

IMPLEMENTATION TOOL

PROVIDING CONTRACEPTIVE SERVICES IN THE CONTEXT OF HIV TREATMENT PROGRAMMES

JULY 2019

HIV TREATMENT AND REPRODUCTIVE HEALTH



WHO/CDS/HIV/19.19

© World Health Organization 2019

Some rights reserved. This work is available under the Creative Commons Attribution-NonCommercial-ShareAlike 3.0 IGO licence (CC BY-NC-SA 3.0 IGO; <https://creativecommons.org/licenses/by-nc-sa/3.0/igo>).

Under the terms of this licence, you may copy, redistribute and adapt the work for non-commercial purposes, provided the work is appropriately cited, as indicated below. In any use of this work, there should be no suggestion that WHO endorses any specific organization, products or services. The use of the WHO logo is not permitted. If you adapt the work, then you must license your work under the same or equivalent Creative Commons licence. If you create a translation of this work, you should add the following disclaimer along with the suggested citation: "This translation was not created by the World Health Organization (WHO). WHO is not responsible for the content or accuracy of this translation. The original English edition shall be the binding and authentic edition".

Any mediation relating to disputes arising under the licence shall be conducted in accordance with the mediation rules of the World Intellectual Property Organization.

Suggested citation. Providing contraceptive services in the context of HIV treatment programmes. Implementation Tool. Geneva, Switzerland: World Health Organization; 2019 (WHO/CDS/HIV/19.19). Licence: CC BY-NC-SA 3.0 IGO.

Cataloguing-in-Publication (CIP) data. CIP data are available at <http://apps.who.int/iris>.

Sales, rights and licensing. To purchase WHO publications, see <http://apps.who.int/bookorders>. To submit requests for commercial use and queries on rights and licensing, see <http://www.who.int/about/licensing>.

Third-party materials. If you wish to reuse material from this work that is attributed to a third party, such as tables, figures or images, it is your responsibility to determine whether permission is needed for that reuse and to obtain permission from the copyright holder. The risk of claims resulting from infringement of any third-party-owned component in the work rests solely with the user.

General disclaimers. The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of WHO concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement.

The mention of specific companies or of certain manufacturers' products does not imply that they are endorsed or recommended by WHO in preference to others of a similar nature that are not mentioned. Errors and omissions excepted, the names of proprietary products are distinguished by initial capital letters.

All reasonable precautions have been taken by WHO to verify the information contained in this publication. However, the published material is being distributed without warranty of any kind, either expressed or implied. The responsibility for the interpretation and use of the material lies with the reader. In no event shall WHO be liable for damages arising from its use.

Printed in in Switzerland.

CONTENTS

ABBREVIATIONS AND ACRONYMS	4
ACKNOWLEDGEMENTS	5
EXECUTIVE SUMMARY	6
1. BACKGROUND	7
1.1 Introduction	7
1.2 Why is this publication needed?	7
1.3 For whom is this publication intended?	9
1.4. Methods for developing this publication	9
2. ENSURING ACCESS TO INTEGRATED, RIGHTS-BASED, CLIENT-CENTRED, HIGH-QUALITY CONTRACEPTIVE CARE	10
2.1 Human rights in high-quality, client-centred contraceptive care	10
2.2 High-quality, client-centred contraceptive care	11
2.3 Linking and integrating HIV and contraceptive care	12
2.4 Involving women, adolescent girls and communities	12
3. ENSURING CONTRACEPTIVE OPTIONS AND EFFECTIVENESS FOR WOMEN AND ADOLESCENT GIRLS LIVING WITH HIV	13
3.1 Overview of contraception for women living with HIV	13
3.2 WHO medical eligibility criteria for contraceptive use for women and adolescent girls living with HIV	14
3.3 Greater contraceptive choice leads to more effective contraceptive use	16
3.4 Ensuring voluntary, informed choice in contraceptive decision-making is essential	16
3.5 Numerous methods can achieve effective contraception	18
4. CONTRACEPTIVE CONSIDERATIONS FOR WOMEN AND ADOLESCENT GIRLS RECEIVING ART	21
4.1 Why is this information important for women and adolescent girls who use ART and may want to use hormonal contraception?	21
4.2 Do ARV drugs affect the effectiveness of hormonal contraceptives?	21
4.2.1 WHO medical eligibility criteria recommendations on contraception and ARV drugs	21
4.2.2 DTG-based ART and hormonal contraception	22
4.2.3 Information about specific contraceptives and their potential interaction with ARV drugs	22
4.2.4 TB treatment and hormonal contraception	23
5. CONTRACEPTIVE CONSIDERATIONS ACROSS THE LIFE-COURSE IN HIV TREATMENT PROGRAMMES	24
5.1 Adolescents	24
5.2 Women and adolescent girls postpartum	25
5.3 Women older than 40 years	26
5.4 Women and adolescent girls who want pregnancy	26
5.5 Emergency contraception	26
REFERENCES	27
Annex 1. Resources relevant to contraceptive care in HIV programmes	31
1 Sexual and reproductive health rights and quality of care	31
2 Links between HIV care and contraceptive care	33
3 Evidence-informed contraceptive care	34
Annex 2. More detailed information on the effectiveness of contraceptives	37
Annex 3. Advising women and adolescent girls living with HIV about ART regimens and hormonal contraception	39

ABBREVIATIONS AND ACRONYMS

3TC	lamivudine
ABC	abacavir
ART	antiretroviral therapy
ARV	antiretroviral
ATV/r	atazanavir/ritonavir
AZT	zidovudine
CHC	combined hormonal contraception
CIC	combined injectable contraceptive
COC	combined oral contraceptive
CVR	combined contraceptive vaginal ring
d4T	stavudine
ddI	didanosine
DMPA	depot medroxyprogesterone acetate
DRV/r	darunavir/ritonavir
DTG	dolutegravir
EFV	efavirenz
ETG	etonogestrel
FTC	emtricitabine
IUD	intrauterine device
LNG	levonorgestrel
LPV/r	lopinavir/ritonavir
NET-EN	norethisterone enantate
NNRTI	non-nucleoside reverse-transcriptase inhibitor
NRTI	nucleoside or nucleotide reverse-transcriptase inhibitor
NVP	nevirapine
POP	progestogen-only pill
PI	protease inhibitor
RTV	ritonavir
SRH	sexual and reproductive health
TDF	tenofovir disoproxil fumarate

ACKNOWLEDGEMENTS

This document is the result of collaboration between the WHO Department of HIV and Global Hepatitis Programme and Department of Reproductive Health and Research.

Chelsea Morroni consultant, WHO was the main technical writer, supported by **Chantal Migone** (consultant, WHO). The development of the document was coordinated by **Morkor Newman Owiredu** (Department of HIV and Global Hepatitis Programme, WHO) and **Mary Lyn Gaffield** (Department of Reproductive Health and Research, WHO), led by **Meg Doherty** (Department of HIV and Global Hepatitis Programme, WHO) and **James Kiarie** (Department of Reproductive Health and Research, WHO) under the overall leadership of **Gottfried Hirnschall** (Department of HIV and Global Hepatitis Programme, WHO) and **Ian Askew** (Department of Reproductive Health and Research, WHO). **David Breuer** edited the text.

Contributors from WHO headquarters and regional offices include **Wole Ameyan** (Department of HIV and Global Hepatitis Programme), **Masoud Dara** (WHO Regional Office for Europe), **Massimo Ghidinelli** (WHO Regional Office for the Americas), **Joumana Hermez** (WHO Regional Office for the Eastern Mediterranean), **Nancy Kidula** (WHO Intercountry Support Team, Harare, Zimbabwe), **Frank Lule** (WHO Regional Office for Africa), **Manjulaa Narasimhan** (Department of Reproductive Health and Research), **Martina Penazzato** (Department of HIV and Global Hepatitis Programme), **Michelle Rodolph** (Department of HIV and Global Hepatitis Programme), **Mukta Sharma** (WHO Regional Office for South-East Asia), **Petrus Steyn** (Department of Reproductive Health and Research) and **Marco Vitoria** (Department of HIV and Global Hepatitis Programme).

The following provided their expertise in external review:), **Emily Bass** (AVAC, Global Advocacy for HIV Prevention), **Linda Gail Bekker** (Desmond Tutu HIV Centre), **Peter Ehrencranz** (Bill & Melinda Gates Foundation), **Ade Fakoya** (Global Fund to Fight AIDS, Tuberculosis and Malaria), **Alison Gatto** (Family Planning 2020), **Sandra Jordan** (Family Planning 2020), **Catherine Lane** (Family Planning 2020), **Imelda Mahaka** (African Community Advisory Board (AfroCAB)), **Jennifer Mason** (United States Agency for

International Development), **Caroline Middlecote** (Clinton Health Access Initiative), **Surbhi Modi** (United States Centers for Disease Control and Prevention), **Lilian Mworeko** (International Community of Women Living with HIV, Eastern Africa), **Kavita Nanda** (FHI 360), **Carmen Perez Casas** (Unitaid), **Elliot Raizes** (United States Centers for Disease Control and Prevention), **Helen Rees** (Wits Reproductive Health and HIV Institute of the University of Witwatersrand), **Beth Schlachter** (Family Planning 2020), **Jacque Wambui** (National Empowerment Network of People Living with HIV), **Heather Watts** (United States President's Emergency Plan for AIDS Relief), **Alice Welbourn** (Salamander Trust) and **Sarah Yeiser** (United States Agency for International Development).

The following provided comments and feedback on a draft of the publication at a WHO and Partners Stakeholders' Meeting on Hormonal Contraception and HIV, held in Zambia, 26–28 February 2019: **Mary Nana Ama Brantuo** (WHO Country Office in Namibia), **Irène Yakana Ndjouma Epse Emah** (WHO Country Office in Cameroon), **Bhavin Jani** (WHO Country Office in the United Republic of Tanzania), **Etienne Kembou** (WHO Country Office in Cameroon), **Nomthandazo Lukhele** (WHO Country Office in Eswatini), **Jennifer Mason** (United States Agency for International Development), **Ishmael Nyasulu** (WHO Country Office in Malawi), **Busi Radebe** (WHO Country Office in South Africa), **Michelle Rodolph** (Department of HIV and Global Hepatitis Programme, WHO), **Saliyou Sanni** (WHO Intercountry Support Team, Libreville, Gabon) and **Ellen Thom** (WHO Country Office in Zambia).

EXECUTIVE SUMMARY

The importance of access to contraceptive care for women and adolescent girls, including those living with HIV, is well established. By enabling women and adolescent girls to exercise their right to choose and control whether to have children and when and how many, use of voluntary, effective contraception promotes positive educational and economic outcomes for women and girls and is key to achieving gender equality, empowering women and reducing poverty. Using contraception also leads to improved infant and child health outcomes by preventing morbidity and mortality related to unintended pregnancy. For women and adolescent girls living with HIV, in addition to the above, using effective contraception reduces the mother-to-child transmission of HIV by preventing unintended pregnancies and enabling the planning and safer conception of desired pregnancies with optimal maternal and child health outcomes.

Despite the clear benefits of access to voluntary, effective contraception, unmet need for contraception remains high, especially in low- and middle-income countries and in settings with a high prevalence of HIV infection. Women and adolescent girls living with HIV have a high unmet need for effective contraception and reproductive health services. Meeting the needs of women and adolescent girls living with HIV for greater contraceptive choice and improved access to high-quality contraceptive care, including a wide range of contraceptive methods and comprehensive evidence-informed counselling, should be given priority. Reducing the unmet need for contraception among women and girls living with HIV who do not want to become pregnant is an essential aspect of high-quality HIV and health-care services.

In 2018, a signal was reported of a potential risk of neural tube defects among babies whose mothers were taking dolutegravir-based antiretroviral therapy (the regimen WHO recommends as preferred first-line therapy) at the time of conception. This issue and the WHO guidance issued around it has brought to the forefront the importance of both access to contraceptive care for women and adolescent girls living with

HIV and the importance of the rights of women and adolescent girls living with HIV to make their own informed choices about their health, including their sexual and reproductive health. Whatever the eventual conclusions are regarding the association between neural tube defects and dolutegravir-based antiretroviral therapy, there is now an opportunity to ensure that all women and adolescent girls living with HIV who want to avoid, delay or limit childbearing have access to rights-based, client-centred, evidence-informed, high-quality contraceptive services that meet their needs.

