



Special Communication from the World Health Organization
Contraception for adolescents: social, clinical and
service-delivery considerations [☆]

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Abstract

A large proportion of the millions of adolescents worldwide who are sexually active have sex without using modern contraceptives or protection against sexually transmitted infections (STI). In many cases, this results in too-early (and often unwanted) pregnancies and STI, with negative consequences at different levels. Adolescents in general — and unmarried adolescents in particular — often find it difficult to obtain the contraceptives they need. Health workers are often unaware of the special needs of adolescents, and contraceptive services are only rarely provided in a manner that is accessible to adolescents. The World Health Organization stresses that age alone does not constitute a medical reason for denying any available contraceptive method to adolescents. However, it recommends that it is important for health workers to be well aware of the biomedical, psychological and social issues that affect how they can assist adolescents in making well-informed choices of contraceptive methods that suit their special needs, and in using the contraceptives, they choose in an effective manner. © 2001 WHO. Published by Elsevier Science Ltd. on behalf of International Federation of Gynecology and Obstetrics.

Keywords: Adolescents; Unprotected sexual activity; Pregnancy prevention; Unwanted pregnancy; Contraception

[☆] WHO and other agencies in the United Nations system use the following operational definitions: adolescents, 10–19 years; youth, 15–24 years; and young people, 10–24 years.

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1. Introduction

One fifth of the world's population — over one billion people — are between the ages of 10 and 19 years. Eight and a half percent of these people live in developing countries [1]. Although adolescents now attain biological maturity earlier than in previous generations, as witnessed by the gradual decline in the average age for the onset of puberty and menarche, this is not always accompanied by a corresponding attainment of psychosocial maturity or economic independence [2]. Many adolescents have difficulty in adjusting to this discrepancy in their lives and in coping with their sexuality. The sexual and reproductive health needs of adolescents remain poorly understood and largely unmet. These needs are distinct in some ways from those of adults, and they vary markedly with age, marital status and cultural context. The health problems and threats faced by adolescents are numerous, but relate most importantly to the consequences of early and unprotected — and often times unwanted — sexual intercourse [3].

2. Too-early pregnancy: the scope of the problem, factors contributing to it, and its consequences

Most people start sexual activity during the adolescent years, often without adequate knowledge about sexuality. This puts them at high risk of unwanted pregnancy and sexually transmitted infections (STIs). It has been reported that 8 in every 10 young women in sub-Saharan Africa have had their first sexual intercourse before age 20; 4 in every 10 before marriage. Similarly, in 5 industrialized countries, 8 in every 10 young women have had intercourse as adolescents; 7 in every 10 before marriage [4].

In some societies, girls continue to be married at an early age, and they are expected to prove their fertility soon after marriage. In other societies, the age of marriage is rising so that the period during which premarital sex can take place is increasing. In the USA, for example, the number of years between menarche and first marriage rose from 7.2 in 1980 to 11.8 in 1988 [5]. Whether

they are married or unmarried, adolescents can face potentially serious physical, social and economic consequences from unprotected sexual relations such as: unintended and too-early pregnancy and childbirth; unsafe abortion; and STIs including HIV (human immuno-deficiency virus infection). These events can also cut short educational and job opportunities, and negatively affect social and cultural development — especially of adolescent girls [6].

Worldwide, some 15 million pregnancies occur every year among young women aged 15 to 19 [1]. Surveys in developing countries show that between 20 and 60% of these pregnancies and births are mistimed or unwanted [1]. Faced with unintended pregnancy, many young women turn to abortion, whether it is legal or not. And when it is illegal, it is often unsafe. When abortion is unsafe, young women face serious health risks that can result in lifelong disability, infertility and even death. Estimates suggest that some 5 million women below the age of 20 undergo induced abortion every year [1]. In some African countries, for example Uganda, women under 20 account for as many as two-thirds of all cases of hospital admissions for abortion complications [1].

Adolescents who become pregnant, face serious health risks because their bodies may not be physically mature enough to handle the stress of pregnancy and childbirth. At menarche, girls are approximately 4% below full height and 12–18% below full pelvic growth [7]. Women aged 15–19 are three times more likely to die from complications of pregnancy than women aged 20–24 years, especially if they are unmarried and, thus, less likely to receive prenatal care. They are especially likely to suffer from pre-eclampsia, eclampsia, obstructed labor and its consequences, including obstetric fistula, and iron deficiency anemia. Infants born to adolescent mothers are more likely to be born before term and have low birth weight. They have an additional 24% higher risk of dying in the first month of life — a risk which continues during early childhood [8]. Furthermore, pregnant adolescents may be denied important educational and employment opportunities. For young men too, early fatherhood can disrupt educational plans and increase economic responsibilities [7].

