WHO RECOMMENDATIONS

ON

Adolescent Health

GUIDELINES APPROVED BY THE WHO GUIDELINES REVIEW COMMITTEE

AUGUST 2017

World Health Organization

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Abbreviations

AIDS	acquired immunodeficiency syndrome
ANC	antenatal care
ART	antiretroviral therapy
ARV	antiretroviral
AZT	zidovudine
BW	body weight
CCT	controlled cord traction
EFZ	efavirenz
FTC	emtricitabine
G6PD	glucose-6-phosphate dehydrogenase
GDG	Guidelines Development Group
GRADE	Grading of Recommendations, Assessment, Development and Evaluation
GRC	Guidelines Review Committee
HIV	human immunodeficiency virus
IM	intramuscular
IV	intravenous
3TC	lamuvidine
mg	milligram
NTD	neural tube defects
NVP	nevirapine
NNRTI	non-nucleotide reverse transcriptase inhibitor
NRTI	nucleotide reverse transcriptase inhibitor
PMTCT	prevention of mother-to-child transmission
PPH	postpartum haemhorrage
TDF	tenofovir
WHO	World Health Organization

Introduction

This publication on WHO recommendations related to adolescent health is one of four in a series; the others relate to maternal, newborn and child health. The objective of this document is to make available WHO recommendations on adolescent health in one easy-to-access document for WHO staff, policy-makers, programme managers, and health professionals. The compilation can also help better define gaps to prioritize guideline updates.

This document is meant to respond to the questions:

- What health interventions should the adolescent receive and when should s/he receive it?
- What health behaviours should the adolescent practise (or not practise)?

Sections in this compilation either reflect adolescent-specific recommendations only or these and adolescent-relevant recommendations.

Adolescent-specific recommendations: Recommendations that specifically address adolescents and are different from recommendations for other population groups e.g. adults or children

Adolescent-relevant recommendations: Recommendations that apply to adolescents as well as other population groups (e.g. adults or children)

WHO produces guidelines according to the highest international standards for guideline development. The main principles are transparency and minimizing bias in every step of the process. The process of developing guidelines is documented in *WHO Handbook for guideline development*.[1] The development process includes the synthesis and assessment of the quality of evidence, and is based on the Grading of Recommendations, Assessment, Development and Evaluation (GRADE) approach. GRADE categorizes the quality (or certainty) of the evidence underpinning a recommendation as high, moderate, low or very low.

- High: further research is very unlikely to change our confidence in the estimate of effect;
- Moderate: further research is likely to have an impact on our confidence in the effect;
- Low: further research is very likely to have an important impact on our confidence in the effect and is likely to change the estimate of effect;
- Very low: any estimate of effect is very uncertain.

Once the quality of the body of evidence on benefits and harms has been assessed, an expert group formulates the recommendations using a structured evidence to decision framework. When determining whether to recommend an intervention or not, the expert group carefully considers the balance of benefits and harms of an intervention, and other factors such as values and preferences of persons affected by the recommendation, stakeholders' perceptions of the acceptability and feasibility of the options and interventions, resource implications, the importance of the problem, and equity and human rights considerations.

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[1] *Handbook for guideline development*, 2nd edition. Geneva, WHO, 2014.

The expert group then decides on the strength of the recommendation – strong or conditional. A strong recommendation is one where the desirable effects of adhering to the recommendation outweigh the undesirable effects. Recommendations that are conditional or weak are made when the expert group is less certain about the balance between the benefits and harms or disadvantages of implementing a recommendation. Conditional recommendations generally include a description of the conditions under which the end-user should or should not implement the recommendation.

The quality of evidence and strength of the recommendation, as well as the link to the source, are included in this publication. Different expert groups may employ different terminology in the guideline processes. We suggest the Reader refer to the Source where more details are available.

The current publication includes updates and new guidelines up until 2017.

Prevent/promote/protect adolescent health

1. PREVENTING EARLY PREGNANCY AND POOR REPRODUCTIVE OUTCOMES AMONG ADOLESCENTS IN DEVELOPING COUNTRIES[2]

(adolescent-specific recommendations)

Reduce marriage before the age of 18 years

Strong recommendations:

- Encourage political leaders, planners and community leaders to formulate and enforce laws and policies to prohibit marriage of girls before 18 years of age. Source
- Undertake interventions to delay marriage of girls until 18 years of age by influencing family and community norms. These interventions should be undertaken in conjunction with interventions directed at political leaders/planners. Source
- Implement interventions to inform and empower girls, in combination with interventions to influence family and community norms, to delay the age of marriage among girls under 18 years of age. Source
- Increase educational opportunities for girls through formal and non-formal channels, to delay marriage until 18 years of age. Source

Undertake research to:

- identify effective interventions that result in the formulation, enforcement and monitoring of laws and policies, including unintended harmful consequences; Source
- determine the feasibility, effectiveness and long-term impact of economic incentives to adolescent girls and their families as a means of delaying the age of marriage until 18 years of age; Source
- determine the feasibility and scale up of interventions to inform and empower girls, in combination with interventions to influence family community norms, to delay the age of marriage among girls until 18 years of age; Source
- assess the impact of improved educational availability and school enrolment on age of marriage; Source
- assess the feasibility of interventions to improve the livelihoods of adolescent girls as well as their impact on delaying the age of marriage. Source

[2] The Reproductive Health and Research (RHR) department at WHO is currently compiling guidelines and recommendations on adolescent sexual and reproductive health. For more information see http://www.who.int/reproductivehealth/publications/en/

Reduce pregnancy before the age of 20 years

Strong recommendations:

- Advocate for adolescent pregnancy prevention among all stakeholders through interventions such as: information provision, sexuality and health education, life skills building, contraceptive counselling and service provision, and the creation of supportive environments. Source
- Maintain and improve efforts to retain girls in school, both at the primary and secondary levels. Source
- Offer interventions that combine curriculum-based sexuality education with contraceptive promotion to adolescents, in order to reduce pregnancy rates. *(Strong recommendation, low to moderate quality evidence).* Source
- Offer and promote postpartum and post-abortion contraception to adolescents through multiple home visits and/or clinic visits to reduce the chances of second pregnancies among adolescents. *(Strong recommendation, low to moderate quality evidence).* Source

Undertake research to:

- determine the effectiveness of interventions among adolescents and other stakeholders to reduce chances of pregnancy among girls under 20 years of age. This research should address varying sociocultural contexts; Source
- explore the effect of socioeconomic improvements, brought about by employment and school retention, for example, on adolescent pregnancy and its mediating determinants within family settings; Source
- determine the effect of availability of formal and non-formal education on adolescent pregnancy prevention. This research should consider potential mediating factors such as socioeconomic and marital status; Source
- determine the effect of targeted interventions for education retention (e.g. conditional or unconditional cash-transfer interventions) and policies (including support for adolescent mothers) on delaying pregnancy and reducing chances of second pregnancies: Source
- design and assess the feasibility and effectiveness of social support interventions to reduce repeat pregnancies among adolescents. Source

Increase of contraception by adolescents at risk of unintended pregnancy

Strong recommendations:

- Undertake efforts with political leaders and planners to formulate laws and policies to increase adolescent access to contraceptive information and services, including emergency contraceptives. Source
- Undertake interventions to influence community members to support access to contraceptives for adolescents. Source
- Implement interventions to improve health service delivery to adolescents as a means of facilitating their access to and use of contraceptive information and services. Source
- Implement interventions at scale that provide accurate information and education about contraceptives, in particular curriculum-based sexuality education (CBSE), to increase contraceptive use among adolescents. *(Strong recommendation, low quality evidence)* Source

Conditional recommendation:

- Implement interventions to reduce the financial cost of contraceptives to adolescents. Source

Undertake research to:

- identify feasible and effective interventions that result in the formulation of such laws and policies; Source
- identify and evaluate interventions that influence community members' support for access to contraceptives for adolescents; Source
- identify feasible and effective interventions to improve the availability of over-the counter hormonal contraceptives to adolescents; Source
- determine the effectiveness of interventions that provide accurate information and education about contraceptives in various settings and populations (both in-school and out-of-school); Source
- identify feasible and effective interventions that aim to involve adolescent and adult males in decisions about contraceptive use by partners as well as by themselves including interventions that aim to transform gender norms; Source
- determine the feasibility, sustainability and impact of specifically reducing the financial cost of contraceptives to adolescents. Source

Reduce coerced sex among adolescents

Strong recommendations:

- Continue efforts with political leaders, planners and the community to formulate laws and policies that punish perpetrators of coerced sex involving adolescent girls, to enforce these laws and policies in a way that empowers victims and their families, and to monitor their enforcement. Source
- Implement interventions to enhance adolescent girls' abilities to resist coerced sex and to obtain support if they experience coerced sex by: Source
  - building their self-esteem; Source
  - developing their life skills in areas such as communication and negotiation; and
  - improving their links to social networks and their ability to obtain social support *(Strong recommendation, low quality evidence)*. Source
- The above interventions should be combined with interventions to create supportive social norms that do not condone coerced sex. Source
- Implement interventions to engage men and boys to critically assess gender norms and normative behaviours (e.g. gender transformative approaches) that relate to sexual coercion and violence. Combine these with wider interventions to influence social norms on these issues *(Strong recommendation, low quality evidence)*. Source

Undertake research to:

- assess how laws and policies to prevent coerced sex involving adolescent girls have been formulated, enforced and monitored; Source

- determine the effectiveness of these laws and policies in preventing coerced sex among adolescents. Source

Reduce unsafe abortion among adolescents

Strong recommendations:

- Ensure that laws and policies enable adolescents to obtain safe abortion services. Source
- Enable adolescents to obtain safe abortion services by informing them and other stakeholders about:
  - the dangers of unsafe methods of interrupting a pregnancy
  - the safe abortion services that are legally available; and
  - where and under what circumstances these services can be obtained legally.