This publication accompanies WHO's 2019 *Programmatic considerations for countries transitioning to new antiretroviral drug regimens*. The main audience for this publication includes HIV and family planning and reproductive health programme managers and members of national guideline development and technical advisory groups, implementing partners and professional societies involved in HIV treatment programmes for women and adolescent girls living with HIV. It brings together existing, evidence-informed WHO guidance on meeting the contraceptive needs and ensuring sexual and reproductive health and rights for women and adolescent girls living with HIV.

The publication provides information on contraceptive options and choice, the medical eligibility criteria for different methods of contraception for women and adolescent girls living with HIV and using antiretroviral therapy, a summary of the comparative effectiveness of contraceptive methods and contraceptive considerations at different stages of a woman's life-course. It clarifies the right of women and adolescent girls living with HIV to make informed choices about WHO-recommended antiretroviral drug regimens, including dolutegravir, to have access to these regimens and to have the right to make informed choices about their contraception and sexual and reproductive health. It includes a list of key resources and tools relevant to providing rights-based, high-quality contraceptive care in the context of HIV care and treatment programmes.

1. BACKGROUND

1.1 Introduction

The voluntary use of effective contraception enables women and adolescent girls, including those living with HIV, to choose whether and when to have children and how many and to maintain their health by reducing unintended pregnancy-related morbidity and mortality with planned, spaced, well-timed pregnancies, contributing to improved outcomes for both mother and child. This leads to positive health, educational and economic outcomes for women and girls and social and economic development at the community and national levels (1). Use of voluntary, effective contraception also reduces the vertical transmission of HIV, by preventing unintended pregnancies and enabling the planning and safer conception of desired pregnancies (2); the use of condoms reduces horizontal transmission of HIV and other sexually transmitted infections. Further, recent data from South Africa show that unintended pregnancy may predict poor outcomes among women initiating antiretroviral therapy (ART) during pregnancy (3).

Despite the clear benefits of access to voluntary, effective contraception, unmet need¹ for contraception remains high, especially in low- and middle-income countries (1,5), which includes settings with a high prevalence of HIV infection. Women and adolescent girls living with HIV have a high unmet need for effective contraception and reproductive health services, because they face stigma and discrimination, higher levels of violence, poorer access to health care and a general lack of safe, supportive and enabling environments (6). A global survey on the sexual and reproductive health and rights priorities of women living with HIV from 94 countries found that 60% reported at least one unintended pregnancy, that less than half the women surveyed had ever obtained contraceptive services and that high rates of violence, including in health-care settings, impeded their ability to make informed decisions regarding their health (5,7,8).



1.2 Why is this publication needed?

National policies and programmes as well as donors should give priority to meeting the needs of women and adolescent girls living with HIV for greater contraceptive choice and improved access to high-quality contraceptive care, including a wide range of contraceptive methods and comprehensive evidence-informed counselling. Reducing the unmet need for contraception among women and girls living with HIV who do not want to become pregnant is an essential aspect of high-quality HIV and health-care services.

In 2018, WHO published updated interim guidelines on first-line and second-line antiretroviral (ARV) drug regimens (9), recommending a dolutegravir (DTG)-based regimen as the preferred first-line regimen for people starting ART for the first time, including women and adolescent girls. Because the ongoing Tsepamo birth surveillance study in Botswana has identified a potential increased risk of neural tube defects among infants whose mothers living with HIV became pregnant while taking DTG-based ART (10), these interim guidelines (9) include recommendations about ART regimens (a DTG-based regimen is recommended as the preferred first-line regimen for people living with HIV initiating ART, including women and adolescent girls) and contraceptive use for women and adolescent girls of childbearing potential (9).

Concerns have been voiced and clear statements made by women living with HIV calling for WHO to clarify aspects of the guidance and to guide on implementing rights-based and evidence-informed contraceptive care for women and adolescent girls living with HIV in the context of these recommendations. National HIV programmes have also requested supportive information on providing contraceptive methods and services for women and adolescent girls living with HIV.

A sex worker displays a strip of condoms at a brothel in Tangail, Bangladesh.

© 2017 Md. Akhlas Uddin, Courtesy of Photoshare

1. Women with unmet need are those who are fecund and sexually active but are not using any method of contraception and report not wanting any more children or wanting to delay the next child. The concept of unmet need points to the gap between women's reproductive intentions and their contraceptive behaviour (4).

Continued observation of additional pregnancy outcomes in Tsepamo and from other studies is needed to determine whether this increased risk of neural tube defects will be confirmed or refuted. Regardless of the eventual conclusions on the potential association between DTG-based ART use at the time of conception and the risk of neural tube defects, making rights-based, client-centred, evidence-informed, high-quality contraceptive care available to women and adolescent girls living with HIV should be given priority.

This publication accompanies WHO's 2019 *Programmatic considerations for countries transitioning to new antiretroviral drug regimens (11)*, expanding on subsection 2.2.1 on women and adolescent girls of childbearing potential (Box 1). It brings together the existing evidence-informed WHO and other guidance on meeting the contraceptive needs and ensuring sexual and reproductive health and rights for women and adolescent girls living with HIV. Annex 1 includes a list of key resources and tools relevant to providing high-quality contraceptive care in the context of HIV care and treatment programmes.



A young mother and her baby wait outside an HIV clinic in rural Ethiopia.

© 2016 Chelsea Solmo, Courtesy of Photoshare

Box 1. Summary of WHO's 2019 Programmatic considerations for countries transitioning to new antiretroviral drug regimens (11)

1. DTG is the preferred first-line ARV regimen for adults and adolescents, including women and adolescent girls of childbearing potential (9).
2. For women and adolescent girls of childbearing potential, counsel about the potential increased risk of neural tube defects when DTG-based ART is being used at the time conception occurs. Inform about the potential benefits of DTG-based ART compared with the current available alternative, efavirenz (EFV)-based ART (9,11).
3. Women and adolescent girls of childbearing potential who do not want to become pregnant should have access to consistent and effective contraception to allow them to plan pregnancies when they desire, regardless of their ART regimen. They should have access to DTG (9). Many women and adolescent girls may not be able to negotiate when they want to become pregnant or negotiate condom use and/or might not be aware that they are pregnant.
4. Women and adolescent girls of childbearing potential who do want to become pregnant or are otherwise not using contraception should be informed that an EFV-based regimen is a safe and effective first-line regimen in pregnancy and can be used during the period of potential risk for developing neural tube defects (9).
5. After appropriate counselling on potential risks and benefits, women and adolescent girls should be allowed to make an informed choice about the ART regimen they want to receive, including DTG-based ART and EFV-based ART (11).

1.3 For whom is this publication intended?

The main audience for this publication is HIV and family planning and reproductive health programme managers and members of national guideline development and technical advisory groups, implementing partners and professional societies involved in HIV treatment programmes for women and adolescent girls living with HIV. This publication can be used in collaboration with national and local networks of women and adolescent girls living with HIV to design, deliver and evaluate policies and services, including peer support, that align with their priorities and meet their needs.

1.4 Methods for developing this publication

The WHO HIV Department and Department of Reproductive Health and Research developed this publication jointly.

The HIV Department and the Department of Reproductive Health and Research agreed on priority areas for inclusion.

Existing WHO guidelines, guidance documents, human rights frameworks and implementation tools for providing sexual and reproductive health and contraceptive care to women and adolescent girls, including those living with HIV, were reviewed. Relevant recommendations, good practice statements and guidance were extracted and summarized. Existing WHO guidelines for treating people living with HIV were also reviewed, and relevant recommendations, good practice statements and guidance were extracted and summarized. All source WHO publications are referenced throughout this publication and listed in Annex 1.

The content areas for inclusion and outline of the publication were presented at a civil society consultation in Johannesburg, South Africa organized by partners in November 2018. An early draft was discussed at a WHO and partners stakeholders' meeting on hormonal contraception and HIV held in Lusaka, Zambia on 26–28 February 2019, and the reviewers who took part in the process are acknowledged. Members of civil society organizations who provided peer review of the document were invited through a civil society consultation organized by AVAC and the International Community of Women Living with HIV Eastern Africa (ICWEA) in Lusaka, Zambia on 24–25 February 2019.

A diverse range of stakeholders peer reviewed the draft, and the comments and feedback from peer reviewers was incorporated. Peer reviewers submitted declaration of interest forms in accordance with WHO policy. The responsible technical officer reviewed these declaration of interest forms and did not identify any significant conflicts of interest.



A health ambassador in Kampala, Uganda, teaches a young man how to safely use a male condom.

© 2017 Musinguzi John/Public Health Ambassadors Uganda, Courtesy of Photoshare

2. ENSURING ACCESS TO INTEGRATED, RIGHTS-BASED, CLIENT-CENTRED, HIGH-QUALITY CONTRACEPTIVE CARE

The fundamental considerations for providing high-quality contraceptive care to women and adolescent girls living with HIV include: (1) respecting, protecting and fulfilling human rights; (2) high-quality, client-centred care that includes a wide range of available contraceptive methods and method choice; (3) links with other health services; and (4) involving women, adolescent girls and communities.

Specifically, it is critically important that policy-makers, programme managers and health-care providers recognize the differences in need and desire for contraception among women and adolescent girls of childbearing age and childbearing potential.² A one-size-fits-all approach cannot be applied to women and adolescent girls living with HIV in all their diversity,³ and contraceptive considerations must focus on the situations, circumstances, needs and preferences of individual women and adolescent girls. All women and adolescent girls go through different seasons of sexual and reproductive health-care need and reproductive intent throughout their life-course. A client-centred approach is paramount (12).

Women and adolescent girls living with HIV should be supported by policies and health-care services to effectively prevent unintended pregnancies if they want to delay, space or limit childbearing and to have planned, safe pregnancies when they desire to, so that they can achieve their personal fertility intentions. Safe and supportive health-care environments and non-judgemental services that enable women and adolescent girls living with HIV to routinely and openly discuss their reproductive plans and desires as part of their HIV care are essential.

2.1 Human rights in high-quality, client-centred contraceptive care

Respect, protection and fulfilment of human rights contributes to positive sexual and reproductive health and rights outcomes, including preventing unintended pregnancy and the healthy timing and spacing of pregnancies through better access to, uptake of and continued use of contraception.

WHO's 2014 *Ensuring human rights in the provision of contraceptive information and services: guidance and recommendations (13)* provides recommendations for policy-makers and managers on the priority actions needed to ensure that human rights are considered and systematically integrated into the provision of contraceptive information and services. WHO recommends that countries and programmes ensure timely, affordable and equitable access to high-quality contraceptive information and services, which should be delivered in a way that ensures fully informed decision-making and volunteerism, respects dignity and autonomy, is non-discriminatory and sensitive to individuals' needs and perspectives (Box 2). The right of individuals to decline contraceptive services without coercion or judgement is also essential. Section 1 of Annex 1 provides more resources on human rights and contraceptive care.

2. From Programmatic considerations for countries transitioning to new antiretroviral drug regimens (11): "Women of childbearing potential are premenopausal females capable of becoming pregnant. Postmenopausal women, women who do not have reproductive organs, women who have undergone tubal ligation, women who are not sexually active and transgender women are not considered women of childbearing potential."

3. Women in all their diversity includes but is not limited to: women who are heterosexual, lesbian, bisexual, transgender or intersex; women who use or have used drugs; women who are or have been involved in sex work; women who are single, married or in stable relationships, separated, divorced or widowed; women who are and are not sexually active; women and girls who have undergone female genital mutilation; women who have tuberculosis, malaria, hepatitis B or C and/or other comorbidities; women who are currently or have previously been incarcerated, detained or homeless; women who are economic or political migrants; women who are indigenous; women living with disabilities; and adolescent girls who have acquired HIV perinatally, in childhood or during adolescence (6).

Box 2. Human rights principles and standards for contraceptive care

1. Non-discrimination in the provision of contraceptive information and services
2. Availability of contraceptive information and services
3. Accessibility of contraceptive information and services
4. Acceptability of contraceptive information and services
5. Quality of contraceptive information and services
6. Informed decision-making in the provision of contraceptive information and services
7. Privacy and confidentiality in the provision of contraceptive information and services
8. Participation in the provision of contraceptive information and services
9. Accountability in the provision of contraceptive information and services.

Source: Ensuring human rights in the provision of contraceptive information and services: guidance and recommendations: guidance and recommendations (13).

