions so that they are able to use the method correctly and consistently. For other methods, such as sterilization and injectables, the two rates are the same because they are less influenced by other factors. There is very little difference between the two rates for users of the TCu 380A. The very few pregnancies among IUD users can be due to several factors. These include the skill of the person to insert the IUD correctly, the age of the user and unnoticed expulsion of the IUD. ■

Note to presenter: Failure rates vary from country to country because they are dependent on many factors. Thus, studies report varying rates and it is impossible to calculate one precise rate for any method. The three main factors that influence the effectiveness of any contraceptive method include the inherent effectiveness of the method itself, programmatic issues, and whether or not the method is used correctly and consistently by users. Correct use is dependent not only on the user, but is influenced by a variety of programmatic factors. To facilitate correct and consistent use of any contraceptive method, programs must offer a variety of contraceptive options with adequate counseling for clients and proper follow-up care. Clients must also receive complete and instructive information on how to use the method, and on the importance of correct and consistent use. Some methods depend greatly on the technical competence of the provider to administer the method properly. All methods must also be accessible and affordable to the user.

Slide 9

Comparison of Copper IUDs

As seen on the previous slide, failure rates vary widely among different contraceptive methods. There is also variability among different types of the same method. For example, as this slide shows, copper IUDs being distributed at this time are very effective. However, the TCu 380A has shown the lowest →

pregnancy rate of any copper IUD in comparative trials. In FHI clinical trials, failure rates for any of these five IUDs were less than 4 percent after one year of use. However, failure rates among the average population may be slightly higher.

Note that each IUD has a recommended lifespan. This means that the IUD is effective for up to a specific number of years from the date of insertion. For example, if a woman had a TCu 380A inserted today, she would not need to have it replaced or removed for 12 years. ■

Slide 10

Comparison of Method Costs

The annual cost of an IUD to the client and the program can be much less than that of other contraceptive methods. This is because IUDs are long-acting, require few clinic visits, and need no other supplies. For example, according to a 1990 Population Council survey, in many countries the annual cost of IUD use, assuming it were used for five years, was less than half the cost of a year's supply of oral contraceptives or condoms. In some countries, the cost difference is even more dramatic. This slide shows the prorated annual cost of IUDs as compared to condoms and oral contraceptives in the commercial sector in Bolivia, India, Thailand, and Nigeria. ■

Slide 11

Characteristics of Copper IUDs

In addition to being highly effective and economical, the IUD has other characteristics that make it a good choice for many women. Use of an IUD does not interfere with intercourse. It is easy to use and requires little action on the part of the user and no active participation by a husband or partner. The woman only needs to check the IUD strings regularly to make sure the device is still in place.

The IUD is long-lasting and easily reversible. If a woman wants to have a baby or to use another →

form of contraception, the IUD can be easily removed by a provider. Return to fertility typically occurs very soon after an IUD is removed. Also, copper-releasing IUDs act locally on the reproductive tract and have no systemic effects. For this reason, IUDs can be used safely by breastfeeding women. ■

Slide 12

Characteristics of Copper IUDs (*continued*)

Although current IUDs are very safe and effective, they are not suitable for all women. IUDs may cause side effects that some women find unacceptable, including pain and cramping, heavier menstrual bleeding and menstrual irregularities. Spotting and cramping between menstrual periods often last two to three months after an IUD is inserted. Also, some women who use IUDs report that their menstrual periods last longer or are heavier. Menstrual blood loss may be 50 percent greater during the first months after insertion of a copper IUD, but usually decreases within 12 to 24 months.

Heavier menstrual bleeding could be a problem for women with anemia. It is estimated that as many as 40 percent of women in developing countries may be anemic. According to WHO Medical Eligibility Criteria, IUDs can generally be used in women with anemia, but more careful follow-up may be required. Menstrual bleeding irregularities can pose social or religious restrictions on women in some cultures. This side effect may be unacceptable to some women even if pain is absent.