In some countries, young unmarried women have been forced to turn to prostitution to support themselves and their children. Young parents might even feel a sense of shame, guilt or inadequacy, and this can lead to isolation from peer groups and loss of social learning experience.

WHO estimates that 340 million new cases of curable STIs and 1 million new cases of HIV infection occur each year. At least half of these infections occur in young people under 25 years of age and one-third in adolescents. This means that every year, more than 1 in every 20 adolescents contracts a curable STI. The number of cases of AIDS among individuals now in their twenties implies that many contracted HIV in the second decade of their lives [4]. Adolescents are at particularly high risk of STI including HIV infection for a number of biological, cultural, social and behavioral reasons. Among the most important of these reasons for high risk is the fact that they tend to engage in short-term relationships and do not protect themselves by consistently using condoms [9]. In addition, in many places, cultural expectations and gender norms condone early initiation of sexual activity by adolescent boys, encourage sex with multiple partners and sexual initiation by older women, including sex workers [9]. Women are physiologically more vulnerable to STI transmission than men, and also have more frequent and serious long-term sequelae to STI infection than men (including pelvic inflammatory disease, infertility, ectopic pregnancy and cervical cancer) [45]. STIs can also be transmitted in utero, or at the time of birth, leading to morbidity and mortality in infancy and childhood.

While family planning providers often focus on the medical and clinical aspects of providing contraceptives, an adolescent's ability to access and use family planning effectively is often influenced by broader issues. Inequitable gender norms, prevailing in many parts of the world, can affect the adolescent woman's overall health status and interactions with her partner. They contribute widely to unwanted pregnancy and STIs [10]. For example, girls and women often lack decision-making authority and, therefore, are unable to participate in decisions related to sexuality and

family planning. They are also unable to make emergency decisions regarding when to seek health care for themselves or their children.

Studies worldwide reveal that 20–50% of women, at some time in their lives, are victims of physical violence by men they know. These studies also show that between 50 and 60% of these women are also sexually abused [11]. Adolescent women often lack the power, confidence and skills to refuse to have sex or to negotiate condom use. Gender norms can place them at high risk of sexual violence including coerced or forced sex [11]. Violence, either as a result of domestic abuse or political strife, can disproportionately affect women's ability to access and use family planning methods and services. Family planning providers need to be aware that these social issues influence contraceptive method use and, wherever possible, should advocate societal changes that improve the status of women in general. In addition, providers should take actions to reorientate health services to meet the needs of adolescents.

3. Knowledge of contraception, and use of contraceptives among adolescents

Millions of adolescents around the world are sexually active. Yet many of them have sex without using modern contraceptives or protection against STI. Demographic and Health Survey data from sub-Saharan Africa reveal that, in a number of countries, 80% of women have had sexual intercourse before age 20 [4]. While these women may know of one or more contraceptive methods, in many sub-Saharan African countries fewer than 30% of sexually active women have ever used a contraceptive method [4]. Few unmarried adolescents use contraception during their first sexual experience. For example, only 4% of sexually active women aged 15–24 in Ecuador reported using contraceptives, and the corresponding figure in Uganda was only 6% [9]. In the developing world, with some notable exceptions — such as in Latin America — few young women use contraception between marriage and first pregnancy. Most women who marry young have at least one child before age 20 [9]. Sexually active young

people are less likely to use contraception than adults, even within marriage. Unmarried adolescents, who face additional barriers to obtaining contraceptives, are even less likely to use contraception than married adolescents.

Studies in the USA suggest that there tends to be a delay of one year, on average, between the initiation of sexual activity and the first use of modern contraceptives. Thus, premarital sexual activity often results in unintended pregnancy. In Mexico City, nearly two thirds of women aged 18–19 with premarital sexual experience, reported that they had been pregnant at least once [9]. In Zimbabwe, 46% of women aged between 11 and 19 who had been sexually active before marriage, had been pregnant [9]. Many unintended pregnancies occur within a year of first sexual intercourse.