  Source
- Identify and overcome barriers to the provision of safe abortion services to adolescents. Source
- Ensure access to post-abortion by adolescents care as a life-saving medical intervention, whether or not the abortion or attempted abortion was legal. Source
- Ensure that adolescents who have had abortions can obtain post-abortion contraceptive information and services, whether or not the abortion was legal. Source

Recommendations related to regulatory, policy and human rights considerations

An enabling regulatory and policy environment is needed to ensure that every woman who is legally eligible has ready access to safe abortion care. Policies should be geared to respecting, protecting and fulfilling the human rights of women, to achieving positive health outcomes for women, to providing good-quality contraceptive information and services, and to meeting the particular needs of poor women, adolescents, rape survivors and women living with HIV. Source

Undertake research to:

- assess their enforcement and impact of laws and policies that enable safe abortion services for adolescents (where they exist); Source
- determine the feasibility and effectiveness of interventions to reduce barriers to the provision of safe, legal abortion services to adolescents; Source
- investigate the feasibility and effectiveness of interventions to ensure access to post-abortion care by adolescents. Source

Increase use of skilled antenatal, childbirth and postnatal care among adolescents

Strong recommendations:

- Provide information to all pregnant adolescents and other stakeholders about the importance of utilizing skilled antenatal care. Source
- Provide information to all pregnant adolescents and other stakeholders about the importance of utilizing skilled childbirth care. Source

- Promote birth and emergency preparedness in antenatal care strategies for pregnant adolescents (in household, community and health facility settings). Source
- Expand the availability and access to basic emergency obstetric care (BEmOC) and comprehensive emergency obstetric care (CEmOC) to all populations, including adolescents. Source

Undertake research to:

- identify interventions that improve access to and use of services by informing adolescents and other stakeholders about the importance of skilled antenatal and childbirth care for pregnant adolescents. Source
- identify the types of changes to health services that can improve adolescents' access to and use of skilled antenatal care. Source
- identify effective interventions to improve birth and emergency preparedness for adolescents (this research should examine both proximal outcomes, such as improved use of care, as well as distal outcomes, such as maternal mortality and morbidity). Source
- identify the types of changes that need to be made to health services in order to improve adolescents' access to and use of skilled childbirth care. Source
- identify effective interventions to reduce barriers to access and use of skilled care for adolescents during antenatal, childbirth and postnatal periods. Source
- identify effective interventions for tailoring antenatal, childbirth and postnatal care services to adolescents. Source
- identify interventions to expand the availability of and access to BEmOC and CEmOC for adolescents. Source

2. VACCINATIONS

(adolescent-relevant recommendations)

Human Papilloma Virus

- WHO recommends that HPV vaccination should be introduced into national immunization programmes where i) prevention of cervical cancer and/or other HPV-related disease is a public health priority ii) the introduction is programmatically feasible and economically sustainable, and where iii) cost-effectiveness aspects have been duly considered. Source
- As HPV vaccines are most efficacious in females who are naïve to vaccine-related HPV types, HPV-immunization programmes should initially prioritize high coverage in the primary target population of girls aged 9–13 years. Where possible, such programmes should be part of a coordinated strategy that includes education about risk behaviours for HPV infection, information on the continued value of screening programmes for cervical cancer, and training of health care workers. HPV vaccination of males is not recommended as a priority, especially in resource-constrained settings, as the available evidence indicates that the first priority should be for cervical cancer reduction by timely vaccination of young females and high coverage with each dose. Source
- For both the bivalent and quadrivalent HPV vaccines, a 2-dose schedule with a 6-month interval between doses is now recommended for females younger than 15 years, including females 15 years or older at the time of the second dose. There is no maximum recommended

interval between doses. However, an interval no greater than 12–15 months is suggested in order to complete the schedule promptly and before becoming sexually active. Source

- If the interval between doses is shorter than 5 months, a third dose should be given at least 6 months after the first dose. A 3-dose schedule (0, 1–2, 6 months) is recommended for females aged 15 years and older, and for those known to be immunocompromised and/or HIV-infected (regardless of whether they are receiving ART). It is not necessary to screen for HPV infection or HIV infection prior to HPV vaccination. The need for a booster dose has not been established. Source

Measles

- Measles vaccines are recommended for all susceptible children and adults for whom measles vaccination is not contraindicated. Where measles transmission is high, the first dose of measles-containing vaccine (MCV1) should be given at 9 months of age, but also to all unvaccinated children over this age. Where transmission is low, MCV1 administration at 12 months of age is preferable. *(Strong recommendation, high quality evidence).* Source
- Where MCV1 is given at 9 months of age, the routine MCV2 should be administered at 15–18 months of age. In countries with very low measles transmission and MCV1 administered at 12 months, the optimal time for routine MCV2 (e.g. between age 15–18 months – school entry) depends on programmatic considerations. *(Strong recommendation, high quality evidence)*. Source
- Measles vaccination should be routinely given to potentially susceptible, asymptomatic HIV-infected children and adults. *(Strong recommendation, very low quality evidence)*. Source
- In areas where there is a high incidence of both HIV infection and measles, the first dose of MCV may be offered as early as age 6 months. Two additional doses of measles vaccine should be administered to these children according to the national immunization schedule. *(Strong recommendation, very low quality evidence)*. Source

Meningococcal vaccines

- WHO recommends that countries with high (>10 cases/100 000 population/year) or intermediate endemic rates (2–10 cases/100 000 population/year) of invasive meningococcal disease and countries with frequent epidemics, introduce appropriate large scale meningococcal vaccination programmes. In countries where the disease occurs less frequently (<2 cases per 100 000 population/year), meningococcal vaccination is recommended for groups at known risk of meningococcal exposure. *(Strong recommendation, high quality evidence)* Source
- For each country the choice of vaccine depends on the locally prevalent serogroup(s) of *N. meningitidis* (or serosubtype in case of serogroup B). Conjugate vaccines are preferred over polysaccharide vaccines due to their potential for herd protection and their increased immunogenicity, particularly in children <2 years of age. Both conjugate and polysaccharide vaccines are efficacious and safe when used in pregnant women. Source
- WHO recommends that countries completing mass vaccination campaigns introduce meningococcal A conjugate vaccine into the routine childhood immunization programme within 1–5 years following campaign completion, along with a one-time catch-up campaign for birth cohorts born since the initial mass vaccination and which would not be within the age range targeted by the routine immunization programme. In areas where routine childhood vaccination coverage with meningococcal A conjugate vaccine is less than 60%, periodic campaigns could be considered to complement routine vaccination, as herd protection may not be sufficient to protect those who are not immunized. Source

Rubella

Rubella-containing vaccines are administered subcutaneously or intramuscularly, usually at age 12–15 months, but may be administered to children aged 9–11 months and to older children, adolescents and adults. Although one dose of rubella vaccine probably induces life-long protection, in most countries using the measles-rubella or measles-mumps-rubella vaccines a second dose is offered at 15–18 months or 4–6years, as indicated for protection against measles and mumps. *(Strong recommendation, high quality evidence)*. Source

Commonly used RCVs are combinations with vaccines against measles (MR), measles and mumps (MMR), or measles, mumps and varicella (MMRV). Each dose of an RCV contains a defined number of infectious units (≥1000 PFU or CCID50). Source

Tetanus vaccine booster

Serological survey data suggest that booster doses in adolescents and adults are critical in maintaining high antibody levels, which can persist for decades. Pre-adolescent and adolescent booster doses are also programmatically feasible and align with the human papillomavirus (HPV) immunization schedule. Source

3. HIV PREVENTION[3]

(adolescent-specific recommendations)

The use of antiretroviral drugs for treating and preventing HIV infection 2016

- HIV testing services, with linkages to prevention, treatment and care, should be offered for adolescents from key populations in all settings *(Strong recommendation, very low-quality evidence)*.
- Adolescents with HIV should be counselled about the potential benefits and risks of disclosure of their HIV status and empowered and supported to determine if, when, how and to whom to disclose *(Conditional recommendation, very low-quality evidence)*.
- Generalized HIV epidemic: HIV testing services with linkage to prevention, treatment and care should be offered to all adolescents in generalized epidemics *(Strong recommendation, very low-quality evidence)*.
- Concentrated HIV epidemic: HIV testing services with linkage to prevention, treatment and care should be accessible to adolescents in low-level and concentrated epidemics *(Conditional recommendation, very low quality evidence)*.
- Community-based approaches can improve treatment adherence and retention in care of adolescents living with HIV *(Conditional recommendation, very low-quality evidence)*.

Source

Comprehensive condom and lubricant programming

- Adolescents' emotional, intellectual and social capacities are continuously evolving. Young people from key populations, perhaps more so than their peers in the general population,

[3] The Reproductive Health and Research (RHR) department at WHO is currently compiling guidelines and recommendations on adolescent sexual and reproductive health. For more information see http://www.who.int/reproductivehealth/publications/en/

experience power imbalances in sexual relationships that limit their ability to use condoms. Peer-led and outreach approaches may help to distribute condoms and lubricants, increase knowledge, develop skills and empower adolescents from key populations to use condoms and lubricants correctly and consistently. Source

Creating an enabling environment

Health sexuality across the life course

- REC A.1: Adolescent- friendly health services should be implemented in HIV services to ensure engagement and improved outcomes. *(Strong recommendation, low quality evidence).* Source

Integration of SRHR and HIV services

- REC A.7: Trained and supervised lay providers can distribute ART to adults, adolescents and children living with HIV.