Pain and excessive bleeding are the main reasons that women discontinue using an IUD. However, studies have shown that many women who complain about pain and bleeding choose to tolerate these side effects and do not have their IUD removed. Counseling can help women decide if the IUD is an appropriate choice for them given the risk of side effects. Also, for women who choose the IUD, effective counseling can help lessen concerns during the initial →

postinsertion period. However, if a woman does find the side effects unacceptable, or requests to have an IUD removed for any reason, she should have that request honored.

A very small number of IUD users may experience more serious complications, such as perforation or pelvic inflammatory disease.

Like any method of contraception, there is a risk of method failure. Some clients expel their devices and fail to notice until they become pregnant. A method failure may result in a uterine pregnancy or an ectopic pregnancy, which is a pregnancy that occurs outside the uterus. ■

Slide 13

Pelvic Inflammatory Disease (PID)

Pelvic inflammatory disease, also known as PID, is an infection of the woman's upper genital tract. Overall risk of PID associated with the IUD is very low, although there is a somewhat increased risk of PID during the first 20 days after insertion. Sexually transmitted infections (STIs), such as gonorrhea and chlamydia, are the reason some women develop PID. When the IUD is inserted through an infected cervix, there is a chance that it will carry the infection from the lower to the upper genital tract. However, women with undiagnosed and untreated gonorrhea or chlamydia who are not using the IUD develop PID as well. Based on available evidence, it appears that PID rates are similar among women with STIs with or without the IUD being inserted, and the IUD itself contributes very little to the risk of PID. ■

Slide 14

PID Incidence Rate by Time Since Insertion

As shown in this slide, the risk of an IUD user developing PID is greatest during the first month after insertion. The risk decreases after the first month and remains low and comparable to non-IUD users. ■

Slide 15

Reducing the Risk of PID

An IUD user's risk for developing PID can be reduced even further if providers follow important guidelines. First, screen women for risk of STIs. While women at risk of STIs can generally use an IUD, more careful follow-up after insertion may be recommended. However, providers should try to screen out women at high individual risk of STIs. This category of women may include, for example, those with more than one sexual partner, those whose partner has multiple sex partners, or those whose partners have symptoms of STIs.

Second, carefully screen women for any symptoms and signs of current STIs. In many cases, good clinical judgment is sufficient to rule out an infection with gonorrhea and chlamydia.

Ruling out the possibility of a current STI by medical history and physical examination is essential prior to providing the IUD. Laboratory tests are not required prior to IUD insertion, but they could be offered when available and when the provider has difficulties ruling out an infection by clinical judgment alone.

IUDs should never be inserted in women with current STIs. Women at high individual risk of STIs should generally not have an IUD inserted unless other methods are unavailable or unacceptable to the client and careful follow-up is possible.

Third, counsel all users about the risks of PID. Emphasize that behaviors that place the woman at greater risk for STIs also increase her risk of PID. Fourth, strictly follow infection prevention procedures to reduce the risk of introducing bacteria into the uterus. Fifth, most service delivery guidelines recommend that the client return about 30 days after the IUD is inserted to check for the presence of infection. Advise her to return immediately if she experiences symptoms such as fever or low abdominal pain during the first month after insertion. ■

Slide 16

Perforations

Although rare, the woman's uterus or cervix can be perforated when an IUD is inserted. When perforation occurs, it is a potentially serious event. According to the World Health Organization, rates of perforation at the time of insertion are generally 1 in 1,000. Perforation of the uterus after IUD insertion is also very rare.

The risk of perforation is directly linked to the skill and experience of the provider. Thus, the World Health Organization recommends that, whenever possible, providers perform at least 50 to 60 pelvic examinations and 10 to 15 IUD insertions under supervision before inserting an IUD without supervision. Carefully following the instructions for IUD insertion will also reduce the risk of a perforated uterus.

The risk of perforation is greater for postpartum insertions performed between 48 hours and four weeks after delivery, as the uterus returns to its normal size. For this reason, it is recommended that postpartum insertions be done within the first 48 hours after delivery or after four weeks. ■

Slide 17

Estimated Ectopic Pregnancy Rates

Pregnancy is unlikely for a woman using a modern IUD, such as the TCU 380A. Consequently, the incidence of ectopic pregnancy in users of the TCU 380A is very low, only two out of every 10,000 women.