The most important reasons adolescents cite, in a variety of different settings [12], for not using contraceptive methods when they are sexually active are:

- the unexpected and unplanned nature of sexual activity;
- lack of information and knowledge about contraceptives and where to get them;
- inability to pay for services and transport;
- fear of medical procedures;
- fear of judgmental attitudes and resistance from providers; and
- embarrassment and fear of lack of confidentiality; and
- pressure to have children.

4. The effectiveness of education programmes on sexuality and reproductive health

For decades, education on sexuality and reproductive health for adolescents has been a controversial issue in developed and developing countries alike, because of concerns that knowledge would lead to earlier or increased sexual activity among unmarried adolescents. However, a review of scientific studies from around the world, conducted by the World Health Organization's Global

Programme on AIDS, evaluated the impact of sex education programmes on adolescent knowledge and behavior, and found no support for this contention [13]. If any effect is observed, almost without exception, it is in the direction of postponed initiation of sexual intercourse and/or effective use of contraception. The report stated that failure to provide adolescents with appropriate and timely information represents a missed opportunity for reducing the incidence of unwanted pregnancy and STIs and their negative consequences.

Sex education programmes need to tailor some of their messages to suit the needs of adolescents who have not begun sexual activity, and others for those who are already sexually active. Also, because some adolescents begin sexual activity as early as age 12, formal sex education programmes need to begin before this age [13].

Research into the sexual and reproductive health of young people that has been carried out by WHO's Special Programme of Research, Development and Research Training in Human Reproduction and by other organizations, clearly point to the fact that information provision and education alone do not necessarily lead to behavioral change.² Increasing awareness and understanding is only the first step in preventing unwanted pregnancy and STI/HIV [1]. In addition, adolescents must know where to find services and be comfortable in using them. This important issue is dealt with later in this paper.

5. The importance of counseling, when providing services to adolescents

Adolescence is a period when individuals may test limits set for them by adults, experiment with new behaviors, and struggle with issues of independence, acceptance, and peer group pressure. Thus, a supportive, encouraging, non-judgmental environment, where confidentiality is ensured, is

²A discussion on other issues that contribute to changes in behaviour, e.g. social norms, are beyond the scope of this paper.

essential when counseling adolescents. Health care providers and others may benefit from special training in sexuality and in counseling skills, to enable them to deal with the needs, concerns and problems of adolescents [14].

Developing a good rapport with adolescents is important, as is using language that they can understand and be comfortable with. Due to inexperience and possibly embarrassment, adolescents may be hesitant in expressing their needs. Providers need to be patient and take the necessary time when working with adolescents.

Adolescents may have special information needs, such as a desire to understand the changes that are happening in their bodies as they mature, whether they are 'normal' or not, and other information regarding sexuality and sexual function. Service providers who are not comfortable discussing these issues with adolescents, should refer them to those who are. Peer group counseling may be particularly useful with adolescents, and whenever possible, parents should be encouraged to communicate with their children/adolescents on sexuality [15].

Counseling should cover responsible sexual behavior and needs to be directed at both males and females. Male adolescents should be encouraged to share the responsibility for contraception and STI/HIV prevention with their female partners.

6. Providing methods to adolescents for contraception and disease prevention

WHO places a high priority on ensuring that adolescents and young people worldwide have access to safe and high quality reproductive health and family planning services. WHO's department on Reproductive Health and Research has spearheaded an effort to ensure that its recommendations for the provision/use of contraceptives are supported by sound scientific evidence. The result of this effort, *Improving Access to Quality Care in Family Planning: Medical Eligibility Criteria for Contraceptive Use* [16], provides recommendations of an expert scientific working group for

appropriate contraceptive use in the presence of various medical conditions. These criteria provide essential information for the safe provision of contraceptives to adolescents, while at the same time ensuring that they are not denied access to contraception based on unfounded 'contraindications'.

Over the past 30 years, significant progress has been made in developing new or improved contraceptive methods and introducing these methods to women and men worldwide. When prescribed and used properly, all currently available contraceptives are safe and effective for healthy adolescents. However, despite scientific advances in contraceptive formulation and design, many family planning programmes and providers still rely on service delivery guidelines and practices that are based on outdated information or pertain to products that are no longer in use. There is now a need to revise these guidelines based on current WHO recommendations, to ensure that methods are offered to adolescents based on the latest data on safety and effectiveness. Service delivery guidelines that restrict choice are, in effect, reducing the overall quality of care that is provided.