2.2 High-quality, client-centred contraceptive care

A quality of care approach, as presented in WHO's 2017 *Quality of care in contraceptive information and services, based on human rights standards* (14), emphasizes the importance of putting the client and their experience at the centre of care. Key elements of high-quality care in contraceptive programmes include:

- grounding in a human rights-based framework (6,13);
- respectful relationships between providers and clients;
- each client's autonomous choice among a wide range of contraceptive methods;
- client access to evidence-informed information on the advantages and disadvantages of various contraceptive methods;
- client decision-making without coercion or judgement;
- client privacy and confidentiality;
- technically competent health workers for counselling and provision of a wide range of contraceptive methods; and
- an appropriate constellation of services (including follow-up) and contraceptive methods that are available in the same locality.

Section 1 of Annex 1 provides resources on high-quality contraceptive care.

A provider counsels a couple on the various methods of family planning at a primary health care center in Oyo State, South West, Nigeria.

© 2012 CCP/NURHI 2,
Courtesy of Photoshare



2.3 Linking and integrating HIV and contraceptive care

Improved linkage between contraceptive and HIV care through policies, programmes and services has numerous potential benefits and advantages for clients and health systems (15), including improved access to and uptake of key services, enhanced co-management of contraception and HIV (16,17), reduction in HIV-related stigma and discrimination, improved coverage of underserved, vulnerable and key populations and better utilization of overstretched health-care workers (18). Contraceptive and HIV services can be integrated through several approaches, including multi-tasked providers, referral systems and one-stop shopping offering HIV and contraceptive services under one roof. Understanding the advantages and challenges of different approaches to linkage and integration is important for policy-makers and programme managers so they can decide what is feasible and appropriate in particular settings. For example, many women receiving HIV treatment services are now enrolled in programmes that require less frequent interactions with the health facility (such as ART refills for three or even six months of treatment at a time). Policy-makers and programmes seeking to provide optimal access to contraceptive services for these women may need to adapt their programmes to coordinate with such patient-centred approaches. Section 2 of Annex 1 provides resources on this topic.

2.4 Involving women, adolescent girls and communities

National HIV policies and guidelines should be structured, developed and implemented in ways that respect the autonomy of women and adolescent girls in making decisions about their health. Women and adolescent girls living with HIV have underscored the importance of ensuring the right to access the best available ART regimens (11) and to informed choice among ART regimens and contraceptive options, including the right not to use contraception. Programmes and services should provide information and options, including the full range of contraceptive options, for women and adolescent girls who want to take DTG-based ART or other ARV drug regimens and for all women and adolescent girls living with HIV. Involving women and adolescent girls as active participants in developing, delivering and evaluating policies, guidelines and services is important for programmes to succeed in reaching women, building trust and delivering services that benefit individuals and communities.



A Village Health Team (VHT) member injects a client with Sayana Press at her home in Iganga district, Uganda.

© 2016 Laura Wando,
Courtesy of Photoshare

3. ENSURING CONTRACEPTIVE OPTIONS AND EFFECTIVENESS FOR WOMEN AND ADOLESCENT GIRLS LIVING WITH HIV

3.1 Overview of contraception for women living with HIV

- Women and adolescent girls living with HIV should have access to and be able to use the full range of available contraceptive options for which they are medically eligible (19), regardless of their choice of ART regimen. Table 1 lists the contraceptive methods that may be available in countries and programmes.
- Many vulnerable and at-risk women and adolescent girls may not be able to negotiate when they want to become pregnant or negotiate condom use. Health-care workers should consider this when discussing contraceptive options (6).
- Women and adolescent girls living with HIV can generally safely use all available contraceptive methods (see Box 3 and Tables 2 and 3 for details and guidance in the 2015 WHO *Medical eligibility criteria for contraceptive use* (19)).
 - Women and adolescent girls living with HIV should be given comprehensive information about the full range of contraceptive options available to make their decisions about the preferred method for them.
 - Information should include that the long-acting reversible methods (intrauterine contraception and implants) are the most effective reversible methods.
 - Women and adolescent girls living with HIV should be counselled about the features, effectiveness and safety of the full range of available contraceptive options (Box 3).
 - No contraceptive method is contraindicated because of having HIV or using ART, although interactions with some ARV drugs may reduce the effectiveness of some hormonal contraceptives. A woman using HIV medication can use all contraceptive methods if she is properly counselled about the risks and benefits and makes an informed decision (see Section 4).

TABLE 1. RANGE OF CONTRACEPTIVE METHODS THAT MAY BE AVAILABLE IN COUNTRIES OR PROGRAMMES

Long-acting reversible contraceptives
<ul style="list-style-type: none"> • These methods provide very effective contraception for an extended period of time without requiring user action (i.e., no regular clinic visits, refills, or remembering required). • These methods are fully reversible, meaning future pregnancies are possible. • These methods do not have to be used long term. The user can and has the right to discontinue these methods at any time they choose. <ul style="list-style-type: none"> - Copper-bearing intrauterine device (Cu-IUD) - Levonorgestrel-releasing intrauterine device (LNG-IUD)^a - Subdermal contraceptive implants (LNG and etonogestrel (ETG) implants)^a
Other reversible methods (short-acting methods)
<ul style="list-style-type: none"> • These methods can provide effective contraception but require user action, such as regular clinic visits, remembering and correct and consistent use. • These methods are reversible, meaning future pregnancies are possible. • These methods can also be used long term for preventing pregnancy. <ul style="list-style-type: none"> - Three-monthly progestogen-only injectable contraceptive, intramuscular or subcutaneous (depot medroxyprogesterone acetate (DMPA))^a - Two-monthly progestogen-only injectable contraceptive (norethisterone enantate (NET-EN))^a - Monthly combined injectable contraceptive (CIC)^a - Combined oral contraceptive (COC) pills^a - Progestogen-only oral contraceptive pills (POP)^a - Contraceptive vaginal ring^a - Contraceptive patch^a - Condoms, male and female - Diaphragm - Fertility awareness methods - Spermicide - Lactational amenorrhoea method
Permanent methods of contraception
<ul style="list-style-type: none"> • These methods provide very effective contraception permanently. • These methods are not reversible. Permanent methods are safe, suitable and appropriate for women and couples only if they want no further pregnancies, have decided on a permanent method in a voluntary way, after having full information, counselling and enough time to make the decision, including on the irreversible nature of the methods, have given full, free and informed consent and were not coerced. <ul style="list-style-type: none"> - Female sterilization (tubal ligation) - Male sterilization (vasectomy)
Emergency contraception
<ul style="list-style-type: none"> • Oral emergency contraceptive pills^a • Cu-IUD

^aIndicates a hormonal contraceptive method.

Source: adapted from *Family planning/contraception* (20).

3.2 WHO medical eligibility criteria for contraceptive use for women and adolescent girls living with HIV

The 2015 WHO *Medical eligibility criteria for contraceptive use*, 5th edition (19) provides detailed information and categorizes the safety of contraceptive methods (WHO medical eligibility criteria 1–4) for use with health conditions or medically relevant characteristics of users, including HIV infection and taking ART. The safety of use of contraceptive methods with (1) symptomatic or mild HIV clinical disease (WHO stages 1 and 2), (2) severe or advanced HIV disease (WHO stages 3 and 4) and (3) use of concomitant medicine, including HIV and TB medicine, is categorized. See Box 3 for how to use the medical eligibility criteria. See below for additional information on use of contraceptive methods with HIV and TB medicines.

WHO medical eligibility criterion 1 or 2 means that it is always or generally always safe to use the contraceptive method with respect to the particular health condition or characteristic. Almost all contraceptive methods are WHO medical eligibility criterion 1 or 2 for HIV and HIV medicines, so that means that women and girls living with HIV should have many contraceptive options (Table 2). Ensuring access to a wide range of options in policies and services is critical.

For women and adolescent girls living with HIV who want to delay, space, or limit childbearing, the WHO medical eligibility criteria recommend the following:⁴

- No restriction (WHO medical eligibility criterion 1) on the use of combined hormonal contraceptives (combined oral contraceptive pills, combined contraceptive patches, combined contraceptive vaginal rings or CIC).
- No restriction (WHO medical eligibility criterion 1) on the use of progestogen-only pills, progestogen-only injectables (DMPA and NET-EN) and LNG and ETG implants.

- Women and adolescent girls living with HIV who have asymptomatic or mild HIV clinical disease (WHO HIV stage 1 or 2) may generally use the LNG-releasing IUD (WHO medical eligibility criterion 2) and the Cu-IUD.
 - Women and adolescent girls living with HIV who have severe or advanced HIV clinical disease⁵ (WHO HIV stage 3 or 4) should generally not initiate use of the LNG-IUD or Cu-IUD (WHO medical eligibility criterion 3 for initiation) until their illness has improved to asymptomatic or mild HIV clinical disease.
 - However, women and adolescent girls who already have an LNG-IUD or Cu-IUD inserted and who develop severe or advanced HIV clinical disease need not have their IUD removed (WHO medical eligibility criterion 2 for continuation). IUD users with severe or advanced HIV clinical disease should be closely monitored for pelvic infection.

In general, women and adolescent girls taking ART who want to delay, space or limit childbearing are eligible for all contraceptive methods, but special consideration (WHO medical eligibility criterion 2) and counselling is necessary for women using some hormonal contraceptive methods with certain ART regimens due to drug interactions (see Section 4 and Annex 3).

The *WHO medical eligibility criteria wheel for contraceptive use*, 5th edition (21) and the app for the medical eligibility criteria for contraceptive use (22) can facilitate contraception service providers in counselling women and adolescent girls and supporting their choice of a contraceptive method that is safe, effective and acceptable to them. This includes women and adolescent girls with health conditions or medically relevant characteristics, including HIV infection and ART use.

4. Unless specifically stated, the WHO medical eligibility criteria do not consider multiple conditions or characteristics simultaneously. Assessing an individual woman's or adolescent girl's eligibility for using a contraceptive method in the presence of multiple conditions, including HIV, requires clinical judgement based on the evidence and other guidance.

5. The WHO definition of advanced HIV disease is as follows: for adults and adolescents and children five years and older, advanced HIV disease is defined as the presence of a CD4 cell count <200 cells/mm³ or a WHO clinical stage 3 or 4 event.

Box 3. How to use and interpret the medical eligibility criteria categories

The medical eligibility criteria provide evidence-informed guidance on the safety use of contraceptive methods with medical conditions or the medically relevant characteristics of users, including HIV and ART use. Unless specifically stated, the WHO medical eligibility criteria do not consider multiple conditions or characteristics simultaneously. Assessing an individual woman's or adolescent girl's eligibility for using a contraceptive method in the presence of multiple conditions, including HIV, requires clinical judgement based on the evidence and other guidance.

Medical eligibility criteria category	Description	Use of medical eligibility criteria categories in clinical practice	
		With clinical judgement	With limited clinical judgement
1	A condition for which there is no restriction for the use of the contraceptive method	Use method in any circumstances	Yes (use the method)
2	A condition in which the advantages for using the method generally outweigh the theoretical or proven risks	Generally use the method; some follow-up may be needed	
3	A condition in which the theoretical or proven risks usually outweigh the advantages of using the method	Use of the method not usually recommended unless other more appropriate methods are not available or not acceptable; clinical judgement and continuing access to clinical services are required for use	No (do not use the method)
4	A condition that represents an unacceptable health risk if the contraceptive method is used	The method should not be used	

TABLE 2. MEDICAL ELIGIBILITY CRITERIA CATEGORY SUMMARY TABLE FOR CONTRACEPTION FOR WOMEN AND ADOLESCENT GIRLS LIVING WITH HIV

Medical eligibility criteria category summary table for contraception and HIV									
Medical eligibility criteria condition: HIV infection	COC/P/ CVR	CIC	POP	DMPA/ NET-EN	LNG/ETG implants	Cu-IUD		LNG-IUD	
						I	C	I	C
Asymptomatic or mild HIV disease (WHO stage 1 or 2)	1	1	1	1	1	2	2	2	2
Severe or advanced HIV clinical disease (WHO stage 3 or 4) ^a	1	1	1	1	1	3	2	3	2

^aThe WHO definition of advanced HIV disease is as follows: for adults and adolescents and children five years old and older, advanced HIV disease is defined as the presence of a CD4 count <200 cells/mm³ or a WHO clinical stage 3 or 4 event.

COC: combined oral contraceptive pill; P: combined contraceptive patch; CVR: combined contraceptive vaginal ring; CIC: combined injectable contraceptive; POP: progestogen-only pill; DMPA: depot medroxyprogesterone acetate injectable contraceptive; NET-EN: norethisterone enantate injectable contraceptive; LNG implant: levonorgestrel implant; ETG: etonogestrel implant; Cu-IUD: copper-bearing intrauterine device; LNG-IUD: levonorgestrel releasing intrauterine device; I: initiation; C: continuation.