Source

Antenatal care and maternal health services

- REC B.24: ART should be initiated in all adolescents living with HIV, regardless of WHO clinical stage and at any CD4 cell count.
- REC B.25: As a priority, ART should be initiated in all adolescents with severe or advanced HIV clinical disease (WHO clinical stage 3 or 4) and adolescents with a CD4 count < 350 cells/mm^3.

Source

4. VOLUNTARY MEDICAL MALE CIRCUMCISION

(adolescent-relevant recommendation)

Voluntary medical male circumcision for HIV prevention

- Countries with hyperendemic and generalized HIV epidemics and low prevalence of male circumcision should increase access to male circumcision services as a priority for adolescents and young men. Source

5. SEXUAL AND REPRODUCTIVE HEALTH AND RIGHTS[4]

(adolescent-specific recommendations)

Contraceptive services

- In order to meet the educational and service needs of adolescents, it is recommended that sexual and reproductive health services, including contraceptive information and services, be provided for adolescents without mandatory parental and guardian authorization/notification.

[4] The Reproductive Health and Research (RHR) department at WHO is currently compiling guidelines and recommendations on adolescent sexual and reproductive health. For more information see http://www.who.int/reproductivehealth/publications/en/

- To act in the best interest of adolescents, health services may need to prioritize their immediate health needs, while being attentive to signs of vulnerability, abuse and exploitation. Appropriate and confidential referral, if and when requested by the adolescent, can provide linkage to other services and sectors for support.

Source

Safe abortion and post-abortion care

- Adolescents may be deterred from accessing health services if they think they will be required to obtain permission from their parents or guardians; this can increase the likelihood that they will go to providers of unsafe abortion. Source

Cervical cancer screening and treatment

- HPV vaccination does not replace cervical cancer screening. In countries where the HPV vaccine is introduced, screening programmes may need to be developed or strengthened.
- The WHO recommended target group for HPV vaccination is girls ages 9–13 years who have not yet become sexually active, including those living with HIV.

Source

Conception and pregnancy

- All adult and adolescent women from key populations who are living with HIV and are pregnant should receive appropriate HIV treatment and care, in line with WHO guidance, to prevent HIV transmission from mother to child.
- Many women from key populations, in particular adolescents, have inadequate access to antenatal care, attend late in pregnancy and have less access to PMTCT services.

Source

Medical Eligibility criteria for contraceptive use

Female surgical sterilization

CONDITION	CATEGORY A = accept C = caution B = delay S = special	CLARIFICATIONS/ EVIDENCE
PERSONAL CHARACTERISTICS AND REPRODUCTIVE HISTORY		
YOUNG AGE	C	**Clarification:** Young women, like all women, should be counselled about the permanency of sterilization and the availability of alternative, long-term, highly effective methods. **Evidence:** Studies show that up to 20% of women sterilized at a young age later regret this decision, and that young age is on the of the stronger predictors of regret (including request for referral information and obtaining reversal) that can be identified before sterilization.

Male surgical sterilization

CONDITION	CATEGORY A = accept C = caution B = delay S = special	CLARIFICATIONS/ EVIDENCE
PERSONAL CHARACTERISTICS AND REPRODUCTIVE HISTORY		
YOUNG AGE	C	**Clarification:** Young men, like all men, should be counselled about the permanency of sterilization and the availability of alternative, long-term, highly effective methods. **Evidence:** Men who underwent vasectomy at young ages were more likely to have the procedure reversed that those who underwent vasectomy at older ages.

Source

Recommendations age:

- Young women (menarche to <18 years) can generally use DMPA (MEC category 2)

Source

Combined hormonal contraceptives (CHCs)

CONDITION	CATEGORY I = initiation, C = continuation COC = combined oral contraceptive	CLARIFICATIONS/ EVIDENCE
PERSONAL CHARACTERISTICS AND REPRODUCTIVE HISTORY		
AGE Menarche to <40 years	N/A	**Evidence:** Evidence about whether CHC use effects fracture risk is inconsistent, although 3 recent studies show no effect. CHC use may decrease bone mineral density (BMD) in adolescents, especially in those choosing very low dose formulations (<30 ug ethinyl estradiol-containing COCs). CHC use has little to no effect on BMD in premenopausal women.

Source

Ensuring human rights in the provision of contraceptive information and services
Accessibility of contraceptive information and services

- Recommend the provision of scientifically accurate and comprehensive sexuality education programmes within and outside of schools that include information on contraceptive use and acquisition.
- Recommend eliminating financial barriers to contraceptive use by marginalized populations including adolescents and the poor, and make contraceptives affordable to all.
- Recommend interventions to improve access to comprehensive contraceptive information and services for users and potential users with difficulties in accessing services (e.g. rural residents, urban poor, adolescents). Safe abortion information and services should be provided according to existing WHO guidelines (*Safe abortion: technical and policy guidance for health systems, 2nd edition*).
- Recommend provision of sexual and reproductive health services, including contraceptive information and services, for adolescents without mandatory parental and guardian authorization/notification, in order to meet the educational and service needs of adolescents.

Source

6. SEXUALLY TRANSMITTED INFECTIONS PREVENTION[5]

(adolescent- specific recommendations)

The Guidance on sexually transmitted infections is in process of being updated.

Behavioural interventions (to reduce their risk of acquiring STIs or HIV)

- Skills-based interactive and participatory approaches for adolescents from key populations, including online, mobile health, peer and outreach approaches, have proved acceptable to adolescents and have shown promise in some contexts. Source

Sexual health counselling and support

- Brief sexuality- related communication (BSC) is recommended for the prevention of sexually transmitted infections among adults and adolescents in primary health services. Source

7. PREVENTION OF RISK FACTORS FOR NON-COMMUNICABLE DISEASES

(adolescent-relevant recommendations)

Criteria for age and frequency of cervical cancer screening

- Women younger than 30 years of age should not undergo screening except for women known to be HIV-infected or living in a high HIV prevalence area. *(No strength, quality of evidence)* Source

Alcohol and other psychoactive substances

- No GRC-approved recommendations specifically for adolescents currently exist.[6]

Diet and physical activity

- Children and young people aged 5–17 years old should accumulate at least 60 minutes of moderate- to vigorous-intensity physical activity daily. Physical activity of amounts greater than 60 minutes daily will provide additional health benefits. Most of daily physical activity should be aerobic. Vigorous-intensity activities should be incorporated, including those that strengthen muscle and bone, at least three times per week. *(Strong recommendation, high quality evidence)* Source

[5] The Reproductive Health and Research (RHR) department at WHO is currently compiling guidelines and recommendations on adolescent sexual and reproductive health. For more information see http://www.who.int/reproductivehealth/publications/en/

[6] The guidance in Global strategy to reduce the harmful use of alcohol, 2010, Source and Mental Health Gap Action Programme: Scaling up care for mental, neurological and substance use disorders, 2010, may be used. Source

Global Recommendations on Physical Activity for Health

Recommended levels of physical activity for health

5–17 years old

For children and young people of this age group physical activity includes play, games, sports, transportation, recreation, physical education or planned exercise, in the context of family, school, and community activities.

In order to improve cardiorespiratory and muscular fitness, bone health, cardiovascular and metabolic health biomarkers and reduced symptoms of anxiety and depression, the following are recommended:

- Children and young people aged 5–17 years old should accumulate at least 60 minutes of moderate to vigorous-intensity physical activity daily.
- Physical activity of amounts greater than 60 minutes daily will provide additional health benefits.
- Most of daily physical activity should be aerobic. Vigorous-intensity activities should be incorporated, including those that strengthen muscle and bone, at least 3 times per week.

Source

18–64 years old

For adults of this age group, physical activity includes recreational or leisure-time physical activity, transportation (e.g walking or cycling), occupational (i.e. work), household chores, play, games, sports or planned exercise, in the context of daily, family, and community activities.

In order to improve cardiorespiratory and muscular fitness, bone health and reduce the risk of NCDs and depression the following are recommended:

- Adults aged 18–64 years should do at least 150 minutes of moderate-intensity aerobic physical activity throughout the week, or do at least 75 minutes of vigorous-intensity aerobic physical activity throughout the week, or an equivalent combination of moderate- and vigorous-intensity activity.
- Aerobic activity should be performed in bouts of at least 10 minutes duration.
- For additional health benefits, adults should increase their moderate-intensity aerobic physical activity to 300 minutes per week, or engage in 150 minutes of vigorous-intensity aerobic physical activity per week, or an equivalent combination of moderate- and vigorous-intensity activity.
- Muscle-strengthening activities should be done involving major muscle groups on 2 or more days a week.