6.1. Medical eligibility for contraceptive methods

Healthy adolescents are medically eligible to use any of the methods of contraception that are currently available. Age alone does not constitute a medical reason for denying any method to adolescents. However, age is an important social factor to take into account when considering irreversible contraceptive methods, such as male or female sterilization. It is also true that some concerns exist regarding the use of certain other methods by adolescents (for instance, intrauterine devices), but this must be balanced with the advantages of avoiding pregnancy. Many of the method-specific eligibility criteria that apply to older clients also apply to young people. Some conditions such as circulatory system diseases, that may limit use of some methods in older women, will not often apply to young people, since these conditions are rare in this age group.

6.2. *The importance of counseling for dual protection — the prevention of both pregnancy and STI / HIV*

As indicated earlier, adolescents may have temporary sexual relationships and multiple partners, which puts them at a high risk of STI/HIV. Biologically, female adolescents are more susceptible to STI than adult women [17]. Sexually active adolescents need to be aware of the importance of protection against both pregnancy and STI/HIV. When used correctly and consistently, male condoms are the most effective method of preventing infections for those engaging in sexual intercourse, and can be highly effective in protecting against pregnancy as well. Another option for dual protection is to use condoms in conjunction with another method, such as combined oral contraceptives or injectables. Table 1 describes the dual protection properties of specific methods of contraception.

6.3. *Other counseling issues for young adults*

While they may choose to use any one of the contraceptive methods available to them, some methods may be more appropriate for adolescents for a variety of reasons. Many of the needs and concerns of adolescents that affect their choice of a contraceptive method are similar to those of adults seeking contraception. As is true for many women, for example, using a method that does not require a daily regimen, as oral contraceptive pills do, may be a more appropriate choice for an individual. For all women, side effects are a major reason for discontinuation of contraception, and this is true for adolescents as well.

Contraceptive providers need to discuss the following issues to help each of their clients, adolescents or adults, make an informed and voluntary choice of a contraceptive method(s): understanding the relative efficacy of the method; common side effects; health risks and benefits of the method; information on return to fertility after discontinuing method use; and information on protection against STI/HIV. After a method

is chosen, it is also important to discuss the correct use of the method and follow-up information, such as signs and symptoms, which would necessitate a return to the clinic.

Expanding the number of method choices offered can lead to improved satisfaction, increased acceptance and higher contraceptive prevalence. Proper education and counseling at the time of method selection can help adolescents address their specific problems and make well-informed, voluntary decisions. Every effort should be made so that service and method cost do not limit the options available [15].

6.4. *Married adolescents*

Much of the advice regarding adolescents and contraceptive use has focused on unmarried adolescents, but many of those seeking family planning services are married. Their contraceptive needs are similar to those of married adults, but they may have other special information needs.

In terms of counseling issues, married adolescents may be particularly concerned about return to fertility. Those desiring a quick return to fertility may prefer to avoid injectables such as Depo Medroxy Progesterone Acetate (DMPA), which can delay return to fertility. Young married women may, in some cases, feel a pressure to have children and, thus, may want to keep their contraceptive use private from their spouse or in-laws. They also may knowingly or unknowingly be in a relationship where they are at risk for STI/HIV. This is an important, yet often difficult issue to discuss, and must be done with sensitivity.

6.5. *Unmarried adolescents*

Unmarried adolescents may be less likely to seek contraceptive services at health facilities because embarrassment at needing or wanting reproductive health services, and because of fears that the staff may be hostile or judgmental or that their parents might learn of their visit [18]. Adolescents need to feel that they are respected, that their needs are taken seriously, and that they have the right to use contraception if they desire.