Source: *Medical eligibility criteria for contraceptive use (19)*.

3.3 Greater contraceptive choice leads to more effective contraceptive use

- The access of women and adolescent girls to certain ARV drug regimens (including DTG-based regimens) should not depend on contraceptive use or on the type of contraceptive used.
- Women and adolescent girls living with HIV who want to delay, space or limit their childbearing, regardless of which ARV drug regimen they choose to use, should have access to the full range of available contraceptive options supported by relevant counselling, including the long-acting reversible options of intrauterine contraception and implants and permanent methods (female and male sterilization) and informed consent to enable them to prevent or plan pregnancies as they choose.
- WHO's 2014 *Ensuring human rights in the provision of contraceptive information and services: guidance and recommendations* (13) stipulates that long-acting, short-acting, emergency contraception, barrier and permanent methods should be available.
- Greater contraceptive choice is strongly correlated with better (more effective and continued) contraceptive use (23–26).
- Ideally, the full range of contraceptive options should be available in HIV care services, but if not, high-quality counselling should be provided in HIV services with informed consent, and effective referrals should be facilitated so that women can access their preferred contraceptive method in a timely manner.
- Programmes should encourage and support dual method contraceptive use: correctly and consistently using male or female condoms in addition to using another contraceptive method for preventing pregnancy. In addition to being a supplementary method of contraception, condoms also help prevent the transmission of HIV and other sexually transmitted infections.

- Many vulnerable and at-risk women and adolescent girls may not be able to negotiate when they want to become pregnant or negotiate condom use. Health-care workers should consider this when discussing contraceptive options (6).
- Programmes should procure contraceptive commodities and ensure that health-care providers and personnel are trained in such a way that a wide range of contraceptive methods, including condoms, are available to women and adolescent girls living with HIV.

3.4 Ensuring voluntary, informed choice in contraceptive decision-making is essential

- With comprehensive counselling and informed choice, women and adolescent girls should be supported in making decisions about a contraceptive method that suits their life stage and fertility intentions. At all times, the decision must be based on: the client's values, needs and preferences and the medical eligibility for the contraceptive options (19) for that particular client.
- WHO (13,14) states that autonomous choice among a wide range of contraceptive options and evidence-informed information on all methods are fundamental to high-quality, human rights-based contraceptive programmes.
- Trained health-care providers should give clients comprehensive, scientifically accurate information (Box 4) that supports them in making voluntary, informed decisions about their choice of contraceptive method (14). This information should be presented in a non-judgemental and unbiased way using language and formats that the client can easily understand.
- Clients should be supported in choosing the method that best suits their values, needs, preferences, fertility intentions and health conditions.

- Clients who choose to switch or discontinue a contraceptive method should be supported in this decision, since changing method is sometimes required for clients to find the most suitable method to meet their needs and preferences.
- Clients who choose not to use a contraceptive method after counselling on risks and benefits should be supported in this decision, regardless of ARV drug regimen.
- No one, including people living with HIV, should be coerced to use any contraceptive method or any specific method of contraception. For example, use of DTG ART and/or living with HIV are not indications for permanent methods of contraception (female sterilization (tubal ligation) and male sterilization (vasectomy)). Coercing or forcing clients to use permanent methods, or any method they have not voluntarily chosen, is against all rights and principles of HIV and contraceptive care.
- As discussed in subsection 5.1, many vulnerable and at-risk women and adolescent girls may not be able to negotiate when they want to become pregnant. Health-care workers should consider this when discussing contraceptive options (6).
- Permanent methods are safe, suitable and appropriate for women and couples only if they want no further pregnancies, have decided on a permanent method in a voluntary way, after counselling, including on the irreversible nature of the methods, have enough time to make the decision and have given full, free and informed consent (27).

Box 4. Contraceptive information

Clients should be given adequate information in easily understood ways to help them make an informed, voluntary choice of a contraceptive method. This information should at least include:

- the effectiveness of the method
- the factors that impact effectiveness
- the duration the method can be used
- correct use of the method
- follow-up required for the method
- how the method works
- common side-effects of the method
- the health benefits and risks of the method
- the privacy of the method
- the signs and symptoms that would necessitate a return to the clinic when using the method
- information on return to fertility after discontinuing method use
- full explanation on permanent methods being irreversible
- information on sexually transmitted infection protection and dual contraceptive method use, using condoms
- cost of the method, if any.

For resources on this topic, see Annex 1, sections 1 and 3 and *Family planning – a global handbook for providers* (28).

A family planning user and a health promoter discuss contraceptive methods in El Quiché, Guatemala.

© 2014 Haydee Lemus/
PASMO PSI Guatemala,
Courtesy of Photoshare



3.5 Numerous methods can achieve effective contraception

The effectiveness of a contraceptive method depends on several factors:

- the level of protection against pregnancy afforded by the contraceptive method itself: the method's inherent efficacy (Box 5a); and
- how consistently and correctly the method is used (Box 5b).

No method of contraception is 100% effective, but some are very close to 100% effective, and many contraceptive methods can be very effective with correct and consistent use.

- Long-acting reversible methods (intrauterine contraception and implants) and permanent methods (female and male sterilization) are very effective for almost everyone who uses them for several reasons: because of the level of protection afforded by the method itself; because they can be used for a long time (5–10 years for intrauterine contraception; 3–5 years for implants; and permanently for female and male sterilization); and because they require little or no action for continued use or frequent resupply once they are started.
- Methods that require consistent and correct use by individual users and/or regular clinic resupply (injectables, oral pills and condoms) have wide-ranging effectiveness

that can vary according to age, socioeconomic status, users' motivation to prevent or delay pregnancy and health system factors. However, many users can also use these methods very effectively for long periods of time. Fear of intimate partner violence may adversely affect the ability of women and adolescent girls to use these methods consistently and effectively.

- Clients should be supported in choosing the contraceptive method that best suits their values, needs and preferences from a broad range of options, including long-acting, short-acting, emergency, barrier and permanent methods.
- Clients need information and support about the requirements and strategies for consistently and effectively using their chosen method and what to do to protect against pregnancy in case of inconsistent use or inability to use a method in the event of rape or coerced sexual intercourse both within and outside intimate relationships.
- WHO recommends that all women and adolescent girls at risk of an unintended pregnancy, including those living with HIV, have access to emergency contraception and that emergency contraception be routinely included within all national family planning programmes (13). WHO also recommends that safe abortion services, post-abortion care and post-abortion contraceptive services be the same for women living with HIV as for all women (6,28).



Health workers counsel a client about available family planning methods at Eduardo Mondlane Health Center in Chimoio, Mozambique.

© 2015 Arturo Sanabria, Courtesy of Photoshare

Box 5b. Definition of contraceptive effectiveness

- The effectiveness of a contraceptive method is defined by how good the method is at preventing pregnancy (the method's inherent efficacy) and is measured as the failure rate of the contraceptive method: the number of pregnancies that occur while using the method per 100 women per year, or pregnancy rate. Table 4 compares the percentage of women experiencing an unintended pregnancy during the first year of using a method when using the method "perfectly" (consistently and correctly) and when using the method as it is commonly used. "As commonly used" means how the method is used under the real-life, day-to-day conditions experienced by average users (assuming occasional non-use and/or incorrect use).
- The long-acting reversible methods, which include intrauterine contraception and contraceptive implants, are similarly effective with "consistent and correct use" and "as commonly or typically used". This is because their effectiveness does not depend on consistent and correct use by clients.
- Methods that depend on consistent and correct use by clients (such as oral pills, injectables and condoms) have typical use failure rates that are higher than the long-acting reversible methods, but many users can still use these methods very effectively.

Box 4b. What is consistent contraceptive use?

For any method of contraception to be effective, it needs to be used correctly and consistently. Many methods of contraception can be very effective if used correctly and consistently.

Consistent contraceptive use means that an effective method of contraception is used continually (for example, an IUD or implant remains in situ; oral pills are taken every day; or repeat injections are received on time at the specified intervals) or regularly enough (a condom is used correctly at each act of sexual intercourse) to effectively prevent pregnancy, for the duration of time a woman wants to avoid pregnancy. Some methods, specifically the long-acting reversible and permanent methods, are easier to use consistently than other methods.

Consistent contraceptive use can depend on and be influenced by many factors, including user adherence, partner agreement and support, ability to pay, access to clinics for resupply and dependable clinic supplies and stock-outs. When choosing a contraceptive method, clients need to be made aware of the factors that can affect a woman or couple's ability to use each method consistently. Inconsistent use reduces the effectiveness of all contraceptive methods.

The Sayana Press injectable contraceptive on display in Uganda.

© 2018 Kato James,
Courtesy of Photoshare



Table 4 shows the failure rates (rates of unintended pregnancy) for methods of contraception with “consistent and correct use” and when used “as commonly used” (28). Many methods can be very effective with consistent and correct use.

In Annex 2, an easy-to-understand WHO chart groups contraceptive methods according to their effectiveness “as commonly used”. It also provides information on how to achieve the greatest possible effectiveness with each method.

TABLE 4. RATES OF UNINTENDED PREGNANCIES OF CONTRACEPTIVE METHODS AS “CONSISTENTLY AND CORRECTLY” AND “AS COMMONLY USED”

Method of contraception	First-year pregnancy rate per 100 women ^a		12-month pregnancy rate per 100 women ^b
	Consistent and correct use	As commonly used	As commonly used
Implants	0.1	0.1	0.6
Vasectomy	0.1	0.15	
Tubal ligation	0.1	0.5	
LNG-IUD	0.5	0.7	
Cu-IUD	0.5	0.8	1.4
Lactational amenorrhoea method (for six months)	0.6	2 ^c	
Monthly injectable	0.9	3 ^c	
Progestin-only injectable	0.05	4	1.7
COC	0.2	7	5.5
POP	0.3	7	
Combined patch	0.3	7	
Combined vaginal ring	0.3	7	
Male condoms	2	13	5.4
Standard Days Method [®]	5	12	
TwoDay Method [®]	4	14	
Ovulation method	3	23	
Other fertility awareness methods		15	
Diaphragms with spermicide	16	17	
Withdrawal	4	20	13.4
Female condoms	5	21	
Spermicide	16	21	
Cervical cap ^d	26 ^e , 9 ^f	32 ^e , 16 ^f	
No method	85	85	

^aMost of the rates apply to the United States of America. The data are from the best available source. Source: Trussell & Aiken (30).

^bThe rates are from developing countries, with self-reported data in population-based surveys. Source: Polis et al. (31).

^cSource: Hatcher (32).

^dSource: Tressell (33).

^ePregnancy rate for women who have given birth.

^fPregnancy rate for women who have never given birth.

Source: adapted from: WHO Department of Reproductive Health and Research, Johns Hopkins Bloomberg School of Public Health, Center for Communication Programs, Knowledge for Health Project (28).

Key: 0–0.9: very effective. 1–9: effective. 10–19: moderately effective. 20+: less effective.

4. CONTRACEPTIVE CONSIDERATIONS FOR WOMEN AND ADOLESCENT GIRLS RECEIVING ART

4.1 Why is this information important for women and adolescent girls who use ART and may want to use hormonal contraception?

Certain hormonal contraceptive methods (see Table 1 for indication of hormonal methods) and certain ARV drugs when used in combination have the potential for drug–drug interactions, which could theoretically lead to lower effectiveness of either of the therapies or to increased adverse effects. Some ARV drugs interact with hormonal contraceptives, potentially reducing their effectiveness. Similarly, some drugs used for tuberculosis (TB) treatment and prevention (rifampicin, rifabutin and rifapentine) also interact with hormonal contraceptives, potentially reducing their effectiveness (34). Using ARV drugs and TB treatment or preventive therapy containing rifamycins together may reduce the effectiveness of hormonal contraception even more than by using either treatment alone. Lower levels of hormonal contraception resulting from these drug–drug interactions can potentially increase the risk of unintended pregnancy. Although data are very limited, hormonal contraceptive methods does not appear to affect ART efficacy (35–38).

4.2 Do ARV drugs affect the effectiveness of hormonal contraceptives?

4.2.1 WHO medical eligibility criteria recommendations on contraception and ARV drugs

Women and adolescent girls taking ARV drugs are generally eligible to use all methods of hormonal contraception.