Source

Tobacco

- No GRC-approved recommendations currently exist.[7]

[7] Guidance on this topic is in the process of being updated. Meanwhile, the guidance in *WHO Framework convention on tobacco control: guidelines for implementation*, 2013, may be used. Source

8. VIOLENCE AND INJURY PREVENTION

- Refer to section 17 on management of violence and injuries

9. PREVENTION OF MENTAL HEALTH PROBLEMS AND PROMOTION OF MENTAL HEALTH

(adolescent-relevant recommendations)

Behaviour change techniques for promoting mental health

- Non-specialized health care facilities should encourage and collaborate with school-based life skills education, if feasible, to promote mental health in children and adolescents. *(CONDITIONAL recommendation, low quality of evidence).* Source

School-based interventions for reducing deaths from suicide and suicide attempts among young people

- The implementation of suicide prevention programmes in school settings that include mental health awareness training and skills training can be offered to reduce suicide attempts and suicide deaths among adolescent students. *(CONDITIONAL recommendation, low quality of evidence).* Source

10. NUTRITION[8]

(adolescent-relevant recommendations)

Healthy diet:

Sugars intake for adults and children

- WHO recommends a reduced intake of free sugars throughout the lifecourse *(strong recommendation)*.
- In both adults and children, WHO recommends reducing the intake of free sugars to less than 10% of total energy intake *(strong recommendation)*.
- WHO suggests a further reduction of the intake of free sugars to below 5% of total energy intake *(conditional recommendation)*.

Source

Potassium intake for adults and children

- WHO recommends an increase in potassium intake from food to reduce blood pressure and risk of cardiovascular disease, stroke and coronary heart disease
- WHO suggests a potassium intake of at least 90 mmol/day (3510 mg/day) for adults *(conditional recommendation)*.

[8] The Nutrition department at WHO is currently compiling guidelines and recommendations on adolescent nutrition. (For more information, see http://www.who.int/nutrition/publications/en/)

- WHO suggests an increase in potassium intake from food to control blood pressure in children *(conditional recommendation)*. The recommended potassium intake of at least 90 mmol/day should be adjusted downward for children, based on the energy requirements of children relative to those of adults.

Source

Sodium intake for adults and children

- WHO recommends a reduction in sodium intake to reduce blood pressure and risk of cardiovascular disease, stroke and coronary heart disease in adults *(strong recommendation)*.
- WHO recommends a reduction to <2 g/day sodium (5 g/day salt) in adults *(strong recommendation)*.
- WHO recommends a reduction in sodium intake to control blood pressure in children *(strong recommendation)*. The recommended maximum level of intake

Source

Micronutrient supplementation:

Daily iron supplementation in adult women and adolescent girls

- Daily iron supplementation is recommended as a public health intervention in menstruating adult women and adolescent girls, living in settings where anaemia is highly prevalent (≥40% anaemia prevalence), for the prevention of anaemia and iron deficiency *(strong recommendation, moderate quality of evidence)*. Source

Intermittent iron supplementation in preschool and school-aged children

- Intermittent iron supplementation is recommended as a public health intervention in preschool and school-age children to improve iron status and reduce the risk of anaemia *(strong recommendation)*. Source

Intermittent iron and folic acid supplementation in menstruating women

- Intermittent iron and folic acid supplementation is recommended as a public health intervention in menstruating women living in settings where anaemia is highly prevalent, to improve their haemoglobin concentrations and iron status and reduce the risk of anaemia *(strong recommendation, low quality evidence for anaemia, haemoglobin, iron deficiency and ferritin for the comparison between intermittent iron supplementation and no intervention or placebo, moderate quality evidence when compared with daily iron supplementation for anaemia, low quality for haemoglobin and ferritin, very low quality for iron deficiency)*. Source

Suggested scheme for intermittent iron and folic acid supplementation in menstruating women

Supplement composition	Iron: 60 mg of elemental iron;[a] Folic acid: 2800 µg (2.8 mg)
Frequency	One supplement per week
Duration and time interval between periods of supplementation	3 months of supplementation followed by 3 months of no supplementation after which the provision of supplements should restart If feasible, intermittent supplements could be given throughout the school or calendar year
Target group	All menstruating adolescent girls and adult women
Settings	Populations where the prevalence of anaemia among non –pregnant women of reproductive age is 20% or higher

[a] 60 mg of elemental iron equals 300 mg of ferrous sulfate heptahydrate, 180 mg of ferrous fumarate or 500 mg of ferrous gluconate.

Daily iron supplementation in postpartum women

- Oral iron supplementation, either alone or in combination with folic acid supplementation, may be provided to postpartum women for 6–12 weeks following delivery for reducing the risk of anaemia in settings where gestational anaemia is of public health concern *(conditional recommendation, low quality of evidence)*. Source

Optimal serum and red blood cell folate concentrations in women of reproductive age for prevention of neural tube defects

- At the population level, red blood cell folate concentrations should be above 400 ng/mL (906 nmol/L) in women of reproductive age, to achieve the greatest reduction of NTDs *(strong recommendation, low quality evidence)*.
- The above red blood cell folate threshold can be used as an indicator of folate insufficiency in women of reproductive age *(strong recommendation, low quality evidence)*. Because low folate concentrations cannot explain all cases of NTDs, this threshold cannot predict the individual risk of having a NTD-affected pregnancy and thus it is only useful at the population level.
- No serum folate threshold is recommended for prevention of NTDs in women of reproductive age at the population level *(strong recommendation, low quality evidence)*. Countries interested in using this indicator may consider first establishing the relationship between both serum and red blood cell folate and use the threshold value for red blood cell folate to establish the corresponding threshold in serum.
- Microbiological assay is recommended as the most reliable choice to obtain comparable results for red blood cell folate across countries *(strong recommendation, moderate quality evidence)*.

Source

Use of multiple micronutrient powders for point-of-use fortification of foods consumed by pregnant women

- Routine use of multiple micronutrient powders during pregnancy is not recommended as an alternative to standard iron and folic supplementation during pregnancy for improving maternal and infant health outcomes *(strong recommendation, very low quality of evidence)*.

Source

Vitamin A supplementation in postpartum women

Vitamin A supplementation in postpartum women is not recommended for the prevention of maternal and infant morbidity and mortality *(strong recommendation)*. Source

Fortification

Fortification of food-grade salt with iodine for the prevention and control of iodine deficiency disorders

- All food-grade salt, used in household and food processing, should be fortified with iodine as a safe and effective strategy for the prevention and control of iodine deficiency disorders in populations living in stable and emergency settings. Source

Fortification of maize flour and corn meal with vitamins and minerals

- Fortification of maize flour and corn meal with iron is recommended to prevent iron deficiency in populations, particularly vulnerable groups such as children and women *(conditional recommendation, very low-quality evidence)*.
- Fortification of maize flour and corn meal with folic acid is recommended to reduce the risk of occurrence of births with neural tube defects *(conditional recommendation, very low-quality evidence)*.

Source

Preconception and antenatal: WHO recommendations on antenatal care for a positive pregnancy experience

Dietary interventions

- Counselling about healthy eating and keeping physically active during pregnancy is recommended for pregnant women to stay healthy and to prevent excessive weight gain during pregnancy. *(Recommended)*
- In undernourished populations, nutrition education on increasing daily energy and protein intake is recommended for pregnant women to reduce the risk of low-birth-weight neonates. *(Context-specific recommendation)*
- In undernourished populations, balanced energy and protein dietary supplementation is recommended for pregnant women to reduce the risk of stillbirths and small-for-gestational-age neonates. *(Context-specific recommendation)*
- In undernourished populations, high-protein supplementation is not recommended for pregnant women to improve maternal and perinatal outcomes. *(Not recommended).* Source

Iron and folic acid supplements

- Daily oral iron and folic acid supplementation with 30 mg to 60 mg of elemental iron and 400 ug (0.4 mg) of folic acid is recommended for pregnant women to prevent maternal anaemia, puerperal sepsis, low birth weight, and preterm birth. *(Recommended)*
- Intermittent oral iron and folic acid supplementation with 120 mg of elemental irone and 2800ug (2.8 mg) of folic acid once weekly is recommended for pregnant women to improve maternal and neonatal outcomes if daily iron is not acceptable due to side-effects, and in populations with an anaemia prevalence among pregnant women of less than 20%. *(Context-specific recommendation)*

Calcium supplements

- In populations with low dietary calcium intake, daily calcium supplementation (1.5–2.0 g oral elemental calcium) is recommended for pregnant women to reduce the risk of pre-eclampsia. *(Context-specific recommendation).* Source

Vitamin A supplements

- Vitamin A supplementation is only recommended for pregnant women in areas where vitamin A deficiency is a severe public health problem, to prevent night blindness. *(Context-specific recommendation).* Source

Zinc supplements

- Zinc supplementation for pregnant women is only recommended in the context of rigorous research. *(Context-specific recommendation: research).* Source

Multiple micronutrient supplements

- Multiple micronutrient supplementation is not recommended for pregnant women to improve maternal and perinatal outcomes. *(Not recommended).* Source

Vitamin B6 (pyridoxine supplements)

- Vitamin B6 (pyridoxine) supplementation is not recommended for pregnant women to improve maternal and perinatal outcomes. *(Not recommended).* Source

Vitamin E and C supplements

- Vitamin E and C supplementation is not recommended for pregnant women to improve maternal and perinatal outcomes. *(Not recommended).* Source

Vitamin D supplements

- Vitamin D supplementation is not recommended for pregnant women to improve maternal and perinatal outcomes. *(Not recommended).* Source

Restricting caffeine intake

- For pregnant women with high daily caffeine intake (more than 300 mg per day), lowering daily caffeine intake during pregnancy is recommended to reduce the risk of pregnancy loss and low-birth-weight neonates. *(Context-specific recommendation).* Source

Vitamin A supplementation during pregnancy for reducing the risk of mother-to-child transmission of HIV