If a pregnancy does occur in an IUD user, the risk of it being an ectopic pregnancy is slightly higher than in women using other methods. However, the overall number of ectopic pregnancies is much lower among users of the TCU 380A than among women who use other contraceptives and women who use no method of contraception. ■

Slide 18

Expulsions

The expulsion of an IUD is not in itself a medical complication. However, a partially expelled device could result in irregular bleeding. Further, an expelled or partially expelled IUD that goes unnoticed leaves the client believing she is protected from pregnancy when she is not. Providers should understand the factors that can contribute to the risk of an IUD being expelled.

Several factors influence expulsion rates, including the skill of the provider, the woman's age and parity, the length of time since insertion and the timing of insertion.

Many studies indicate that the provider's ability to place the IUD correctly at the top of the uterine cavity, or fundus, may be the most important factor in determining the risk for expulsion. In some studies, higher expulsion rates were associated with providers whose skills were inadequate.

Studies also show that younger women who have never given birth are more likely to expel an IUD than older women with children. In general, the risk of IUD expulsion is greatest during the first few months after the IUD is inserted, while the woman's body is adjusting to the device. Thereafter, the risk decreases. However, contractions of the uterus during the first few months after the insertion or during later menstrual periods can push the IUD downward, expelling it either partially or totally. It is recommended that users check after each menses for the presence of IUD marker strings to ensure that the IUD is still in place. Next we will discuss expulsion rates as they relate to timing of insertion. ■

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Expulsion Rates for Interval and Postpartum Insertions

The lowest expulsion rates are associated with interval insertions, or those which take place any →

time other than the four weeks following delivery. As can be seen on this slide, studies have shown that the expulsion rate is generally higher during the postpartum period. The rate varies according to when during the postpartum period the insertion is done. The higher expulsion risk is due to the changes the uterus undergoes as it returns to its normal size.

Based on this, researchers have made specific recommendations about when to insert an IUD during the postpartum period. The expulsion rate is only slightly higher for insertions done in the immediate postpartum period, within the first 10 minutes after the placenta is expelled. It is moderately higher if inserted after 10 minutes but before the woman is discharged from the hospital, usually 48 hours after delivery. Data on expulsion rates for late postpartum insertions, done between 48 hours and 4 weeks after delivery, are limited. However, inserting an IUD during this time window is not recommended due to a greater risk of perforation. Before performing postpartum insertions, providers need to receive specific training and supervised practice. As previously noted, the inserter's skill can greatly affect the risk of expulsion.

Although the expulsion rate for postpartum insertions is higher, postpartum IUD insertion does have a number of advantages. The primary advantage is convenience for the woman. However, clients should be counseled that the risk of expulsion is greater if the IUD is inserted during this period. ■

Slide 20

Client Screening and Counseling

Client screening and counseling are essential parts of any family planning program. This presentation will not discuss general screening and counseling procedures, but will highlight those issues that are especially important in providing high quality care for IUD users. In this section, we will discuss the goals of screening and counseling, recommend screening guidelines and →

counseling topics, and then provide information important for follow-up care and counseling. ■

Slide 21

Screening and Counseling Goals

The combined goals of screening and counseling are to provide high quality care that enables the client to make a well-informed choice of a contraceptive method that is safe for her to use. Client screening procedures are necessary to identify the most appropriate methods for the client and ensure safe use of the method. Also, research has shown that, in general, appropriate counseling leads to improved client satisfaction and continued use of any contraceptive method. ■

Slide 22

WHO Eligibility Criteria for Contraceptive Use

The World Health Organization has developed medical eligibility criteria for the safe use of various contraceptive methods. Providers use these criteria in deciding whether it is appropriate for a woman with a particular medical condition to use the contraceptive method in question. For each contraceptive method, medical conditions are classified into four categories based on the risks and benefits associated with use of that method by women having those medical conditions.

The WHO eligibility criteria use the following four categories to classify medical conditions:

- Category 1: For women with these conditions, the method presents no risks and can be used without restriction.
- Category 2: For women with these conditions, the benefits of using the method generally outweigh the theoretical or proven risks. Women with these conditions generally can use the method, but monitoring by the provider may be appropriate in some cases. →

- Category 3: For women with these conditions, the risks of the method generally outweigh the benefits. Women with these conditions generally should not use the method. However, if no better options for contraception are available or acceptable, the health care provider may judge that the method is appropriate, depending on the severity of the condition. In such cases, careful monitoring by the provider is essential.
- Category 4: For women with these conditions, the method presents an unacceptable health risk and should not be used.