- The right of women and adolescent girls to access and use any contraceptive method for which they are medically eligible, including the hormonal contraceptive methods, should not be limited or determined by ARV use (19). A woman using ARV drugs can use all contraceptive methods if she is properly counselled about the risks and benefits, including possible reduced contraceptive effectiveness, and makes an informed decision (see Annex 3).
- WHO categorizes the concomitant use of all hormonal contraceptive methods listed above as either WHO medical eligibility criterion 1 or 2 for all ARV drugs (Table 3) (19).
- Special consideration is necessary for women and adolescent girls using some hormonal methods (combined hormonal methods (including COC pills), progestogen-only pills or LNG and ETG implants) with certain ART regimens (specifically those containing EFV or nevirapine (NVP) and some protease inhibitors (PIs)) (19). This is because certain ARV drugs may reduce the effectiveness of these hormonal contraceptive methods (see Table 3 and subsection 4.2.3). Women and adolescent girls should be counselled on this possible reduced contraceptive effectiveness. Women using progestogen-only injectable contraceptives (DMPA and NET-EN) are unlikely to experience reduced effectiveness when taking these ARV drugs. See Annex 3 for points on counselling women living with HIV about ART regimens and hormonal contraception.
- The Cu-IUD (a long-acting reversible method) is a very effective method of contraception, appropriate for women and adolescent girls, that does not interact with ARV drugs.
- Permanent methods of contraception (female and male sterilization) are very effective non-hormonal methods of contraception that do not interact with ARV drugs.
- Male and female condoms are non-hormonal methods and do not interact with ARV drugs, and can be used for sexually transmitted infection prevention and HIV prevention in serodiscordant couples. When used in addition to a hormonal contraceptive method (dual method use), they maximize prevention of pregnancy and sexually transmitted infections and HIV infection and offer additional protection from pregnancy if a primary contraceptive method fails.

TABLE 3. WHO MEDICAL ELIGIBILITY CRITERIA CATEGORY SUMMARY TABLE FOR CONTRACEPTION, ARV DRUGS AND TB MEDICATIONS

	CHC ^a	POP	DMPA/ NET-EN	LNG/ETG implants	LNG-IUD initiation	LNG-IUD continuation
Nucleoside reverse-transcriptase inhibitors (NRTIs)						
ABC, TDF, AZT, 3TC, ddI, FTC, d4T	1	1	1	1	2/3 ^b	2
Non-nucleoside reverse-transcriptase inhibitors (NNRTIs)						
EFV, NVP	2	2	1	2	2/3 ^b	2
EFV, rilpivirine	1	1	1	1	2/3 ^b	2
Protease inhibitors (PIs)						
ATV/r, LPV/r, DRV/r, RTV	2	2	1	2	2/3 ^b	2
Integrase inhibitors						
Raltegravir	1	1	1	1	2/3 ^b	2
TB medications						
Rifampicin or rifabutin	3d	3	DMPA=1 NET-EN=2	2	1	1

^aCHC includes the combined oral contraceptive pill, the combined contraceptive vaginal ring, the combined contraceptive patch and the CIC.

^bNo drug–drug interactions but depends on clinical disease status.

^c3HP and 1HP used for TB preventive therapy contain rifapentine.

^dCIC is WHO medical eligibility criterion 2 for concomitant rifampicin or rifabutin therapy.

For information on DTG, see subsection 4.2.2.

Source: *Medical eligibility criteria for contraceptive use (19)*.

4.2.2 DTG-based ART and hormonal contraception

DTG and hormonal contraception have no reported or expected drug–drug interactions that would reduce the effectiveness of the hormonal contraceptive methods, although pharmacokinetic and other data are limited. Without the risk of DTG interactions decreasing the effectiveness of the contraceptive, DTG can likely be used with the full range of contraceptive methods without compromising their effectiveness, including the long-acting reversible contraceptive methods of intrauterine contraception and implant.

The WHO medical eligibility criteria do not provide specific recommendations for DTG and hormonal contraception. However, some national authorities have issued guidance on this. The United States Centers for Disease Control and Prevention medical eligibility for contraceptive use (medical eligibility criteria for the United States from 2016) specifically categorizes DTG-based ART as United States medical eligibility criterion 1 (a condition for which there is no restriction on using the contraceptive method) for use with all contraceptive methods (39).

4.2.3 Information about specific contraceptives and their potential interaction with ARV drugs

- Not all ARV drugs interact with all hormonal contraceptives, so understanding which ones do and which do not is important in developing programmes and guidelines.
- Women and adolescent girls should be provided with high-quality counselling about drug–drug interactions so they can make informed decisions. They should then be fully supported in using the contraceptive method of their choice based on their values, needs, fertility intentions and preferences.
- Annex 3 provides points on counselling women and adolescent girls living with HIV about specific ART regimens and hormonal contraception.

Non-hormonal methods of contraception

ARV drug interactions do not affect the effectiveness of the Cu-IUD, the permanent methods of contraception (female sterilization and male vasectomy) and male and female condoms.

LNG-IUD

Given the localized delivery and action of the LNG hormone released from IUDs, it is unlikely that drug interaction with ARV drugs reduces the effectiveness of the hormonal IUD (LNG-IUD), although data are limited (38).

Implants (LNG and ETG implants)

Concurrent use of LNG and ETG contraceptive implants and the non-nucleoside reverse-transcriptase inhibitor (NNRTI) EFV can reduce LNG and ETG implant effectiveness and could put users at risk of unintended pregnancy. Pharmacokinetic studies of women using LNG and ETG implants found significantly lower LNG or ETG levels among women taking EFV-based ART compared with women taking no ART (40–42), and pregnancy rates among implant users who take EFV range from 5.5% to 15% (38). Despite the decreased contraceptive effectiveness among women using EFV-based ART and implant, the rate of unintended pregnancy remains much lower for these women than for women not using contraception and is also lower than for women using methods that require regular adherence for effective use, such as injectables and pills (42,43). The NNRTI NVP, nucleoside reverse-transcriptase inhibitors (NRTIs) and PIs do not reduce implant effectiveness (38,44). No direct evidence indicates whether the integrase inhibitor DTG affects the contraceptive effectiveness of implants, although this is considered to be unlikely because significant drug–drug interactions with these agents and hormonal contraceptives are not expected (38,44).

Progestogen-only injectables (DMPA and NET-EN)

ARV drugs do not reduce the effectiveness of the progestogen-only injectable intramuscular DMPA (38,44). Studies of intramuscular DMPA users who take NNRTIs (both efavirenz and nevirapine) found that pregnancy rates were comparable to pregnancy rates among intramuscular DMPA users who are not receiving ART (38). NRTIs and PIs do not reduce the effectiveness of intramuscular DMPA (38,44). There are no data for injectable NET-EN and subcutaneous DMPA (38,44). No evidence indicates whether the integrase inhibitor DTG affects the contraceptive effectiveness of DMPA, although this is considered to be unlikely because significant drug–drug interactions with these agents and hormonal contraceptives are not expected (38,44). Progestogen-only injectable contraceptives are unlikely to be affected by interactions with ARV drugs.

Oral contraceptive pills (COC and POP)

Pharmacokinetic studies have shown that EFV could reduce the effectiveness of COC, POP and progestogen-only emergency contraception by reducing the levels of hormonal contraceptive (progestogen) exposure (38,44). Robust data on pregnancy rates is lacking. For oral contraceptive pills, because contraceptive effectiveness relies on user adherence and consistent use, any potential additional reductions in effectiveness from drug–drug interaction are concerning (38). The NNRTI NVP, NRTIs, PIs and the integrase inhibitor DTG do not seem to reduce the effectiveness of COC and POP (38).

4.2.4 TB treatment and hormonal contraception

Rifampicin, rifapentine and rifabutin therapy interacts with some hormonal contraceptive methods and emergency contraceptive pill formulations (Table 3). Women and adolescent girls using TB regimens containing rifampicin, rifapentine or rifabutin should be advised against using combined oral contraception or other combined hormonal methods (WHO medical eligibility criterion 3). There are theoretical concerns of lowered effectiveness for LNG and ETG implants (WHO medical eligibility criterion 2), NET-EN injectable (WHO medical eligibility criterion 2) and progestogen-only pills (WHO medical eligibility criterion 3) (19). These TB medications are not considered to reduce the effectiveness of the DMPA progestogen-only injectable (WHO medical eligibility criterion 1) (19,23).

5. CONTRACEPTIVE CONSIDERATIONS ACROSS THE LIFE-COURSE IN HIV TREATMENT PROGRAMMES

5.1 Adolescents

- Adolescent girls living with HIV are eligible to use all the same methods of contraception as adults and have the right to access the full range of contraceptive options, including the long-acting reversible methods (implants and intrauterine contraception) (45).
 - Age alone does not constitute a medical reason for denying any contraceptive method to adolescents (19).
 - Long-acting reversible methods (both intrauterine contraception and implants) are safe and appropriate contraceptive methods for adolescents, including nulliparous adolescents (19). The 2015 WHO medical eligibility criteria (19) list all types of intrauterine contraception and implants as either WHO medical eligibility criterion 1 (use method in any circumstance) or WHO medical eligibility criterion 2 (generally use the method).
 - Although adolescents may choose to use any one of the contraceptive methods available in their communities, using methods that do not require a daily regimen or regular resupply, such as the long-acting reversible methods, may be more convenient and effective (25). Adolescents, compared with adults, often have poorer adherence and/or higher discontinuation rates when using short-acting methods (46).
 - Adolescents have also been shown to be less tolerant of side-effects, leading to higher discontinuation, and may therefore require greater support from health-care professionals for effective contraceptive use and for switching methods of contraception if required (29).
- Since adolescents are disproportionately affected by sexually transmitted infections, dual-method use that includes correct and consistent use of male or female condoms for preventing sexually transmitted infections in addition to using another effective contraceptive method should be emphasized.
- WHO recommends that adolescent girls at risk of unintended pregnancy, including those living with HIV, have access to emergency contraception. As for women of all age groups, WHO recommends that adolescent girls at risk of an unintended pregnancy, including those living with HIV, have access to emergency contraception. The choice of emergency contraception will depend on other medications that she might be taking, together with her long term potentially using a long-acting reversible method (such as Cu-IUD).⁶
- Adolescents in many countries lack adequate access to the contraceptive information and services necessary to protect their sexual and reproductive health and rights.
 - There is an urgent need to implement programmes that meet the contraceptive needs of adolescents, including those living with HIV, and remove their barriers to information and services.
 - Political and cultural factors may affect adolescents' ability to access contraceptive information and services. For example, where contraceptive services are available, adolescents (in particular, those who are unmarried) may not be able to obtain them because of restrictive laws and policies.
 - Even if adolescents are able to obtain contraceptive services, they may not do so because of fear that their confidentiality will not be respected or that health workers may be judgemental.
 - Countries are encouraged to examine their current consent policies and consider revising them to reduce age-related barriers to HIV and sexual and reproductive health services, including contraceptive care, and to empower providers to act in the best interest of adolescent clients (6).
- All adolescents, regardless of marital status and parity, have a right to privacy and confidentiality in health matters, including reproductive health care (29). The right to receive confidential information on preventing pregnancy, and contraceptive information, counselling and services, free of health-care provider judgement or bias, is especially important for adolescents.
- Sexual and reproductive health services that are appropriate for adolescents and adolescent friendly, including contraception, should be available and accessible to all adolescents without requiring parental, guardian or spousal consent (12) or authorization by law, policy or practice (47).

6. Many vulnerable and at-risk women and adolescent girls may not be able to negotiate when they want to become pregnant or negotiate condom use. Health-care workers should consider this when discussing contraceptive options (6).

5.2 Women and adolescent girls postpartum

Postpartum women and adolescent girls are among those with the greatest unmet need for contraception, yet they often do not receive the services they need to support longer birth intervals or reduce unintended pregnancy (48). See Box 6 for information on DTG-based or EFV-based ARV drug regimens postpartum and contraceptive care.

Women and couples need to be counselled about the risk of pregnancy from early postpartum if not fully or nearly fully breastfeeding, not adhering to lactational amenorrhoea method criteria and not using an effective contraceptive method. They also need to be counselled about healthy pregnancy spacing (waiting for two years or longer before trying to conceive again, depending on the reproductive intentions of the woman or couple) and helped to choose a safe and effective contraceptive if they choose to use contraception. Rapid, repeat pregnancy commonly affects the health of adolescent girls, conferring an increased risk of adverse maternal and neonatal outcomes (49,50). There are unique considerations for providing contraceptive services to women and adolescent girls during the postpartum period, which include the timing of contraceptive initiation, specific counselling messages and various considerations around safe and effective contraceptive options postpartum depending on whether the woman is breastfeeding (19,23,29,51). Health-care providers should also be aware of the possibility of intimate partner violence (6). See Annex 1 for more information on the WHO *Postpartum family planning compendium* (51) and *Family planning – a global handbook for providers* (28).