- Vitamin A supplementation in HIV-positive pregnant women is not recommended as a public health intervention for reducing the risk of mother-to-child transmission of HIV *(strong recommendation)*. Source

WHO Recommendations on health promotion interventions for maternal and newborn health

Birth preparedness and complication readiness (BPCR)

- BPCR interventions are recommended to increase the use of skilled care at birth and to increase the timely use of facility care for obstetric and newborn complications. Source

Male involvement interventions for MNH

- Interventions to promote the involvement of men during pregnancy, childbirth and after birth are recommended to facilitate and support improved self-care of women, improved home care practices for women and newborns, improved use of skilled care during pregnancy, childbirth and the postnatal period for women and newborns, and increase the timely use of facility care for obstetric and newborn complications.
- These interventions are recommended provided that they are implemented in a way that respects, promotes and facilitates women's choices and their autonomy in decision-making and supports women in taking care of themselves and their newborns. In order to ensure this, rigorous monitoring and evaluation of implementation is recommended. Source

Partnership with traditional birth attendants (TBAs)

- Where TBAs remain the main providers of care at birth, dialogue with TBAs, women, families, communities and service providers is recommended in order to define and agree on alternative roles for TBAs, recognizing the important role they can play in supporting the health of women and newborns.
- The use of lay health workers including trained TBAs is recommended for promoting the uptake of a number of maternal and newborn-related health care behaviours and services, providing continuous social support during labour in the presence of a skilled birth attendant and administering misoprostol to prevent postpartum haemorrhage.
- The use of lay health workers including trained TBAs to deliver the following interventions is recommended, with targeted monitoring and evaluation: the distribution of certain oral supplement-type interventions to pregnant women (calcium supplementation for women living in areas with known low levels of calcium intake; routine iron and folate supplementation for pregnant women; intermittent presumptive therapy for malaria for pregnant women living in endemic areas; vitamin A supplementation for pregnant women living in areas where severe vitamin A deficiency is a serious public health problem); and the initiation and maintenance of injectable contraceptives using a standard syringe. Source

Providing culturally appropriate skilled maternity care

- Ongoing dialogue with communities is recommended as an essential component in defining the characteristics of culturally appropriate, quality maternity care services that address the needs of women and newborns and incorporate their cultural preferences. Mechanisms that ensure women's voices are meaningfully included in these dialogues are also recommended. Source

Companion of choice at birth

- Continuous companionship during labour and birth is recommended for improving women's satisfaction with services.

- Continuous companionship during labour and birth is recommended for improving labour outcomes.
- Community mobilization through facilitated participatory learning and action cycles with women's groups
- The implementation of community mobilization through facilitated participatory learning and action cycles with women's groups is recommended to improve maternal and newborn health, particularly in rural settings with low access to health services.
- The implementation of facilitated participatory learning and action cycles with women's groups should focus on creating a space for discussion where women are able to identify priority problems and advocate for local solutions for maternal and newborn health.
- Community participation in quality-improvement processes
- Community participation in quality-improvement processes for maternity care services is recommended to improve quality of care from the perspectives of women, communities and health care providers.
- Communities should be involved in jointly defining and assessing quality. Mechanisms that ensure women's voices are meaningfully included are also recommended.
- Community participation in programme planning and implementation
- Community participation in programme planning, implementation and monitoring is recommended to improve use of skilled care during pregnancy, childbirth and the postnatal period for women and newborns, increase the timely use of facility care for obstetric and newborn complications and improve maternal and newborn health. Mechanisms that ensure women's voices are meaningfully included are also recommended. Source

Maternity waiting homes (MWHs)

- MWHs are recommended to be established close to a health facility where essential childbirth care and/or care for obstetric and newborn complications is provided to increase access to skilled care for populations living in remote areas or with limited access to services. *(Conditional recommendation)* Source

Community-organized transport schemes

- Community-organized transport schemes are recommended in settings where other sources of transport are less sustainable and not reliable. However, measures should be taken to ensure the sustainability, efficacy and reliability of these schemes while seeking long-term solutions to transport. *(Conditional recommendation)* Source

Management of adolescent conditions

11. HIV TESTING AND COUNSELLING FOR ADOLESCENTS LIVING WITH HIV[9]

(adolescent-specific recommendations)

HIV testing and counselling

In all epidemic settings accessible and acceptable HTC services must be available to adolescents and provided in ways that do not put them at risk. Countries are encouraged to examine their current consent policies and consider revising them to reduce age-related barriers to access and uptake of HTC and to linkages to prevention, treatment and care following testing. Young people should be able to obtain HTC without required parental or guardian consent or presence.

- HIV testing and counselling, with linkages to prevention, treatment and care, is recommended for adolescents from key populations in all settings (generalized, low and concentrated epidemics). *(Strong recommendation, very low quality of evidence)*
- Adolescents should be counselled about the potential benefits and risks of disclosure of their HIV status and empowered and supported to determine when, how and to whom to disclose. *(Conditional recommendation, very low quality of evidence)*
- Children of school age should be told their HIV-positive status. *(Strong recommendation, low quality of evidence)*

Source

Service Delivery: Community-based approaches

- Community-based approaches can improve treatment adherence and retention in care of adolescents living with HIV. *(Conditional recommendation, very low quality of evidence)* Source

[9] The Reproductive Health and Research (RHR) department at WHO is currently compiling guidelines and recommendations on adolescent sexual and reproductive health, including HIV. For more information see http://www.who.int/reproductivehealth/publications/en/

12. ANTIRETROVIRAL TREATMENT (ART)[10]

(adolescent-specific recommendations)

When to start (ART) in adolescents

- ART should be initiated in all adolescents living with HIV, regardless of WHO clinical stage and at any CD4 cell count *(Conditional recommendation, low-quality evidence)*.
- As a priority, ART should be initiated in all adolescents with severe or advanced HIV clinical disease (WHO clinical stage 3 or 4) and adolescents with a CD4 count ≤350 cells/mm^3 *(Strong recommendation, moderate-quality evidence)*.

Source

People who inject with drugs

- Current WHO guidance on the use of ART for treatment of HIV infection in adults and adolescents applies to people living with HIV who inject drugs. Source

Adolescents from key populations

- Community-based approaches can improve treatment adherence and retention in care of adolescents living with HIV.
- Training of health-care workers can contribute to treatment adherence and retention in care of adolescents living with HIV.
- Health-care providers can support adherence among adolescents by:
  - assisting them in exploring factors influencing their adherence
  - improving their understanding of HIV, ART and adherence
  - recognizing developmental needs while supporting their emerging independence
  - assisting them in integrating ART into daily life
  - offering simplified ART regimes
  - encouraging participation in peer support groups and community-based interventions.

Source

First-line ART for adolescents

First-line ART for adolescents should consist of two NRTIs plus an NNRTI or an INSTI:

- TDF + 3TC (or FTC) + EFV as a fixed-dose combination is recommended as the preferred option to initiate ART *(strong recommendation, low-quality evidence)*.
- TDF + 3TC (or FTC) + DTG or TDF + 3TC (or FTC) + EFV400mg/day may be used as alternative options to initiate ART *(conditional recommendation, low-quality evidence)*.
- If preferred regimens are contraindicated or not available, one of the following alternative options is recommended *(strong recommendation, moderate-quality evidence)*:

[10] The Reproductive Health and Research (RHR) department at WHO is currently compiling guidelines and recommendations on adolescent sexual and reproductive health, including HIV. For more information see http://www.who.int/reproductivehealth/publications/en/

- ABC + 3TC + EFV
- ABC + 3TC + NVP
- AZT + 3TC + EFV
- AZT + 3TC + NVP
- TDF + 3TC (or FTC) + NVP

Source

Prevention and management of coinfections and co-morbidities

Mental health

- Peer support groups and safe spaces can help improve self-esteem and address self-stigma. Additionally, individual and family counselling can address adolescents' mental health co-morbidities. The involvement of supportive parents or guardians can be beneficial, especially for those requiring ongoing treatment and care. It is important, however, to have the adolescent's express permission before contacting parents or care-givers. Source

13. TREATMENT OF SKIN AND ORAL HIV-ASSOCIATED CONDITIONS IN CHILDREN AND ADULTS

(adolescent-relevant recommendations)

Kaposi sarcoma

- Mild/moderate disease: In HIV-infected adults, adolescents and children diagnosed with mild/moderate Kaposi sarcoma, immediate ART initiation is recommended. *(Strong recommendation, low quality evidence)*
- Severe/symptomatic disease: In HIV-infected adults, adolescents and children diagnosed with severe symptomatic Kaposi sarcoma, immediate ART initiation in combination with systemic chemotherapy is recommended. *(Strong recommendation, low quality evidence)*
- Recommended chemotherapy regimens in adults, adolescents and children may include vincristine with bleomycin and doxorubicin (ABV), bleomycin with vincristine (BV), and when available or feasible, liposomal anthracyclines (doxorubicin or daunorubicin), paclitaxel or oral etoposide at sites with the infrastructure, staff and resources to administer chemotherapy drugs and provide appropriate monitoring and supportive care. *(Conditional recommendation, low quality evidence)* Source