In some cases, a particular condition is assigned to one category for initiation and another for continuation of the method. In other words, for certain conditions, the category depends on whether a woman with the condition wishes to initiate the contraceptive method, or whether a woman already using that method develops the condition.

Under circumstances where clinical judgment is limited, as when DMPA is distributed by community health workers, these categories may be further simplified, as shown on the slide:

- Women with conditions classified as Category 1 or 2 can use the method.
- Women with conditions classified as Category 3 or 4 should not use the method. ■

Slide 23

Who Can Use Copper IUDs

This slide and the next two slides show some conditions of the WHO eligibility criteria for IUD use. The conditions mentioned are examples, not complete lists.

Conditions discussed on this slide fall into WHO category 1 or 2, when the IUD can be used without any restrictions or with some follow-up. ➔

Women of various age and parity can safely use an IUD. However, young women and those who have never been pregnant should be counseled about the risk of expulsion, which, if unnoticed, may lead to pregnancy. Studies have shown that failure rates among young women are higher than among women over age 35.

The IUD can be used postpartum and postabortion, unless there is an infection present; it also can be used by women who are breastfeeding.

Women with various chronic conditions, such as hypertension, cardiovascular disease, diabetes, gall bladder or liver disease, can use copper IUDs without any restrictions. ■

Slide 24

Who Should Not Have an IUD Inserted

Medical history and pelvic exam help to identify conditions that contraindicate initiation of an IUD (category 4). IUDs should not be inserted in women with the following conditions:

- Known or suspected pregnancy
- Diagnosed cervical, endometrial cancer, or unexplained vaginal bleeding of a suspicious nature
- Malignant trophoblastic disease or known pelvic tuberculosis
- Distortion or abnormality of the uterus that impedes correct placement of the IUD
- Infection following childbirth or following incomplete abortion ■

Slide 25

STIs/HIV/AIDS Can Affect IUD Eligibility

The presence of STIs or AIDS, or a risk for these conditions, can affect initiation and use of the IUD.

Women with current STIs (gonorrhea or chlamydia), PID or purulent cervicitis should not have an IUD inserted (category 4). After the infection is cured, IUD insertion may be considered if it remains a →

desired method. In the meantime, women should be provided with another contraceptive method, preferably the condom, and partner treatment should be discussed. However, if the woman acquires an STI or develops PID while using an IUD, she can be treated with the IUD in place (category 2).

The following are conditions that fall into WHO category 3, when initiation of the IUD is usually not recommended unless other more appropriate methods are not available or not acceptable to the client:

- High individual risk of STIs
- AIDS

IUD users who develop AIDS or whose individual risk of STIs becomes high can continue using the method (category 2). They should be counseled to use condoms in addition to the IUD to prevent infection transmission.

Women with increased risk of STIs/HIV or who are HIV-positive can generally initiate and use an IUD. Research has found no increased risk of acquiring or transmitting HIV associated with IUD use. Also, it was shown that complication rates, including infection-related complications, were similar in HIV-infected and uninfected women. Women with AIDS who are doing clinically well on antiretroviral therapy (ARV) can also initiate and use an IUD. ■

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IUD Counseling Topics

If the client chooses an IUD, the following specific issues must be covered in detail during the counseling session:

- characteristics of IUDs
- client's risk for STIs
- effectiveness and how the IUDs work
- insertion and removal procedures
- instructions for use and follow-up visits →

- possible side effects and complications
- signs of possible complications that require an immediate return to the clinic. ■

Slide 27

Dispelling Myths

Both providers and clients may have false beliefs about IUDs. Replacing rumors with facts will help the user be more comfortable and satisfied with the method and more likely to continue using it.

Some women may be concerned that the IUD is an abortifacient, or prevents pregnancy by aborting a fertilized egg. However, as discussed earlier, research has shown that the primary mechanism of action of copper IUDs is to prevent fertilization.