Box 6. ART regimens postpartum and contraceptive care

Women using DTG-based regimens in pregnancy and who in the postpartum period (1) want to become pregnant or (2) choose not to start contraception postpartum, should be:

- counselled about the possible increased risk of neural tube defects with DTG use at conception and the potential benefits of DTG-based ART compared with EFV-based ART and other regimens;
- be informed of the option to use EFV-based ART as a safe and effective regimen that can be used during the period of greatest potential risk for developing neural tube defects;
- after appropriate counselling on potential risks and benefits, supported to make an informed choice of the ART regimen they wish to use, including continuing with DTG-based ART or changing to EFV-based ART; and
- supported in their informed ART choice, including a decision to use DTG-based ART without contraception.

Regardless of the ART regimen used in pregnancy, postpartum women and adolescent girls who want to delay, space or limit childbearing (do not want to become pregnant) should have access to safe, appropriate and effective contraception. This includes access to male and female condoms. For women choosing to use EFV-based ART and contraception, counselling on the possible reduced contraceptive effectiveness of certain hormonal contraceptives when used with EFV is needed (see Section 4 and Annex 3).

5.3 Women older than 40 years

Pregnancy and childbirth when women are older than 40 years confers a greater risk of adverse maternal and neonatal outcomes than among women younger than 40 years (52,53), but reproductive choice should be supported for women of all ages. Women older than 40 years who are sexually active and want to avoid an unintended pregnancy should use contraception until they reach menopause. Age alone does not restrict contraceptive method options (19). However, since women in the perimenopause often have different medically relevant characteristics and background health risks than younger women, health-care providers need to consider contraceptive options and counselling specifically with this population in mind (19). Women in this population may be interested in long-acting reversible or permanent methods; however, contraceptive method choice from the range of options should be supported, and if they choose a short-acting method, they should be supported in using the method effectively. Permanent methods are safe and appropriate for people only if they want no further pregnancies and have decided on a permanent method in an informed and voluntary way, after appropriate counselling, full information and time to make decisions. Women in this population should also be advised about condom use, in addition to using other contraceptive methods, for protecting against sexually transmitted infections.

5.4 Women and adolescent girls who want pregnancy

Pregnancy planning, preconception care and safe conception are the right of all women and improve health outcomes for mothers and babies. Among women living with HIV, they also reduce the risk of HIV transmission to HIV-negative partners and children (54,55). Contraception can be used to plan and delay conception until viral load is low or undetectable, so that fully informed ART decisions can be made (DTG-based regimen use versus EFV-based regimen to avoid DTG exposure at conception and during the first eight weeks of pregnancy).

5.5 Emergency contraception

- Women and adolescent girls may need emergency contraception throughout their reproductive life-course.
- Emergency contraception can prevent most pregnancies when used correctly after unprotected sexual intercourse. It provides an important back-up in cases of unprotected intercourse or contraceptive accident (such as forgotten pills or torn condoms) and is especially valuable in the event of rape or coerced sexual intercourse.
- WHO recommends that all women and adolescent girls at risk of unintended pregnancy, including those living with HIV, have access to emergency contraception and that emergency contraception be routinely included within all national family planning programmes (13).



Young women in Kampala, Uganda, display packs of the backup emergency contraception as their method of contraception in cases where the condom has not been used correctly.

© 2018 Dennis Ssesanga/Marie Stopes Uganda, Courtesy of Photoshare

REFERENCES

1. Singh S, Darroch JE, Ashford LS. Adding it up: the costs and benefits of investing in sexual and reproductive health. New York: Guttmacher Institute; 2014.
2. PMTCT strategic vision 2010–2015. Preventing mother-to-child transmission of HIV to reach the UNGASS and Millennium Development Goals. Geneva: World Health Organization; 2010 (https://www.who.int/hiv/pub/mtct/strategic_vision.pdf?ua=1, accessed 8 July 2019).
3. Brittain K, Phillips TK, Zerbe A, Abrams EJ, Myer L. Long-term effects of unintended pregnancy on antiretroviral therapy outcomes among South African women living with HIV. *AIDS*. 2019;33:885–93.
4. Unmet need for family planning. Geneva: World Health Organization; 2019 (https://www.who.int/reproductivehealth/topics/family_planning/unmet_need_fp/en, accessed 8 July 2019).
5. Narasimhan M, Pillay Y, Garcia PJ, Allotey P, Gorna R, Welbourn A et al. Investing in sexual and reproductive health and rights of women and girls to reach HIV and UHC goals. *Lancet Glob Health*. 2018;6:e1058–9.
6. Consolidated guideline on sexual and reproductive health and rights of women living with HIV. Geneva: World Health Organization; 2017 (https://www.who.int/reproductivehealth/publications/gender_rights/srhr-women-hiv/en, accessed 8 July 2019).
7. Orza L, Bass E, Bell E, Crone ET, Damji N, Dilmitis S et al. In women’s eyes: key barriers to women’s access to HIV treatment and a rights-based approach to their sustained well-being. *Health Hum Rights*. 2017;19:155–68.
8. Orza L, Welbourn A, Bewley S, Crone ET, Vazquez M. Building a safe house on firm ground: key findings from a global values and preferences survey regarding the sexual and reproductive health and human rights of women living with HIV. London: Salamander Trust; 2014.
9. Updated recommendations on first-line and second-line antiretroviral regimens and post-exposure prophylaxis and recommendations on early infant diagnosis of HIV: interim guidelines. Supplement to the 2016 consolidated guidelines on the use of antiretroviral drugs for treating and preventing HIV infection. Geneva: World Health Organization; 2018 (<https://www.who.int/hiv/pub/guidelines/ARV2018update/en>, accessed 8 July 2019).
10. Zash R, Makhema J, Shapiro RL. Neural-tube defects with dolutegravir treatment from the time of conception. *N Engl J Med*. 2018;379:979–81.
11. Programmatic considerations for countries transitioning to new antiretroviral drug regimens. Geneva: World Health Organization; in press.
12. Framework on integrated, people-centred health services. Report by the Secretariat. Sixty-ninth World Health Assembly. Geneva: World Health Organization; 2016 (<https://www.who.int/iris/handle/10665/252698>, accessed 8 July 2019).
13. Ensuring human rights in the provision of contraceptive information and services: guidance and recommendations. Geneva: World Health Organization; 2014 (https://www.who.int/reproductivehealth/publications/family_planning/human-rights-contraception/en, accessed 8 July 2019).

14. Quality of care in contraceptive information and services, based on human rights standards: a checklist for health care providers. Geneva: World Health Organization; 2017 (<https://www.who.int/reproductivehealth/publications/qoc-contraceptive-services/en>, accessed 8 July 2019).
15. IPPF, UNFPA, WHO, UNAIDS, GNP +, ICW, Young Positives. Rapid assessment tool for sexual & reproductive health and HIV linkages: a generic guide. London: IPPF; 2009.
16. Integrating family planning into HIV programs: evidence-based practices. Durham (NC): FHI360; 2013 (<http://bit.ly/1WdAoyt>, accessed 8 July 2019).
17. IPPF, Population Council, London School of Hygiene and Tropical Medicine. Making sense of complexity: key findings from the Integra Initiative. London: Integra Initiative; 2013 (<http://bit.ly/1sNhvql>, accessed 8 July 2019).
18. Sexual and reproductive health and rights and HIV linkages toolkit. Geneva: World Health Organization; 2019 (<http://toolkit.srhivlinkages.org>, accessed 8 July 2019).
19. Medical eligibility criteria for contraceptive use. 5th ed. Geneva: World Health Organization; 2015 (http://www.who.int/reproductivehealth/publications/family_planning/medical_eligibility_criteria-5/en, accessed 8 July 2019).
20. Family planning/contraception. Geneva: World Health Organization; 2018 (<https://www.who.int/news-room/fact-sheets/detail/family-planning-contraception>, accessed 8 July 2019).
21. Medical eligibility criteria wheel for contraceptive use. 5th ed. Geneva: World Health Organization; 2015 (http://www.who.int/reproductivehealth/publications/family_planning/mec-wheel-5th/en, accessed 8 July 2019).
22. App for WHO's medical eligibility criteria for contraceptive use. Geneva: World Health Organization; 2018 (<http://www.who.int/reproductivehealth/mec-app/en>, accessed 8 July 2019).
23. Selected practice recommendations for contraceptive use. 3rd ed. Geneva: World Health Organization; 2016 (https://www.who.int/reproductivehealth/publications/family_planning/SPR-3/en, accessed 8 July 2019).
24. RamaRao S, Lacuesta M, Costello M, Pangolibay B, Jones H. The link between quality of care and contraceptive use. *Int Fam Plan Perspect.* 2003;29:76–83.
25. Koenig MA, Hossain MB, Whittaker M. The influence of quality of care upon contraceptive use in rural Bangladesh. *Stud Fam Plann.* 1997;28:278–89.
26. Arends-Kuenning M, Kessy FL. The impact of demand factors, quality of care and access to facilities on contraceptive use in Tanzania. *J Biosoc Sci.* 2007;39:1–26.
27. OHCHR, UN Women, UNAIDS, UNDP, UNFPA, UNICEF, WHO. Eliminating forced, coercive and otherwise involuntary sterilization: an interagency statement. Geneva: World Health Organization; 2014 (https://www.who.int/reproductivehealth/publications/gender_rights/eliminating-forced-sterilization/en, accessed 8 July 2019).
28. WHO, Johns Hopkins Bloomberg School of Public Health/Center for Communication Programs, Knowledge for Health Project. Family planning: a global handbook for providers (2018 update). Baltimore and Geneva: Center for Communication Programs and World Health Organization, 2018.
29. Safe abortion: technical and policy guidance for health systems. 2nd ed. Geneva: World Health Organization; 2012 (<https://www.who.int/reproductivehealth/publications/unsafe-abortion/9789241548434/en>, accessed 8 July 2019).
30. Trussell J, Aiken ARA. Contraceptive efficacy. In: Hatcher RA. Contraceptive technology. 21st revised edition. New York: Ardent Media; 2008.

31. Polis CB, Bradley SEK, Bankole A, Onda T, Croft TN, Singh S. Contraceptive failure rates in the developing world: an analysis of Demographic and Health Survey data in 43 countries. New York: Guttmacher Institute; 2016.
32. Hatcher RA. Contraceptive technology. 21st revised edition. New York: Ardent Media; 2008.
33. Tressell J. Contraceptive failure in the United States. *Contraception*. 2004;70:89–96.
34. Simmons KB, Haddad LB, Nanda K, Curtis KM. Drug interactions between rifamycin antibiotics and hormonal contraception: a systematic review. *BJOG*. 2018;125:804–11.
35. Chu JH, Gange SJ, Anastos K, Minkoff H, Cejtin H, Bacon M et al. Hormonal contraceptive use and the effectiveness of highly active antiretroviral therapy. *Am J Epidemiol*. 2005;161:881–90.
36. Polis CB, Nakigozi G, Ssempijja V, Makumbi FE, Boaz I, Reynolds SJ et al. Effect of injectable contraceptive use on response to antiretroviral therapy among women in Rakai, Uganda. *Contraception*. 2012;86:725–30.
37. Heikinheimo O, Lehtovirta P, Aho I, Ristola M, Paavonen J. The levonorgestrel-releasing intrauterine system in human immunodeficiency virus–infected women: a 5-year follow-up study. *Am J Obstet Gynecol*. 2011;204:126.e1–4.
38. Nanda K, Stuart GS, Robinson J, Gray AL, Tepper NK, Gaffield ME. Drug interactions between hormonal contraceptives and antiretrovirals. *AIDS*. 2017;31:917–52.
39. U.S. medical eligibility criteria for contraceptive use, 2016. Atlanta: United States Centers for Disease Control and Prevention; 2016 (<https://www.cdc.gov/mmwr/volumes/65/rr/pdfs/rr6503.pdf>, accessed 8 July 2019).
40. Vieira CS, Bahamondes MV, de Souza RM, Brito MB, Rocha Prandini TR, Amaral E et al. Effect of antiretroviral therapy including lopinavir/ritonavir or efavirenz on etonogestrel-releasing implant pharmacokinetics in HIV-positive women. *J Acquir Immune Defic Syndr*. 2014;66:378–85.
41. Scarsi KK, Darin KM, Nakalema S, Back DJ, Byakika-Kibwika P, Else LJ et al. Unintended pregnancies observed with combined use of the levonorgestrel contraceptive implant and efavirenz-based antiretroviral therapy: a three-arm pharmacokinetic evaluation over 48 weeks. *Clin Infect Dis*. 2016;62:675–82.
42. Pyra M, Heffron R, Mugo NR, Nanda K, Thomas KK, Celum C et al. Effectiveness of hormonal contraception in HIV-infected women using antiretroviral therapy. *AIDS*. 2015;29:2353–9.
43. Patel RC, Onono M, Gandhi M, Blat C, Hagey J, Shade SB et al. Pregnancy rates in HIV-positive women using contraceptives and efavirenz-based or nevirapine-based antiretroviral therapy in Kenya: a retrospective cohort study. *Lancet HIV*. 2015;2:e474–82.
44. Scarsi KK, Darin KM, Chappell CA, Nitz SM, Lamorde M. Drug–drug interactions, effectiveness, and safety of hormonal contraceptives in women living with HIV. *Drug Saf*. 2016;39:1053–72.
45. WHO recommendations on adolescent, sexual and reproductive health and rights. Geneva: World Health Organization; 2018 (<https://www.who.int/reproductivehealth/publications/adolescent-srhr-who-recommendations/en>, accessed 8 July 2019).
46. Jaccard J, Levitz N. Counseling adolescents about contraception: towards the development of an evidence-based protocol for contraceptive counselors. *J Adolesc Health*. 2013;52(4 Suppl):S6–13.
47. Consolidated guidelines on the use of antiretroviral drugs for treating and preventing HIV infection: recommendations for a public health approach – second edition. Geneva: World Health Organization; 2016 (<https://www.who.int/hiv/pub/arv/arv-2016/en>, accessed 8 July 2019).