Seborrhoeic dermatitis

- Mild seborrhoeic dermatitis: HIV-infected children and adults with mild seborrhoeic dermatitis (including on the scalp) should be treated with topical ketoconazole 2% two to three times per week for four weeks, with a maintenance treatment once per week as needed. *(Conditional recommendation, low quality evidence)*
- Severe seborrhoeic dermatitis and seborrhoeic dermatitis unresponsive to first line therapy:
  - HIV-infected children and adults with severe seborrhoeic dermatitis and those patients with mild seborrhoeic dermatitis unresponsive to first-line therapy should be treated with a combination therapy of topical antifungals (e.g. ketoconazole 2%) and topical corticosteroids. *(Strong recommendation, very low quality evidence)*

- Patients with severe seborrhoeic dermatitis whose HIV status is unknown should be tested for HIV, and if positive, should be assessed for ART initiation according to WHO Consolidated guidelines on general HIV care and the use of antiretroviral drugs for treating and preventing HIV infection. Source

Papular pruritic eruption

- In HIV-infected children, adolescents, pregnant women and adults with papular pruritic eruption, ART should be considered as the primary treatment. *(Strong recommendation, low quality evidence)*
- Additional symptomatic therapy with antihistamines and topical corticosteroids (class 3, 4, 5 or 6, e.g. betamethasone valearate) is also recommended for the duration of persistent symptoms. *(Conditional recommendation, very low quality evidence)* Source

Eosinophilic folliculitis

- ART should be considered as the primary treatment of eosinophilic folliculitis in eligible patients.*(Strong recommendation, low quality evidence)*
- All HIV-infected adults (including pregnant women), adolescents and children who have been initiated on ART and who subsequently develop HIV-associated eosinophilic folliculitis should not discontinue the ART. *(Conditional recommendation, very low quality evidence)*
- Additional symptomatic therapy is recommended for the duration of the persistent symptoms with, depending on severity:
  - oral antihistamine; if no adequate response, add
  - topical corticosteroids (class 3, 4, 5 or 6, e.g. betamethasone valearate); if no adequate response, add
  - oral itraconazole; if no adequate response, add
  - permethrin 5% cream (applied above the waist).

(Conditional recommendation, very low quality evidence)

Source

Tinea infections

- In children and adults (including pregnant women) with tinea infections that are not extensive, topical treatment with terbinafine 1% cream/gel (for two weeks) or miconazole (for three to four weeks) should be initiated. *(Strong recommendation, low quality evidence)*
- In children and adults with extensive tinea infections or hair/nail involvement, oral griseofulvin should be considered. *(Conditional recommendation, very low quality evidence)*
- If there is no response, then oral terbinafine or itraconazole should be used. *(Conditional recommendation, very low quality evidence)*
- In children and adults having tinea infections with unknown HIV status, an HIV test should be offered. *(Strong recommendation, low quality evidence)*

Source

Herpes zoster

- For all HIV-infected children, adolescents and adults (including pregnant women) with herpes zoster, acyclovir is recommended to prevent dissemination and for resolution of disease (at any time in the course of the disease). *(Strong recommendation, low quality evidence)* Source
- All children, adolescents and adults presenting with herpes zoster with unknown HIV status should be offered an HIV test and, if positive, assessed for ART eligibility. *(Strong recommendation, low quality evidence)* Source

Scabies

Mild/moderate scabies:

- For scabies in HIV-infected children and adults (including pregnant women) topical application of permethrin 5% (two applications) is recommended. If permethrin is not available, benzyl benzoate (at least two applications) should be used.
- If there is poor response to treatment, or permethrin treatment is not feasible, then oral ivermectin at 200 µg/kg is recommended. *(Strong recommendation, low quality evidence)*

Source

Severe/crusted scabies:

- For severe or crusted scabies in HIV-infected children ≥15 kg and adults:
  - Two doses (with one to two weeks in-between) of oral ivermectin;
  - If ivermectin is not available, then treat with topical permethrin 5% (or alternatively benzyl benzoate) until clinically clear, as longer treatments may be required. *(Conditional recommendation, very low quality evidence)*
- For severe or crusted scabies in HIV-infected children <15 kg,
  - Topical permethrin 5% (or alternatively benzyl benzoate) until clinically clear, as longer treatments may be required. *(Conditional recommendation, very low quality evidence)*
  - In addition, a keratolytic, such as 5% salicylic acid, can be used to remove scale bulk. *(Conditional recommendation, very low quality evidence)*

Source

Molluscum contagiosum

- ART should be considered as the primary treatment of extensive and/or unusually distributed molluscumcontagiosum in HIV-infected patients. No additional specific treatment is recommended. *(Conditional recommendation, very low quality evidence)*
- All adults presenting with new-onset molluscumcontagiosum in high HIV-prevalence settings with unknown HIV status should be offered an HIV test and, if positive, assessed for ART eligibility. *(Strong recommendation, low quality evidence)*

Source

Oropharyngeal candidiasis

Specific therapy:

ART eligibility:

- Prompt ART initiation is recommended in all HIV-infected adults (including pregnant and breastfeeding women), adolescents and children with orophyaryngeal candidiasis. *(Strong recommendation, high quality evidence)* Source

Stevens-Johnson syndrome & toxic epidermal necrolysis

- In HIV-infected children and adults with Stevens-Johnson syndrome or toxic epidermal necrolysis, the suspected causative drug should be promptly discontinued and supportive therapies should be offered. *(Strong recommendation, very low quality evidence)*
- The use of systemic corticosteroids is not recommended. *(Conditional recommendation, very low quality evidence)*.

Source

Management of HIV-infected children with SAM

- Children with SAM who are HIV infected and who qualify for lifelong ART should be started on ART as soon as possible after stabilization of metabolic complications and sepsis. This would be indicated by return of appetite and resolution of severe oedema. HIV-infected children with SAM should be given the same ART regimens, in the same doses, as children with HIV who do not have SAM. HIV-infected children with SAM who are started on ART should be monitored closely (inpatient and outpatient) in the first six to eight weeks following initiation of ART to identify early metabolic complications and opportunistic infections. *(Strong recommendation, very low quality evidence)* Source
- Children with SAM who are HIV infected should be managed with the same therapeutic feeding approaches as children with SAM who are HIV uninfected. *(Strong recommendation, very low quality evidence)* Source
- HIV-infected children with SAM should receive a high dose of vitamin A on admission (50000 IU to 200000IU depending on age) and zinc for management of diarrhoea as indicated for other children with SAM, unless they are already receiving F75, F100 or RUTF which contain adequate vitamin A and zinc if they are fortified following the WHO specifications. *(Strong recommendation, very low quality evidence)* Source
- HIV-infected children with SAM in whom persistent diarrhoea does not resolve with standard management should be investigated to exclude carbohydrate intolerance and infective causes that may require different management, such as modification of fluid and feed intake, or antibiotics. *(Strong recommendation, very low quality evidence)* Source

14. TREATMENT OF SEXUALLY TRANSMITTED INFECTIONS[11]

- No GRC-approved recommendations currently exist. Guidance on this topic is in the process of being updated.

15. TREATMENT OF MALARIA (ADOLESCENT-RELEVANT RECOMMENDATIONS)

Treating uncomplicated *P. falciparum* malaria

- Treat children and adults with uncomplicated *P. falciparum* malaria (except pregnant women in their first trimester) with one of the following recommended artemisinin-based combination therapies (ACT):
  - Artemether + lumefantrine
  - Artesunate + amodiaquine
  - Artesunate + mefloquine
  - Dihydroartemisinin + piperaquine
  - Artesunate + sulfadoxine – pyrimethamine (SP)

(Strong recommendation, high quality evidence) Source

Duration of ACT treatment

- ACT regimens should provide 3 days treatment with artemisinin derivative. *(Strong recommendation high quality evidence)* Source

Revise dose recommendation for dihydroartemisinin + piperaquine in young children

- Children below 25kg treated with dihydroartemisinin + piperaquine should receive a minimum of 2.5mg/kg body weight (bw) per day of dihydroartemisinin and 20 mg/kg bw per day of piperaquine daily for 3 days. *(Strong recommendation based on pharmacokinetic modelling)* Source

Reducing the transmissibility of treated *P. falciparum* infections

- In low-transmission areas, give a single dose of 0.25 mg/kg bw primaquine with ACT to patients with *P. falciparum* malaria (except pregnant women, infants aged less than 6 months and women breastfeeding infants aged less than 6 months) to reduce transmission. Testing for glucose-6-phosphate dehydrogenase (G6PD) deficiency is not required. *(Strong recommendation low quality evidence)* Source

Treating uncomplicated *P. falciparum* malaria in special risk groups

First trimester of pregnancy

- Treat pregnant women with uncomplicated *P. falciparum* malaria during the first trimester with 7 days of quinine + clindamycin. *(Strong recommendation)*

[11] The Reproductive Health and Research (RHR) department at WHO is currently compiling guidelines and recommendations on adolescent sexual and reproductive health, including HIV. For more information see http://www.who.int/reproductivehealth/publications/en/

Infants less than 5kg body weight

- Treat infants weighing less than 5kg with uncomplicated *P. falciparum* malaria with ACT ant the same mg/kg bw target dose as for children weighing 5kg. *(Strong recommendation)* Source

Patients co-infected with HIV

- In people who have HIV/AIDS and uncomplicated *P. falciparum* malaria, avoid artesunate + SP if they are being treated with co-trimoxazole, and avoid artesunate + amodiaquine if they are being treated with efavirenz or zidovudine. *(Good practice statement)* Source

Non-immune travellers

- Treat travellers with uncomplicated *P. falciparum* malaria returning to non-endemic settings with ACT. *(Strong recommendation low quality evidence)* Source