Another myth is that modern IUDs cause infertility. As discussed earlier, infertility is mainly caused by PID. Providers can largely reduce a woman's risk of developing PID by screening clients for current STIs or high individual risk of STIs and carefully following infection prevention procedures during insertion. This fear of infertility may be a result of problems attributed to the Dalkon shield, an early IUD that has not been manufactured or distributed for 20 years. These problems included an increased risk of infection, infertility, pain and cramping. The most serious consequences associated with Dalkon shield use were the result of untreated infections and septic abortions. The IUDs manufactured today are designed differently to avoid these problems. They are much safer and cause fewer side effects.

Women may have heard that IUDs cause discomfort for the man during intercourse. Occasionally, a man may feel the IUD string, but this should not cause him any pain or discomfort. Counseling the man may be appropriate in such cases. If the male partner finds the string unacceptable, the provider can cut the strings shorter if the client requests it. Clients should understand, however, that if the strings are too →

short, they may retract into the uterus and the woman may not be able to feel them when checking for the IUD.

Another myth is that the IUD can leave the uterus and travel to distant parts of the body, such as the brain or the heart. On rare occasions, an IUD can perforate the uterus, but it will remain in the abdominal cavity.

The last myth is that Copper T IUDs are too large for small women. Studies comparing the TCu 380A to the smaller MLCu 250 show that this is not true. ■

Slide 28

Common Side Effects

IUDs do have some common side effects that should be discussed with the client before an IUD is inserted. The provider should tell the woman that she may experience pain and cramping during the insertion and may experience light bleeding and continued mild cramping for a few days following insertion. Heavier and prolonged menstrual bleeding, as well as cramping and bleeding between periods, are common but usually temporary. Studies have shown that these events usually are tolerable and do not necessitate removal of the IUD. Providers need to reassure the woman that these side effects do not indicate a serious medical problem. ■

Slide 29

IUD Use and Follow-up

Another element of counseling is discussion of IUD use and follow-up care. Teach the client how to check for her IUD by feeling for the strings. Make sure that she knows to wash her hands thoroughly before inserting her fingers into her vagina. If she is unwilling or unable to check with her hand, she can be counseled to inspect the pads she uses during menses carefully to check for a possible expelled IUD. Emphasize the importance of routinely checking for strings after each menses, especially during the first six months, since this is when the IUD is most likely to be expelled. The client should be ➔

advised to use a backup method of contraception, such as condoms, and visit the provider as soon as possible if she notices the strings are missing.

Schedule the client for a return visit three to six weeks after the insertion to check the position of the IUD strings and to check for signs of infection. If she has no problems at the time of her checkup or during the following months, she needs only to return to the clinic yearly for routine checkups. The client should be encouraged to return to the clinic any time she has a question or concern. Be sure she knows when to return to have her IUD replaced or removed.

When the client returns for a checkup, ask her if she is satisfied with the IUD. Ask if she has any questions or problems, and whether she is experiencing any unpleasant side effects. A client who requests that an IUD be removed should have that request honored as soon as possible. It is not advisable to discourage the client from having the IUD removed if she does not want to continue using it. ■

Slide 30

Signs of Possible Complications

During counseling, providers need to discuss the signs of possible IUD complications with the client and advise her to return immediately if any of the following signs or symptoms appear.

- **Severe bleeding or abdominal cramping during the first three to five days after insertion** — This could indicate that the uterus or cervix may have been perforated when the IUD was inserted, or it could indicate an infection.
- **Irregular bleeding and/or pain in every cycle** — This can indicate IUD dislocation or perforation.
- **Fever and chills, or an unusual vaginal discharge** — These can indicate an infection. This is a concern especially during the first month after →

the IUD is inserted since this is when PID, although rare, is most likely to develop. ■

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Signs of Possible Complications (*continued*)

Additional signs of possible complications include:

- **Pain during intercourse** — This could indicate an infection, perforation or partial expulsion.
- **A missed menstrual period, other signs of pregnancy or an expelled IUD** — This could indicate uterine or ectopic pregnancy.
- **IUD strings that appear shorter, longer, or are missing** — This can be a sign that the IUD may have been partially or completely expelled or has perforated the uterus. However, providers should advise the client that the IUD strings are sometimes difficult to locate until after the first menses because they may have retracted into the uterus. ■