48. Programming strategies for postpartum family planning. Geneva: World Health Organization; 2013 (https://www.who.int/reproductivehealth/publications/family_planning/ppfp_strategies/en, accessed 8 July 2019).
49. Dean SV, Lassi ZS, Imam AM, Bhutta ZA. Preconception care: promoting reproductive planning. *Reprod Health*. 2014;11:S2.
50. Global accelerated action for the health of adolescents (AA-HA!) : guidance to support country implementation. Geneva: World Health Organization; 2017 (https://www.who.int/maternal_child_adolescent/topics/adolescence/framework-accelerated-action/en, accessed 8 July 2019).
51. Postpartum family planning compendium. Geneva: World Health Organization; 2016 (<https://postpartumfp.srhr.org>, accessed 8 July 2019).
52. Kenny LC, Lavender T, McNamee R, O'Neill SM, Mills T, Khashan AS. Advanced maternal age and adverse pregnancy outcome: evidence from a large contemporary cohort. *PLoS One*. 2013;8:e56583.
53. Lisonkova S, Potts J, Muraca GM, Razaz N, Sabr Y, Chan WS et al. Maternal age and severe maternal morbidity: a population-based retrospective cohort study. *PLoS Med*. 2017;14:e1002307.
54. Meeting to develop a global consensus on preconception care to reduce maternal and childhood mortality and morbidity: World Health Organization Headquarters, Geneva, 6–7 February 2012: meeting report. Geneva: World Health Organization; 2012 (<https://apps.who.int/iris/handle/10665/78067>, accessed 8 July 2019).
55. Preconception care: maximizing the gains for maternal and child health: a policy brief. Geneva: World Health Organization; 2013 (<https://www.who.int/topics/early-child-development/preconception/en>, accessed 8 July 2019).

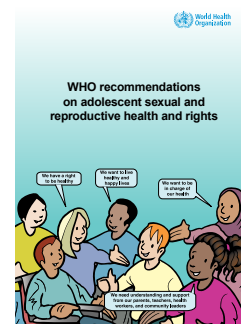
ANNEX 1. RESOURCES RELEVANT TO CONTRACEPTIVE CARE IN HIV PROGRAMMES

1 Sexual and reproductive health rights and quality of care

WHO recommendations on adolescent sexual and reproductive health and rights. Geneva: World Health Organization; 2018.

<https://apps.who.int/iris/bitstream/handle/10665/275374/9789241514606-eng.pdf?ua=1>

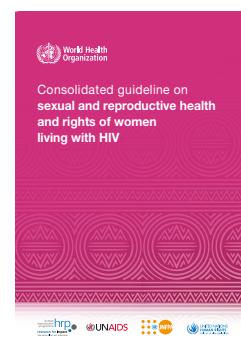
This provides an overview of sexual and reproductive health and rights issues that may be important for the human rights, health and well-being of adolescents (10–19 years old) and the WHO guidelines on how to address them.



Consolidated guideline on sexual and reproductive health and rights of women living with HIV. Geneva: World Health Organization; 2017.

https://www.who.int/reproductivehealth/publications/gender_rights/srhr-women-hiv/en

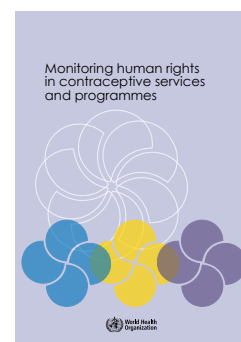
This consolidates recommendations and good practice statements specific to women living with HIV. It is designed to support front-line health-care providers, programme managers and public health policy-makers around the world to better address the sexual and reproductive health and rights of women living with HIV.



Monitoring human rights in contraceptive services and programmes. Geneva: World Health Organization; 2017.

<http://www.who.int/reproductivehealth/publications/contraceptive-services-monitoring-hr/en>

This tool for monitoring human rights in contraceptive services and programmes is intended for use by countries to assist them in monitoring and strengthening their human rights efforts in contraceptive programming.

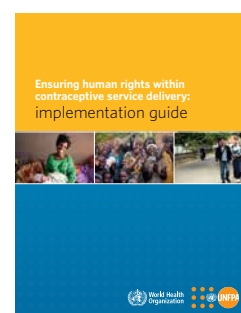


Ensuring human rights within contraceptive service delivery: implementation guide. Geneva: World Health Organization; 2015.

Authors: UNFPA and WHO

http://www.who.int/reproductivehealth/publications/family_planning/hr-contraceptive-service-delivery/en

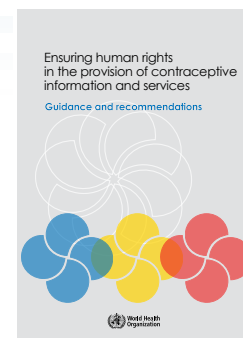
This is a companion publication to Ensuring human rights in the provision of contraceptive information and services: guidance and recommendations. It sets out core minimum actions that can be taken at different levels of the health system and provides examples of implementation of the recommendations in the WHO guidelines.



Ensuring human rights in the provision of contraceptive information and services: guidance and recommendations. Geneva: World Health Organization; 2014.

http://www.who.int/reproductivehealth/publications/family_planning/human-rights-contraception/en

These guidelines provide recommendations for programmes on how they can ensure that human rights are respected, protected and fulfilled while services are scaled up to reduce unmet need for contraception.

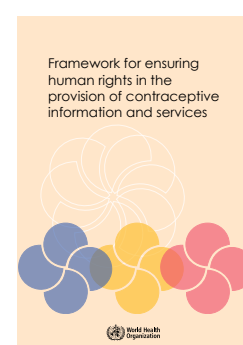


Framework for ensuring human rights in the provision of contraceptive information and services (2014)

Author: WHO

http://www.who.int/reproductivehealth/publications/family_planning/framework-hr-contraceptive-info/en

This document provides guidance on the different dimensions of human rights that need to be systematically and comprehensively considered in the rights-based provision of sexual and reproductive health services.

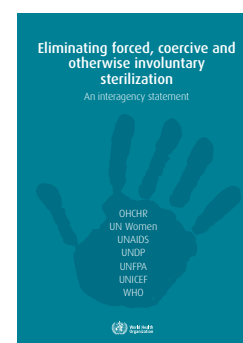


Eliminating forced, coercive and otherwise involuntary sterilization. Geneva: World Health Organization; 2014.

Authors: OHCHR, UN Women, UNAIDS, UNDP, UNFPA, UNICEF and WHO

https://www.who.int/reproductivehealth/publications/gender_rights/eliminating-forced-sterilization/en

This statement reaffirms that sterilization as a method of contraception and family planning should be available, accessible, acceptable, of good quality and free from discrimination, coercion and violence and that laws, regulations, policies and practices should ensure that the provision of procedures resulting in sterilization is based on the full, free and informed decision-making of the person concerned.



Quality of care in contraceptive information and services, based on human rights standards: a checklist for health care providers. Geneva: World Health Organization; 2017.

<https://www.who.int/reproductivehealth/publications/qoc-contraceptive-services/en>

This presents a user-friendly checklist specifically addressed to health-care providers at the primary health care level who directly provide contraceptive information and services. It complements Ensuring human rights in the provision of contraceptive information and services: guidance and recommendations and Ensuring human rights within contraceptive service delivery: implementation guide.



2 Links between HIV care and contraceptive care

Sexual and reproductive health and rights & HIV linkages toolkit. Geneva: World Health Organization; 2018.

Authors: WHO and International Planned Parenthood Federation

<http://toolkit.srhivlinkages.org>

This is intended to help countries effectively link their sexual and reproductive health and HIV programmes by presenting existing resources in a way that facilitates use.



Sexual and reproductive health and rights and HIV linkages: navigating the work in progress. Geneva: World Health Organization; 2017.

Authors: Interagency Working Group on SRH and HIV, IPPF, WHO

<http://srhivlinkages.org/srh-hiv-linkages>

This leaflet provides an overview to sexual and reproductive health and rights and HIV links and includes a summary of the work of the Interagency Working Group on SRH and HIV Linkages.



What is the evidence of effectiveness of SRH/HIV integration? Sandton: East and Southern Africa Regional Office, UNFPA; 2016.

<https://esaro.unfpa.org/en/publications/what-evidence-effectiveness-srh-hiv-integration>

This evidence brief sets out the key findings and key recommendations on the evidence of the effectiveness of integrating sexual and reproductive health and HIV in eastern and southern Africa.



Linking sexual and reproductive health and rights and HIV in southern Africa. Sandton: East and Southern Africa Regional Office, UNFPA; 2015.

Authors: UNAIDS, UNFPA

<https://esaro.unfpa.org/en/publications/linking-sexual-and-reproductive-health-and-rights-and-hiv-southern-africa>

This presents findings from demonstration projects in seven countries in southern Africa that have scaled up effective models for strengthening integrated sexual and reproductive health and HIV policies, systems and service delivery mechanisms.

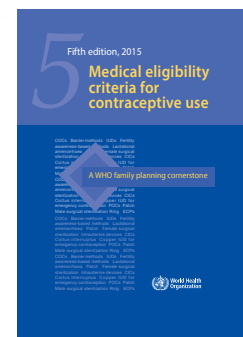


3 Evidence-informed contraceptive care

Medical eligibility criteria for contraceptive use. 5th ed. Geneva: World Health Organization; 2015.

http://www.who.int/reproductivehealth/publications/family_planning/medical_eligibility_criteria-5/en

This is a key WHO guidance document on family planning. It provides evidence-informed guidance on the safety of various contraceptive methods for use in the context of specific health conditions and characteristics and specifies who can use various contraceptive methods safely.



Medical eligibility criteria wheel for contraceptive use. 5th ed. Geneva: World Health Organization; 2015.

App for WHO's medical eligibility criteria for contraceptive use. Geneva: World Health Organization; 2018.

http://www.who.int/reproductivehealth/publications/family_planning/mec-wheel-5th/en

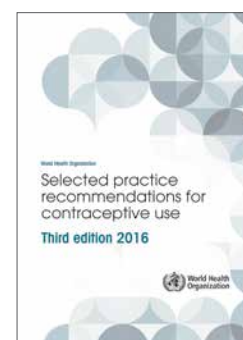
This wheel-shaped job aid is a quick reference tool based on the 5th edition of Medical eligibility criteria for contraceptive use. The wheel allows health-care providers to rapidly assess a woman's medical eligibility to begin contraceptive methods. The medical eligibility criteria wheel is now available as an app for iOS and Android platforms: <https://www.who.int/reproductivehealth/mec-app/en>



Selected practice recommendations for contraceptive use. 3rd ed. Geneva: World Health Organization; 2016.

http://www.who.int/reproductivehealth/publications/family_planning/SPR-3/en

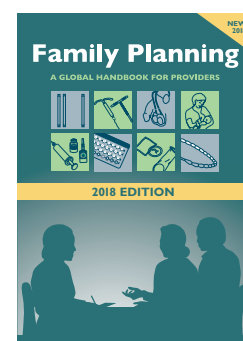
This provides guidance on how to use contraceptive methods safely and effectively once they are deemed to be medically appropriate. Safety considerations include common barriers to safe, correct and consistent use of contraception and the benefits of preventing unintended or unwanted pregnancy.