Hyperparasitaemia

- People with uncomplicated *P. falciparum* hyperparasitaemia are at increased risk for treatment failure, severe malaria and death and should be closely monitored, in addition to receiving ACT. *(Good practice statement)* Source

Treating uncomplicated *P. vivax*, *P. ovale*, *P. malariae* or *P. knowlesi* malaria

Blood Stage Infection:

- If the malaria species is not known with certainty, treat as for uncomplicated *P. falciparum* malaria. *(Good practice statement)*
- In areas with chloroquine-susceptible infections, treat adults and children with uncomplicated *P. vivax*, *P. ovale*, *P. malariae* or *P. knowlesi* malaria with either ACT (except pregnant women in their frst trimester) or chloroquine. *(Strong recommendation, high-quality evidence)*
- In areas with chloroquine-resistant infections, treat adults and children with uncomplicated *P. vivax*, *P. ovale*,*P. malariae* or *P. knowlesi* malaria (except pregnant women in their first trimester) with ACT. *(Strong recommendation, high-quality evidence)*
- Treat pregnant women in their first trimester who have chloroquine-resistant *P. vivax* malaria with quinine. *(Strong recommendation, very low-quality evidence)*

Source

Preventing relapse in *P. vivax* or *P. ovale* malaria

- The G6PD status of patients should be used to guide administration of primaquine for preventing relapse. *(Good practice statement)*
- To prevent relapse, treat *P. vivax* or *P. ovale* malaria in children and adults (except pregnant women, infants aged < 6 months, women breastfeeding infants aged < 6 months, women breastfeeding older infants unless they are known not to be G6PD defcient, and people with G6PD defciency) with a 14-day course (0.25–0.5 mg/kg bw daily) of primaquine in all transmission settings. *(Strong recommendation, high-quality evidence)*

- In people with G6PD defciency, consider preventing relapse by giving primaquine base at 0.75 mg/kg bw once a week for 8 weeks, with close medical supervision for potential primaquine-induced haemolysis. *(Conditional recommendation, very low-quality evidence)*
- When G6PD status is unknown and G6PD testing is not available, a decision to prescribe primaquine must be based on an assessment of the risks and benefits of adding primaquine. *(Good practice statement)*

Source

Treatment of severe malaria

- Treat adults and children with severe malaria (including infants, pregnant women in all trimesters and lactating women) with intravenous or intramuscular artesunate for at least 24 h and until they can tolerate oral medication. Once a patient has received at least 24 h of parenteral therapy and can tolerate oral therapy, complete treatment with 3 days of ACT (add single dose primaquine in areas of low transmission). *(Strong recommendation, high-quality evidence)* Source

Parenteral alternatives where artesunate is not available

- If artesunate is not available, use artemether in preference to quinine for treating children and adults with severe malaria. *(Conditional recommendation, low-quality evidence)* Source

Treating cases of suspected severe malaria pending transfer to a higher level facility (pre-referral treatment)

Pre-referral options.

- If complete treatment for severe malaria below is not possible, but injections are available, give adults and children a single intramuscular dose of artesunate, and refer to an appropriate facility for further care. Where intramuscular artesunate is not available use intramuscular artemether or, if that is not available, use intramuscular quinine. *(Strong recommendation, moderate-quality evidence)*
- Where intramuscular injection of artesunate is not available, treat children < 6 years with a single rectal dose (10mg/kg bw) of artesunate, and refer immediately to an appropriate facility for further care. Do not use rectal artesunate in older children and adults. *(Strong recommendation, moderate-quality evidence)*

Source

Fever management in peripheral health care settings: a global review of evidence and practice

- Diagnostic testing and treatment for malaria should be deployed as part of programmes promoting the integrated management of febrile childhood and adult illnesses. Source
- Evidence and lessons learnt from implementation should be taken into account in scaling-up iCCM at community level and IMCI and IMAI at health facility level. Source
- The essential elements of the generic iCCM algorithm should remain unchanged in country adaptations. Source

- A continuum of care is important in the management of fever. Therefore, iCCM should be accompanied by strengthening of the quality of care in both health centres and hospitals. Source
- Programmes aiming to improve the quality of malaria case management in the private sector should include the diagnosis and treatment of common non-malaria causes of fever. Source
- Carefully standardized studies of various diseases and pathogens implicated in the causation of fever, including susceptibility to antimicrobial agents, should be undertaken at different levels of health care and in different epidemiological settings, seasons and age groups. Source
- Research on new strategies for effective diagnostic testing and treatment of febrile illness should be encouraged, with clinical outcomes as the primary end-points. The results could be used to adapt IMCI and IMAI, by modifying or extending the diseases in the current WHO algorithms on the basis of health care needs. Source

Classification and management of fever in the updated IMAI acute care algorithm
Source

Sign	Classification	Treatment
One or more of the following signs: • confusion, agitation or lethargy, • inability to drink, • inability to walk unaided, • stiff neck or • severe respiratory distress	Very severe febrile illness	• Give artemether (or quinine, if artemether is not available) intramuscularly. • Give first dose of antibiotics intramuscularly. • Give glucose. • Refer urgently to hospital. • If fever is accompanied by bleeding (gums, skin, into eyes or urine) or if jaundice develops within 2 weeks of fever, report case to district clinic
Malaria test positive	Malaria	• Give appropriate oral antimalarial agent. • Look for other apparent cause and treat accordingly. • Consider HIV-related illness. • If fever for 7 days or more, consider tuberculosis (send sputum sample, refer). • Follow up in 3 days if still febrile.
Malaria test negative and/or other apparent cause of fever (low malaria risk)	Non-malaria fever	• Treat according to apparent cause. • Consider HIV-related illness if unexplained fever for > 30 days. • Consider fever related to antiretroviral drugs. • If no apparent cause and fever for 7 days or more, send sputum samples for tuberculosis testing and refer to hospital for assessment. • Follow up in 3 days if still febrile.

16. MANAGEMENT OF MALNUTRITION[12]

(adolescent-relevant recommendations)

Nutritional care and support for patients with tuberculosis:

Management of severe acute malnutrition

- School-age children and adolescents (5 to 19 years), and adults, including pregnant and lactating women, with active TB and severe acute malnutrition should be treated in accordance with the WHO recommendations for management of severe acute malnutrition. *(Strong recommendation, very low quality of evidence)*. Source

Management of moderate undernutrition

- School-age children and adolescents (5 to 19 years), and adults, including lactating women, with active TB and moderate undernutrition, who fail to regain normal body mass index after 2 months' TB treatment, as well as those who are losing weight during TB treatment, should be evaluated for adherence and comorbid conditions. They should also receive nutrition assessment and counselling and, if indicated, be provided with locally available nutrient-rich or fortified supplementary foods, as necessary to restore normal nutritional status. *(Conditional recommendation, low quality of evidence)* Source

17. INJURIES AND VIOLENCE[13]

(adolescent-relevant recommendations)

Violence against women services

- REC B.6: Adolescents should be counselled about the potential benefits and risks of disclosure of their HIV status to others and empowered and supported to determine, if, when, how and to whom to disclose. Source

Women-centered care

- Women who disclose any form of violence by an intimate partner (or other family member) or sexual assault by any perpetrator should be offered immediate support. Health-care providers should, as a minimum, offer first line support when women disclose violence.

  First-line support includes:

  — being non-judgmental and supportive and validating what the woman is saying

  — providing practical care and support that responds to her concerns, but does not intrude

  — asking about her history of violence, listening carefully, but not pressuring her to talk (care should be taken when discussing sensitive topics when interpreters are involved)

  — helping her access information about resources, including legal and other services that she might think helpful

[12] The Nutrition department at WHO is currently compiling guidelines and recommendations on adolescent nutrition. For more information, see http://www.who.int/nutrition/publications/en/

[13] The Reproductive Health and Research (RHR) department at WHO is currently compiling guidelines and recommendations on adolescent sexual and reproductive health, including HIV. For more information see http://www.who.int/reproductivehealth/publications/en/

— assisting her to increase safety for herself and her children, where needed

— providing or mobilizing social support.

Providers should ensure:

— that the consultation is conducted in private

— confidentiality, while informing women of the limits of confidentiality (e.g. when there is mandatory reporting)

If health-care providers are unable to provide first line support, they should ensure that someone else (within their health-care setting or another that is easily accessible) is immediately available to do so. *(Strong recommendation, indirect evidence)*

Source

Identification and care for survivors of intimate

Identification of intimate partner violence

- "Universal screening" or "routine enquiry" (i.e. asking women in all health-care encounters) should not be implemented. *(Low–moderate, Conditional)* Source
- Health-care providers should ask about exposure to intimate partner violence when assessing conditions that may be caused or complicated by intimate partner violence in order to improve diagnosis/identification and subsequent care. *(Indirect evidence, Strong)* Source
- Written information on intimate partner violence should be available in health-care settings in the form of posters, and pamphlets or leaflets made available in private areas such as women's washrooms (with appropriate warnings about taking them home if an abusive partner is there). *(No relevant evidence was identified Conditional)* Source

Note: the strength of the evidence is labelled "Indirect evidence" when no direct evidence was identified for this population and the recommendation was therefore based on evidence extrapolated from another appropriate population.