Slide 32

Insertion Guidelines and Management Issues

In this section, we will discuss insertion guidelines and management issues for providers. Specifically, we will discuss how to reduce the risk of complications during insertion and review topics for training providers. We will also address infection prevention guidelines, insertion steps and the management of complications. ■

Slide 33

Reducing Risks During Insertion

Two critical factors reduce the risk of complications associated with IUD insertion. First, providers must follow infection prevention procedures during the insertion, and second, they must follow the manufacturer's instructions for IUD insertion carefully. Insertion procedures vary for different types of IUDs. Providers must be sure to follow specific instructions for each type of device.

IUDs come in sterile packages. It is important that providers inspect the package to make sure it has not been damaged or opened and has not expired. Copper IUDs may oxidize while in the package, causing the surface to appear less shiny or discolored. This is not a problem. As long as the sterile package is intact, tarnished or discolored IUDs are as safe and effective as the shiny ones. The expiration date printed on the IUD package indicates the date when the sterile packaging expires, not the date when the IUD's effectiveness expires. IUDs should not be inserted after the expiration date has passed.

Prophylactic antibiotics are generally not recommended for IUD insertion but may be considered in settings of high STI prevalence (if STI screening is limited). ■

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Provider Training

Most of the problems that are still associated with IUDs, including perforations, expulsions, and infections, result from improper or careless insertion techniques. Providers should receive high quality training, which includes practice with interval and postpartum insertions, as well as training in using different types of IUDs. It is essential that training also include procedures for IUD removal. Insertion and removal training should include initial practice with plastic pelvic models followed by supervised clinical practice.

IUDs can be inserted or removed by physicians, midwives, nurses or other appropriately trained health-care personnel. In fact, studies show that trained nurses or midwives are as competent as physicians, and may provide better overall service because they are more accessible, and for some clients, more acceptable. ■

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Timing of IUD Insertion

A woman who chooses an IUD can have the device inserted during her first visit to the family planning clinic. An interval insertion can be performed at any time during the menstrual cycle, as long as the woman is not pregnant and has no signs of infection. Some providers recommend the IUD be inserted during the last few days of menstruation when the cervical opening is a little wider than usual and it is known the woman is not pregnant. However, it is easier to examine for signs of reproductive tract infections when a woman is not menstruating. Therefore, IUDs can be inserted at the client's convenience if the provider can be reasonably sure she is not pregnant.

If the woman requests it, an IUD can be inserted postpartum. This assumes the provider has received adequate training in the procedure, the woman has been counseled appropriately prior to delivery, and there is no infection or hemorrhage. The IUD can be placed manually in the uterus immediately after a cesarean section delivery or a vaginal delivery. If at all possible, an IUD insertion following a vaginal delivery should be done during the first 10 minutes after delivery of the placenta. However, early postpartum insertions within the first 48 hours are considered safe. Otherwise, it is best to wait until the woman is four weeks postpartum, when the uterus returns to its normal size.

Women who are postabortion may have an IUD inserted immediately after the procedure if the pregnancy was in the first trimester and there is no infection. However, if the pregnancy was 16 weeks or more, IUD insertion should be performed by a specially trained provider or be delayed for four weeks. ➔

An IUD should never be inserted in any woman with an STI. If an infection is present, the woman should be given antibiotics to treat it, along with her choice of alternative contraception. She can have an IUD inserted after the infection clears. For acute PID, it is generally recommended to wait three months. ■

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Infection Prevention Procedures

Providers must also follow basic infection prevention measures, which include washing hands, wearing sterile gloves, and carefully disinfecting the vagina and cervix. Use only sterile IUDs and sterile or high-level disinfected equipment. Properly decontaminate instruments after the insertion procedure, and safely dispose of any contaminated waste materials.