Family planning – a global handbook for providers. Geneva: World Health Organization; 2018.

<http://www.who.int/reproductivehealth/publications/fp-global-handbook/en>

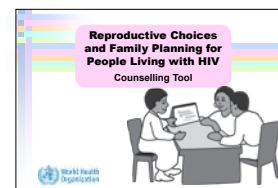
This offers evidence-informed information on the delivery of contraception, method by method. The 2018 edition includes new WHO recommendations that expand contraceptive choices. WHO encourages all national health systems and other organizations providing family planning to consider this new edition as a key publication to help to ensure the quality and safety of family planning services.



Reproductive choices and family planning for people living with HIV. Geneva: World Health Organization; 2012.

http://www.who.int/reproductivehealth/publications/family_planning/9241595132/en

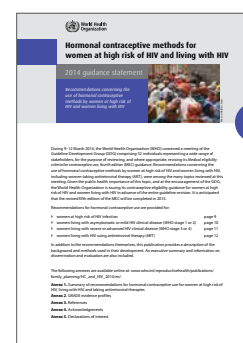
This counselling tool is designed to help health workers in counselling people living with HIV on sexual and reproductive choices and family planning. It is also meant to help people living with HIV make and carry out informed, healthy and appropriate decisions about their sexual and reproductive lives.



Hormonal contraceptive methods for women at high risk of HIV and living with HIV guidance statement. Geneva: World Health Organization; 2014.

http://www.who.int/reproductivehealth/publications/family_planning/HC_and_HIV_2014/en

Recommendations on the use of hormonal contraceptive methods by women at high risk of HIV infection and women living with HIV, including women taking antiretroviral therapy.



Programming strategies for postpartum family planning. Geneva: World Health Organization; 2013.

https://apps.who.int/iris/bitstream/handle/10665/93680/9789241506496_eng.pdf?sequence=1

Provides programming recommendations on the use of contraception among women during the first year postpartum and beyond.



Postpartum family planning compendium. Geneva: World Health Organization; 2016.

<https://postpartumfp.srhr.org>

This digital tool is aimed at health providers who are prescribing contraception to postpartum women and programme managers and policy-makers who facilitate the availability of contraceptive methods. It focuses on the initiation of family planning services within the first 12 months following childbirth.



Training resource package for family planning. Baltimore (MD): Knowledge for Health Project; 2019.

Authors: USAID, WHO and UNFPA

<https://www.fptraining.org>

This is a comprehensive set of website-based materials designed to support up-to-date training on family planning and reproductive health. It was developed using evidence-informed technical information from WHO publications: Family planning: a global handbook for providers; Medical eligibility criteria for contraceptive use; and Selected practice recommendations for contraceptive use. This provides organizations with the essential resources for family planning and reproductive health trainers, supervisors and programme managers. All materials can be downloaded for free and adapted or translated.



Drug interactions between hormonal contraceptives and antiretrovirals. AIDS. 2017;31:917–52.

Authors: Nanda K, Stuart GS, Robinson J, Gray AL, Tepper NK, Gaffield ME.

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5378006>

Systematic review article of drug–drug interactions between hormonal contraceptives and antiretroviral drugs.



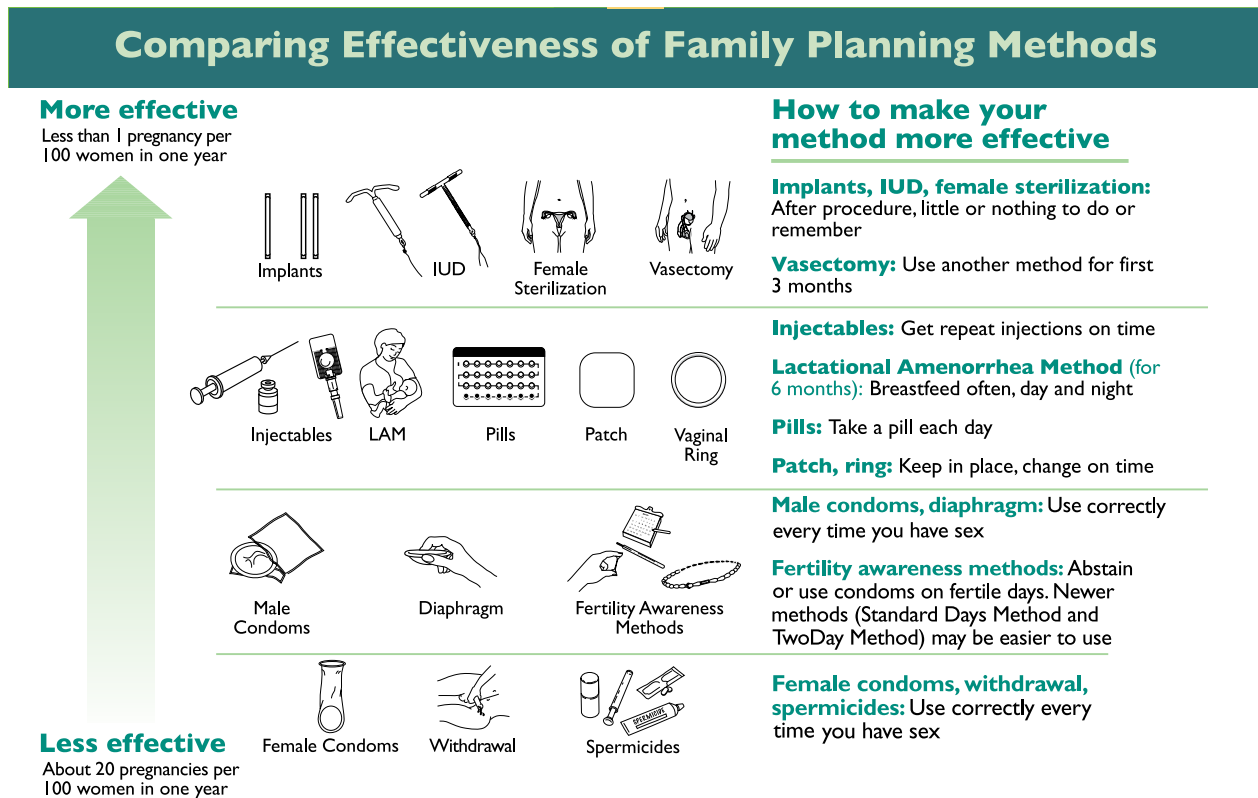
ANNEX 2. MORE DETAILED INFORMATION ON THE EFFECTIVENESS OF CONTRACEPTIVES

A useful and easy to understand WHO chart (Fig. A1) groups contraceptive methods according to their effectiveness “as commonly used”. It also provides information on how to achieve the greatest possible effectiveness with each method. All clients need information and support about the requirements and strategies for consistent and effective use of their chosen method and what to do in case of inconsistent use: access emergency contraception.

The methods in the top row of the chart are the very effective contraceptive methods.

- The most effective contraceptive methods – implants, intrauterine contraception, female sterilization (cutting or blocking the fallopian tubes) and vasectomy (male sterilization) – are classified as very effective, with less than one pregnancy in 100 women in a year as commonly used.
- These methods are very effective for almost everyone who uses them for several reasons: because of the level of protection afforded by the method itself; because they can be used for a long time; and because they require little or no action for continued use by clients or frequent resupply once they are initiated.
- All these methods require help from a health-care provider to get started but then require little or no action by the user to continue and use effectively and consistently. In general, methods that require little or no action by clients once they are initiated and do not rely on continued user action or clinic resupplies, such as implant, intrauterine contraception and permanent sterilization, are the most effective.
- The methods in the second row of the chart are effective contraceptive methods.
- These methods include injectables, oral pills, patches and rings and are also effective, with 2 to 7 pregnancies per 100 women in a year as commonly used.
- These methods can also be very effective (as effective as the top-row methods) when used correctly and consistently.
- For consistent and effective use, they require some repeated action by the user – some seldom, such as getting 3–4 injections on time a year with the progestogen-only injectables, and some often, such as taking a pill every day, 365 days a year, such as oral contraceptive pills. These methods also depend on regular clinic resupply. As a result, they are usually less effective, on average, than methods in the top row but are still classified as effective.
- Many women and adolescent girls can use these methods successfully to effectively prevent pregnancy over the long term.
- Clients who prefer to use these methods need information and support about the requirements and strategies for consistent use, how to achieve the greatest possible effectiveness with the method, and what to do in case of inconsistent use: emergency contraception.
- The methods in the lower rows of the chart are generally less effective at preventing pregnancy.
- These methods, which include male and female condoms, are the less effective methods.
- These methods usually have much higher pregnancy rates – for the least effective methods in this group (female condom, fertility awareness methods, spermicide and cervical cap) as high as 20 or more pregnancies per 100 women in a year.
- Some of these methods can also be effective if used consistently and correctly.
- The effectiveness of these methods depends greatly on the user taking correct action repeatedly and consistently, such as using a condom correctly with every act of sexual intercourse.
- Particularly for these methods, some highly motivated users use these methods more successfully than average; others make more mistakes in use and are more likely than average to become pregnant.
- Clients who prefer to use these methods need information and support about the requirements and strategies for consistent use, how to achieve the greatest possible effectiveness with the method, and what to do in case of inconsistent use: emergency contraception.
- Condoms play an important role in dual method contraceptive use, which is the correct and consistent use of male or female condoms for preventing sexually transmitted infections and for HIV prevention in serodiscordant couples in addition to using another effective contraceptive method.

Fig. A1. Comparative effectiveness of contraceptive methods as commonly used



Source: WHO Department of Reproductive Health and Research, Johns Hopkins Bloomberg School of Public Health, Center for Communication Programs, Knowledge for Health Project. Family planning: a global handbook for providers. Baltimore and Geneva: Center for Communication Programs and World Health Organization; 2018.

ANNEX 3. ADVISING WOMEN AND ADOLESCENT GIRLS LIVING WITH HIV ABOUT ART REGIMENS AND HORMONAL CONTRACEPTION

- Women and adolescent girls' access to and right to use any hormonal contraceptive method should not be limited by ARV drug use.
- Decisions about combining ART and hormonal contraception should be made on a client-by-client basis, considering the medical safety of the contraceptive options for that particular woman, the specific ARV drugs she is using, specific contraceptive methods (WHO medical eligibility criteria) and the client's values, needs and preferences. Effectiveness is only one of many factors that influence a woman's decision to choose a specific contraceptive method.
- Providers should explain drug–drug interactions using language that can be easily understood by the client. Discuss how some ARV drugs may affect the effectiveness of some hormonal contraceptives.
- Providers should advise that drug interactions with HIV or TB medicines do not affect the Cu-IUD, the three-monthly DMPA injections and the male and female condom. Permanent methods (female sterilization through tubal ligation and male sterilization through vasectomy), which are also not affected by drug interactions, are an option for women and couples who have all the children they desire.
- Providers should advise that some hormonal contraceptives (implant, oral contraceptives, ring and patch) may become less effective with some HIV or TB medications.
 - Decisions need to be made on a client-by-client basis and based on the client's values, needs and preferences.
 - Providers may give these methods with good counselling (about interactions, and risk of unintended pregnancy, what to do in case of concerns about pregnancy) if the client prefers.
 - For example, if a woman receiving EFV ART has been fully counselled and still prefers the implant instead of other methods such as Cu-IUD or DMPA injections, she should be supported in her decision. She can be given it with good counselling.
- Discuss the importance of using condoms in addition to a hormonal contraceptive method (dual method use). This maximizes the prevention of pregnancy and sexually transmitted infections and HIV. When used consistently and correctly, condoms offer protection from pregnancy if a primary contraceptive method fails.
- Discuss the role of emergency contraception.



For more information, contact:

World Health Organization
Department of HIV/AIDS
20, avenue Appia
1211 Geneva 27
Switzerland

E-mail: hiv-aids@who.int

www.who.int/hiv