Care for survivors of intimate partner violence

- Women with a pre-existing diagnosed or partner violence-related mental disorder (such as depressive disorder or alcohol use disorder) who are experiencing intimate partner violence should receive mental health care for the disorder (in accordance with the WHO Mental Health Gap Action Programme (mhGAP) intervention guide, 2010), delivered by health-care professionals with a good understanding of violence against women. *(Indirect evidence, variable (varies with intervention, see* http://www.who.int/mental_ health/mhgap/ evidence/en/*) Strong)* Source
- Cognitive behavioural therapy (CBT) or eye movement desensitization and reprocessing (EMDR) interventions, delivered by health-care professionals with a good understanding of violence against women, are recommended for women who are no longer experiencing violence but are suffering from posttraumatic stress disorder (PTSD). *(Low–moderate Strong)* Source
- Women who have spent at least one night in a shelter, refuge or safe house should be offered a structured programme of advocacy, support and/or empowerment. *(Low Conditional)* Source

- Pregnant women who disclose intimate partner violence should be offered brief to medium-duration empowerment counselling (up to 12 sessions) and advocacy/support, including a safety component, offered by trained service providers where health-care systems can support this. The extent to which this may apply to settings outside of antenatal care, or its feasibility in low or middle-income countries, is uncertain. *(Low Conditional)* Source
- Where children are exposed to intimate partner violence at home, a psychotherapeutic intervention, including sessions where they are with, and sessions where they are without their mother, should be offered, although the extent to which this would apply in low- and middle income settings is unclear. *(Moderate, Conditional)* Source

Clinical care for survivors of sexual assault

Interventions during the first 5 days after the assault

First-line support

- Offer first-line support to women survivors of sexual assault by any perpetrator (see also recommendation 1), which includes:
  - providing practical care and support, which responds to her concerns, but does not intrude on her autonomy
  - listening without pressuring her to respond or disclose information
  - offering comfort and help to alleviate or reduce her anxiety
  - offering information, and helping her to connect to services and social supports. *(Indirect evidenced Strong)* Source
- Take a complete history, recording events to determine what interventions are appropriate, and conduct a complete physical examination (head-to-toe including genitalia). The history should include:
  - the time since assault and type of assault
  - risk of pregnancy risk of HIV and other sexually transmitted infections (STIs)
  - mental health status.

  (Indirect evidence Strong) Source

Emergency contraception

- Offer emergency contraception to survivors of sexual assault presenting within 5 days of sexual assault, ideally as soon as possible after the assault, to maximize effectiveness. *(Moderate, Strong)* Source
- Health-care providers should offer levonorgestrel, if available. A single dose of 1.5 mg is recommended, since it is as effective as two doses of 0.75 mg given 12–24 hours apart. If levonorgestrel is NOT available, the combined oestrogen–progestogen regimen may be offered, along with anti-emetics if available. If oral emergency contraception is not available and it is feasible, copper-bearing intrauterine devices (IUDs) may be offered to women seeking ongoing pregnancy prevention. Taking into account the risk of STIs, the IUD may be inserted up to 5 days after sexual assault for those who are medically eligible. *(Moderate, Strong)* Source
- If a woman presents after the time required for emergency contraception (5 days), emergency contraception fails, or the woman is pregnant as a result of rape, she should be offered safe abortion, in accordance with national law. *(No relevant evidence was identified, Strong)* Source

HIV post-exposure prophylaxis

- Consider offering HIV post-exposure prophylaxis (PEP) for women presenting within 72 hours of a sexual assault. Use shared decision-making with the survivor, to determine whether HIV PEP is appropriate. *(Indirect evidence, Strong)* Source
- Discuss HIV risk to determine use of PEP with the survivor, including:
  - HIV prevalence in the geographic area
  - limitations of PEPb
  - the HIV status and characteristics of the perpetrator if known
  - assault characteristics, including the number of perpetrators
  - side-effects of the antiretroviral drugs used in the PEP regimen
  - the likelihood of HIV transmission.

  (Indirect evidence, Strong) Source
- If HIV PEP is used:
  - start the regimen as soon as possible and before 72 hours
  - provide HIV testing and counselling at the initial consultation
  - ensure patient follow-up at regular intervals
  - two-drug regimens (using a fixed dose combination) are generally preferred over three-drug regimens, prioritizing drugs with fewer side-effects
  - the choice of drug and regimens should follow national guidance.

  (Indirect evidence, Strong) Source
- Adherence counselling should be an important element in PEP provision. *(Very low, Strong)* Source

Health-care policy and provision

- Care for women experiencing intimate partner violence and sexual assault should, as much as possible, be integrated into existing health services rather than as a stand-alone service. *(Very low, Strong)* Source
- A country needs multiple models of care for survivors of intimate partner violence and sexual assault, for different levels of the health system. However, priority should be given to providing training and service delivery at the primary level of care. *(Very low, Strong)* Source
- A health-care provider (nurse, doctor or equivalent) who is trained in gender-sensitive sexual assault care and examination should be available at all times of the day or night (on location or on-call) at a district/area level. *(Very low. Conditional)* Source
- Mandatory reporting of intimate partner violence to the police by the health-care provider is not recommended. However, health-care providers should offer to report the incident to the appropriate authorities (including the police) if the woman wants this and is aware of her rights. *(Very low, Strong)* Source
- Child maltreatment and life-threatening incidents must be reported to the relevant authorities by the health-care provider, where there is a legal requirement to do so. *(Very low, Strong)* Source

18. MENTAL DISORDERS

(adolescent-relevant recommendations)

Caregiver skills training for the management of developmental disorders

- Caregiver skills training should be provided for management of children and adolescents with developmental disorders, including intellectual disabilities and pervasive developmental disorders (including autism). *(Strength of recommendation: STRONG Quality of evidence: LOW)* Source

Effective strategies for detecting maltreatment of children and youth within the context of mental health and developmental assessment

- Health care providers should be alert to the clinical features associated with child maltreatment and associated risk factors and assess for child maltreatment without putting the child at increased risk. *(CONDITIONAL recommendation, very low quality of evidence)* Source

Psychosocial interventions, treatment of emotional disorders

- Psychological interventions, such as cognitive behavioural therapy (CBT), interpersonal psychotherapy (IPT) for children and adolescents with emotional disorders, and caregiver skills training focused on their caregivers, may be offered for the treatment of emotional disorders. *(CONDITIONAL recommendation, low quality of evidence)* Source

Psychosocial interventions for treatment of behavioural disorders

- Behavioural interventions for children and adolescents, and caregiver skills training, may be offered for the treatment of behavioural disorders. *(Strength of recommendation: CONDITIONAL, Quality of evidence: LOW)* Source

Pharmacological interventions for anxiety disorders in children and adolescents

- Pharmacological interventions should not be considered in children and adolescents with anxiety disorders in non-specialist settings. *(Strength of recommendation: CONDITIONAL Quality of evidence: LOW)* Source

Antidepressants among adolescents with moderate-severe depressive disorder for whom psychosocial interventions have proven ineffective

When psychosocial interventions prove ineffective, fluoxetine (but not other Selective Serotonin Reuptake Inhibitors or Tricyclic Antidepressants) may be offered in adolescents with moderate-severe depressive episode/disorder. The intervention should only be offered under supervision of a specialist. *(Strength of recommendation: CONDITIONAL Quality of evidence: VERY LOW)* Source

Antidepressants (Tricyclic Antidepressants, Selective Serotonin Reuptake Inhibitors) in children 6–12 years of age with depressive episode/disorder

- Antidepressants (Tricyclic antidepressants (TCA), Selective serotonin reuptake inhibitors (SSRI)) should not be used for the treatment of children 6-12 years of age with depressive episode/disorder in non-specialist settings. *(Strength of recommendation: STRONG Quality of evidence: LOW)* Source

Pharmacological intervention for somatoform disorders in children and adolescents

- Pharmacological interventions to treat somatoform disorders in children and adolescents should not be considered by non-specialized health care providers. *(Strength of recommendation: CONDITIONAL Quality of evidence: LOW)*
- Brief psychological interventions, including cognitive-behavioural therapy (CBT) should be considered to treat somatoform disorders in children, if adequate training and supervision by specialists can be made available. *(Strength of recommendation: CONDITIONAL Quality of the evidence: MODERATE)*
- Active consultation with a mental health specialist should be considered in managing these conditions, when possible. *(Strength of recommendation: CONDITIONAL Quality of evidence: LOW)*

Source

Pharmacological and nonpharmacological interventions for children with attention-deficit hyperactivity disorder (ADHD)

- Non-specialized health care providers at the secondary level should consider initiating parent education/training before starting medication for a child who has been diagnosed as suffering from Attention-deficit hyperactivity disorder (ADHD). Initial interventions may include cognitive behaviour therapy and social skills training if feasible. *(Strength of recommendation: STANDARD)*
- Methylphenidate may be considered, when available, after a careful assessment of the child, preferably in consultation with relevant specialist and taking into consideration, the preferences of parents and children. Children receiving methylphenidate should be maintained under close clinical monitoring for improvement in symptoms and prevention of adverse effects. Care and support should be provided for the parents, if needed. *(Strength of recommendation: STANDARD)*

Source

Pharmacological interventions for children with Disruptive Behaviour Disorders or Conduct Disorder or Oppositional Defiant Disorder

- Pharmacological interventions (such as methylphenidate, lithium, carbamazepine and risperidone) should not be offered by non-specialized health care providers to treat Disruptive Behaviour Disorders (DBD), Conduct Disorder (CD), Oppositional Defiant Disorder (ODD) and comorbid Attention-Deficit Hyperactivity Disorder (ADHD). For these conditions, the patients should be referred to specialist before prescribing any medicines. *(Strength of recommendation: STRONG Quality of evidence: LOW)* Source

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