Researchers have studied the efficacy of giving clients prophylactic doses of antibiotics before or after an IUD is inserted to prevent PID. Findings indicated that if clients were screened for STIs and if infection prevention procedures were followed during insertion, infection rates were similar among IUD users who did not receive antibiotics. Thus, antibiotic prophylaxis has not been proven to be necessary for the safe insertion of an IUD. ■

Slide 37

IUD Insertion Steps

The following is a general overview of the steps for inserting an IUD. However, specific loading and insertion procedures vary among different types of IUDs. This discussion is not meant to take the place of supervised training, which is needed by all providers who perform IUD insertions.

First, insert the speculum and visually inspect the vagina, cervix, and entrance to the cervical canal to make sure there are no signs of infection such as a grey, frothy, or smelly discharge. Next, perform a bimanual exam to determine the position of the uterus. Then, disinfect the vagina and opening to the cervix with antiseptic solution. Next, sound, or →

measure, the length of the uterine cavity. Sounding must be performed very carefully and gently to avoid uterine perforation. After sounding, adjust the depth gauge on the IUD inserter for proper and safe placement of the IUD high in the uterine cavity. Finally, insert the IUD. Some providers use a tenaculum and gently pull the cervix to stabilize and align the uterine cavity. This makes insertion easier and helps to prevent perforation.

At no time should the IUD come in contact with a nonsterile surface. All phases of the procedure should be conducted carefully and gently to reduce client discomfort. ■

Note to presenter: To reduce the incidence of perforation during sounding, the calibrated inserter tube may be used to sound the uterus in place of a metal sound.

Slide 38

Management of Perforation

On this and the following slides we will discuss management strategies for perforation, cramping, heavy bleeding, missing strings, pregnancy, and PID.

A rare complication that may occur is the perforation of the uterus. A perforation usually occurs when the IUD is not inserted in the direction of the uterine cavity, or when the length of the cavity is misjudged. Perforation also may occur as a result of forceful insertion or sounding. If perforation occurs, the patient will likely feel a sharp pain. If the client feels a sharp pain, the provider should stop the procedure and remove the IUD. If no additional complications are evident, the provider should give the client an alternative method of contraception and instruct her to return for a follow-up visit in one week. Another IUD can be inserted after her next menses. ■

Slide 39

Management of Cramping

If mild cramping occurs only around the time of menses, the IUD user should be advised to use a pain reliever such as ibuprofen. If cramping is severe →

or continues after three months, it is important to examine the client for other problems. Severe or prolonged cramping may indicate a partially expelled IUD, a perforated uterus, or PID. If cramping is unacceptable to the client, the IUD should be removed. ■

Slide 40

Management of Heavy Bleeding

Heavy bleeding during menstrual periods and light intermenstrual bleeding can be common side effects of IUD use. However, if a woman experiences irregular or heavy bleeding for more than three months, she should return to her provider for an examination. The purpose of the examination is to rule out complications or conditions unrelated to the IUD, such as infection or tumors.

Heavy, prolonged bleeding may lead to aggravation of already existing anemia. If the woman shows signs of anemia, she should be given iron supplements and be advised to eat iron-rich foods. Ibuprofen (or other nonsteroidal anti-inflammatory drugs, except aspirin) taken during her periods can help reduce the amount of bleeding and cramping. The provider should remove the IUD if the bleeding is unacceptable to the client. ■

Slide 41

Management of Missing Strings

Missing IUD strings may be a sign that the IUD has been expelled or has perforated the uterus. If a client says her IUD strings are missing, the health-care provider should determine her risk of pregnancy by asking the woman when she last felt the strings and if she has had unprotected intercourse since that time. Next, perform a pelvic exam to determine if the strings are high in the cervix or hidden by a fold in the vagina. Often the strings can be located by probing the cervical canal with cotton swabs or narrow forceps. Gently rotate the instrument to draw the strings down. ➔

Although not absolutely necessary, an ultrasound or X-ray can be used to locate the IUD if the strings cannot be found. If there is a risk that the woman is pregnant however, an X-ray should not be used. The client should be provided another contraceptive method to use until her next menses. If the strings have retracted into the uterus, they may fall back into place during menstruation. Tell the client to check for strings after her next menses.