Table 1
Dual protection of available contraceptive methods

Method	Effectiveness against pregnancy [32]		Protection against STI/HIV	Comments and considerations
	As commonly used	Used correctly and consistently		
Abstinence and non-penetrative sex	Not effective	Very effective	Protective against STI/HIV	Most effective method for dual protection. Only provides dual protection when used correctly and consistently.
Male condom	Somewhat effective	Effective	Protective against STI/HIV [21]	Only provides dual protection when used correctly and consistently.
Female condom	Somewhat effective	Effective	Protective against STI/HIV, although data is limited [23]	Only provides dual protection when used correctly and consistently.
Spermicide	Somewhat effective	Effective	May protect against gonorrhea and chlamydia [21], no protection against HIV [43]	Only provides limited dual protection when used correctly and consistently. Not recommended for use alone.
Diaphragm with spermicide	Somewhat effective	Effective	May protect against gonorrhea and chlamydia [21], no protection against HIV [43]	Only provides limited dual protection when used correctly and consistently. Spermicide not recommended for frequent use (may cause genital lesions.)
Combined Oral Contraceptives (COCS)	Effective	Very effective	Not protective	Only protective against pregnancy when used correctly and consistently. If at risk of STI/HIV, recommend switching to condoms or using condoms along with this method.
Progestin-only Pills (POPS)	Very effective (during breast-feeding)		Not protective	
Emergency Contraceptive Pills (POPS or COCS)	Effective		Not protective	Only protective against pregnancy when used correctly

Table 1. (Continued)

Method	Effectiveness against pregnancy [32]		Protection against STI/HIV	Comments and considerations
	As commonly used	Used correctly and consistently		
Long-Acting Hormonals: Injectables or Implants	Very effective	Very effective	Not protective	If at risk of STI/HIV, recommend switching to condoms or using condoms along with this method.
Copper Intrauterine Device (IUD)	Very effective	Very effective	Not protective	Use of IUDs among women at risk of STI/HIV is generally not recommended (unless other, more appropriate methods are not available.) Insertion of an IUD in a woman with an STI increases the risk of PID If an IUD user becomes at risk of STI/HIV, recommend switching to condoms or using condoms along with this method.
Fertility awareness based methods	Somewhat effective	Effective	Not protective	Only protective against pregnancy when used correctly and consistently. If at risk of STI/HIV, recommend switching to condoms or using condoms along with this method.
Lactational Amenorrhoea (LAM) during first 6 months postpartum	Effective	Very effective	Not protective	
Withdrawal	Somewhat effective	Effective	Not protective	
Male and Female Sterilization	Very effective	Not protective	If at risk of STI/HIV	recommend using condoms along with this method

For unmarried adolescents who do seek contraceptive services, it is important to discuss abstinence or non-penetrative sexual activity as options, even with those who have already had sexual intercourse. With support, individuals can delay sexual activity until they are older and, thus, be better able to deal with its social, psychological and physical implications [19]. This requires commitment, high motivation and self-control. Adolescents need support and encouragement to abstain from and/or delay the initiation or continuation of sexual intercourse.

When discussing abstinence, it is important also to discuss safe sexual behaviors that do not put individuals at risk of pregnancy or STI/HIV. These include non-penetrative sexual activities such as stroking, rubbing, massage or other ways that sexual pleasure can be given, to oneself or to others. These behaviors are safe as long as no blood, semen or vaginal secretions come into contact with mucous membrane or damaged skin [20].

For unmarried adolescents who do desire to have sexual intercourse, condoms — or condoms in combination with another method for dual protection — are the best recommendation. For adolescents who are not in monogamous relationships, sexual activity may be sporadic and unplanned. In these circumstances, condoms are a good choice because they are widely available — easily and inexpensively — and can be used when needed.

Adolescents, especially those in monogamous relationships, may also desire to use other, longer-acting methods. Family planning providers must support this decision. For these adolescents as well, risk of STI/HIV must be discussed. Some of them may be at risk of contacting STI/HIV when they do not consider themselves to be, if their partner has other sexual partners.

6.6. Method-specific medical, service delivery and counseling considerations for adolescents

A brief review of method-specific medical, service delivery and counseling considerations for adolescents is provided below in Table 2. This

table covers issues that are most important when providing contraceptive methods to adolescents. For a more thorough discussion of the medical eligibility criteria, please refer to *Improving Access to Quality Care in Family Planning: Medical Eligibility Criteria for Contraceptive Use* [16]. For more information on methods, such as mechanism of action, correct use, management of problems and side effects, and contraceptive benefits, see *The Essentials of Contraceptive Technology: A Handbook for Clinic Staff* [32].

7. Special considerations for contraceptive service provision to adolescents

A detailed discussion on expanding the availability and improving the accessibility of high quality contraceptive services is beyond the scope of this paper. The twin-track approach recommended by VHO is to train/retrain service providers, in order to enable them to respond more effectively to the physical, psychological and sociocultural needs of adolescents; and to reorientate existing service-delivery systems to make them responsive and sensitive to the needs and preferences of adolescents [14].

For all adolescents, but especially for those who are sexually active outside the context of marriage, access to appropriate information and services — and the assurance of confidentiality — are particularly important. To help ensure contraceptive use among sexually active adolescents, contraceptive information and services must be made readily available through a variety of delivery points, including community-based points and outreach services. In many countries, laws restrict young people's access to such information and services and can prohibit some providers from offering contraceptive services to adolescents. Changing those restrictive laws is an important step towards improving access and quality of family planning care and, therefore, protecting the physical and social well being of adolescents. Building governmental and non-governmental coalitions — including the media, community leaders, youth leaders, school associations, and religious groups — to support and contribute to

Table 2
Medical, service delivery and counselling considerations for adolescents

Method	Dual protection	Age Restriction	Availability/ accessibility	Side effects	Other important counselling points for adolescents	Comments/ considerations
Abstinence and non-penetrative sex [19]	Yes	No age restriction	Available at anytime to anyone	None	Can be used even by those who have already begun sexual activity To prevent pregnancy, avoid vaginal intercourse To prevent STI/HIV, also avoid anal intercourse and oral sex Examples of safe sexual activities: hand-holding, hugging, massaging, kissing, mutual masturbation Emphasize need to use condom or other method if penetrative sex is initiated	Most effective method for dual protection Requires high level of motivation and self-control Counselling can help with issues of motivation and peer pressure
Male condom [21,22]	Yes	No age restriction	Easily available in most places	Usually no side effects (local irritation possible)	Explain and demonstrate correct use Requires partner communication/negotiation important Requires supplies at home (fear of discovery may be an issue)	Important method because provides dual protection
Female condom [23]	Yes (data limited)	No age restriction	Availability limited in many places High cost may be a constraint	Usually no side effects (local irritation possible)	Explain and demonstrate correct use Use can be controlled by woman Requires supplies at home (fear of discovery may be an issue)	Important method because provides dual protection
Spermicides [24]	Yes (protective against some STIs, not HIV)	No age restriction	Easily available in many places	Usually no side effects (local irritation possible)	Explain and demonstrate correct use Recommend use with condom or diaphragm Requires supplies at home (fear of discovery may be an issue)	Not recommended for use alone Not recommended for frequent use (may cause genital lesions)
Diaphragm with spermicide [24]	Yes (protective against some STIs, not HIV)	No age restriction	Requires a clinic visit for fitting Availability limited in many places	Usually no side effects (local irritation possible)	Explain and demonstrate correct use Requires supplies at home (fear of discovery may be an issue)	Spermicide not recommended for frequent use (may cause genital lesions)

Method	Dual protection	Age Restriction	Availability/accessibility	Side effects	Other important counselling points for adolescents	Comments/considerations
Low Dose Combined Oral Contraceptives (COCs) [25–32]	No	No age restriction	Requires clinic visit in many places May be available through community-based distribution	Side effects may include nausea or headache	Explain and demonstrate correct use Recommend also using condom if at risk of STI/HIV Requires daily regimen Requires supplies at home (fear of discovery may be an issue)	A widely used method among adolescents, although correct and consistent use may be an issue
Progestin-only pills (POPs) [31]	No	No age restriction	Requires clinic visit in many places May be available through community-based distribution	Fewer side effects than COCs or long-acting hormonal (injectables and implants)	Explain and demonstrate correct use Recommend also using condom if at risk of STI/HIV Requires strict daily regimen Requires supplies at home (fear of discovery may be an issue)	Stricter regimen than COCs Good option for breastfeeding women after first 6 weeks postpartum
Emergency contraceptive pills (POPs or COCs) [33–35]	No	No age restriction	Requires clinic visit in many places May be available over-the-counter or through community-based distribution	Side effects may include nausea and vomiting (much less likely with POP regimen)	Not meant for repeated use Discuss initiation of a regular method	Important method when intercourse may be unplanned, unprotected
Injectables: depo medroxy progesterone acetate (DMPA) and norethisterone enanthate (NET-EN) [36–38]	No	Not first method of choice for those under 18, as there is a theoretical concern that bone development could be hindered	Require clinic visit every 2 or 3 months May be available through community-based distribution	Side effects may include irregular bleeding, amenorrhea, or weight gain	Recommend also using condom if at risk of STI/HIV Often delay in return to fertility	May be a good option for those desiring a without a daily regimen
Combined injectables: cyclofem and mesigyna [38,44]	No	No age restriction	Require clinic visit every month May be available through community-based distribution	Side effects may include nausea or headache	No daily regimen required No supplies needed at home (can be private)	Side effects the main reason for discontinuation and if they occur, method cannot be quickly discontinued
Norplant implants [32,37]	No	No age restriction	Clinic visit required for insertion and removal	Side effects may include irregular bleeding or amenorrhoea	Recommend also using condom if at risk of STI/HIV No delay in return to fertility No daily regimen required No supplies needed at home (can be private)	May be a good option for those desiring a hormonal method without a daily regimen May be a good option for those desiring a hormonal method without a daily or monthly regimen