If the strings are still not present after the next menstrual period, the client should see a physician for further examination. If pregnancy and a perforated uterus are ruled out and the IUD has been expelled, another IUD can be inserted immediately. If the IUD has perforated the uterus, refer the client to a hospital for treatment. ■

Slide 42

Management of Pregnancy

If a client misses her menstrual period, the health-care provider should ask the client about the date of her last menstrual period and whether she has had sexual intercourse since then. Determine if the client has experienced any other signs of pregnancy. If possible, perform a pregnancy test; if the results are positive, check for ectopic pregnancy. If it is a normal uterine pregnancy, ask the client if she wants to continue the pregnancy.

Determine whether the IUD is still in the uterus. If the IUD strings are visible and the pregnancy is less than 13 weeks, a trained health-care provider should remove the IUD. If the strings are not visible or the woman is more than 13 weeks pregnant, removal may be more difficult. In either case, the woman should be examined by a physician.

A woman who has her IUD removed may continue her pregnancy, usually without complications. (There is a small risk of miscarriage as a result of the removal procedure.) ➔

If a woman's IUD cannot be removed and she wishes to continue the pregnancy, the woman should be counseled that she is at an increased risk of a miscarriage, premature labor, or uterine infection. She should be examined frequently for signs of complications and told to report all abnormal symptoms immediately. Proper follow-up is essential to reduce the risk of any complications. ■

Slide 43

Management of STIs and PID

A woman using an IUD who has been diagnosed with an STI or PID should have her condition treated. There is no need to remove the IUD; however, she should be counseled to abstain from sex or use condoms until she is cured, in order to prevent infection transmission. If she does not want to keep the IUD, removal should be done after antibiotic treatment has been started. Treatment of the woman's partner should also be encouraged. Treatment of serious cases of PID should be supervised by a physician and may require hospitalization. ■

Slide 44

IUD Removal

IUD removal is usually routine and uncomplicated. The IUD can be removed at any time, although removal during menses may make the procedure easier for the provider. Any trained health-care provider, including a nurse or midwife, can remove the IUD.

As with IUD insertion, be sure to follow standard infection prevention guidelines to minimize the risk of infection. Apply slow, gentle traction to avoid breaking the string. Let the woman know that some cramping and/or bleeding is normal during removal. Refer the client to a specially trained or experienced clinician for difficult removals.

A woman returning to the clinic to have an old IUD replaced can have a new IUD inserted at the same time. ➔

Common practice is to remove an IUD in menopausal women after one year without menses. In cases where an IUD is not removed after menopause, ill effects have not been reported. However, no studies have been conducted on this to date. ■

Slide 45

Reasons for Discontinuation of Copper IUDs

Studies indicate that IUD users continue using their IUD much longer than users of other reversible contraceptive methods. However, as shown on this slide, clients may have IUDs removed while the device is still effective for different reasons. Note that, after one year of use, the number of removals due to infection and method failure are generally lower than the number due to the side effects of bleeding and pain. Although not shown on this chart, woman may also discontinue using an IUD for personal reasons, such as a desire to become pregnant. ■

Slide 46

Hormonal IUDs

Changes and improvements in IUDs continue today. Although not widely used, both European and American researchers have developed IUDs that release hormones. The addition of hormones to the IUD causes it to have a different mechanism of action and different characteristics. The hormonal IUD available today is the levonorgestrel-releasing, or LNG IUD. This IUD releases hormones into the uterus, having both a local and systemic effect on the user. Hormonal IUDs are being used by many women, in particular those with menorrhagia, since the progestin in the IUD reduces menstrual blood flow. The LNG IUD has a low failure rate in clinical trials, at less than 1 per 100 women using the IUD for one year. The LNG IUD is more expensive than copper IUDs and has limited availability worldwide. ■

Slide 47

Summary

In conclusion, IUDs are a safe, effective, and convenient method of reversible contraception. →

They are long-lasting, cost effective, easy to use, and do not require the active participation of a partner.

Health-care providers play an important role in making sure that IUDs are used safely. Careful screening of potential users, accurate and appropriate client education and counseling, use of good infection prevention techniques and follow-up care can help prevent many of the possible complications associated with IUD use. Counseling is especially important to help clients be alert to any possible problems and can also improve client satisfaction with the device. ■