Table 2 (Continued)

Method	Dual protection	Age Restriction	Availability/ accessibility	Side effects	Other important counselling points for adolescents	Comments/ considerations
Copper intrauterine device (IUD) [39,40]	No	Not first method of choice for those under 20, as risk of expulsion may be higher for nulliparous women	Clinic visit required for insertion and removal	Sides effects may include excessive bleeding or pain during menses	Recommend also using condom if at risk of STI/HIV No delay in return to fertility No daily regimen required No supplies needed at home (can be private)	Not a good choice for those at risk of STI/HIV (more than one sexual partner or whose partner may have more than one partner) nulliparous women may be at higher risk of expulsion
Fertility awareness-based methods [30,33]	No	No age restriction	Available at anytime to anyone	No side effects	Explain correct use Recommend also using condom if at risk of STI/HIV Requires partner communication/ negotiation important	Important for adolescents to understand their fertility May not be as effective in younger women whose menstrual cycles are irregular May be difficult to use for couples who have sex infrequently
Lactational amenorrhoea (LAM) [30,33]	No	No age restriction	Can be used during first 6 months postpartum when exclusively breastfeeding and amenorrhoeic	No side effects	Explain and demonstrate correct use Recommend also using condom if at risk of STI/HIV	Important method option for breastfeeding women
Withdrawal [30,33]	No	No age restriction	Available at anytime to anyone	No side effects	Explain correct use Requires partner communication/ negotiation important	Important method to discuss as may be only method available in some places
Male and female sterilization [41,42]	No	No age restriction However, age at sterilization is a key risk factor for regret for both women and men	Clinic visit required for procedure	Minimal side effects, local infection possible Permanent method No daily regimen required	Recommend also using condom if at risk of STI/HIV No supplies needed at home (can be private)	Consider only in special circumstances after thorough counselling

the provision of information and services to adolescents has been successful in some areas.

For service providers to be able to provide good quality services, they require training and supervision, appropriate facilities, adequate supplies and functional linkages with other service providers. These points are discussed below.

- *Training and supervision:* In addition to providing necessary technical information and clinical skills, training should provide participants with an awareness of young people's rights, and with the skills necessary to interact with them in a respectful way. Training should be reinforced through ongoing supportive supervision that provides constructive feedback and encouragement.
- *Appropriate facilities:* Service delivery facilities should be convenient (location and timing) and provide a comfortable environment for adolescents. For example, examination rooms should be separated from other areas by walls or partitions to allow for maximum privacy, appropriate levels of cleanliness should be maintained and other basic facilities, such as toilets and comfortable waiting areas, should be provided.
- *Adequate supplies:* For providers to be able to facilitate adolescents' rights to choice of method and appropriate information, they need access to a reliable source of supply of both contraceptive products and educational materials. In addition, access to supplies for infection control is crucial for maintaining quality of care for contraceptives requiring a clinical intervention (e.g. injectables and implants).
- *Functional linkages to other service providers:* Adolescents have diverse needs for information and services, and not all programmes will be able to address all these needs. By establishing linkages with other care providers in the community (where available), service providers can create a broad network of service delivery options to which adolescents can be referred [15]. By providing quality services that respect adolescents' rights and respond

to their needs, programmes will contribute to the overall health and well being of their adolescent clients/patients and to their communities.

8. Conclusion

Studies that have been carried out over the past ten years have demonstrated unequivocally that in many parts of the world, adolescents are entering their reproductive years ill prepared to protect and safeguard their sexual and reproductive health. Helping health workers understand the special needs of adolescents, and reorienting health services to meet those needs and preferences, will go a long way in helping to prevent the consequences of too-early and unprotected sexual activity in this important population group.

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