



World Health
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GUIDELINES



GUIDELINES ON

THE PUBLIC HEALTH RESPONSE TO PRETREATMENT HIV DRUG RESISTANCE

JULY 2017

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**THE PUBLIC HEALTH
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SUPPLEMENT TO THE 2016 CONSOLIDATED GUIDELINES ON THE USE OF ANTIRETROVIRAL DRUGS FOR TREATING AND PREVENTING HIV INFECTION: SECOND EDITION JUNE 2016

Guidelines on the public health response to pretreatment HIV drug resistance: July 2017

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ABBREVIATIONS AND ACRONYMS

3TC	lamivudine
ABC	abacavir
ART	antiretroviral therapy
ARV	antiretroviral (drug)
ATV/r	ritonavir-boosted atazanavir
AZT	azidothymidine (also known as zidovudine)
CI	confidence interval
d4T	stavudine
D: A: D	Data Collection on Adverse Events of Anti-HIV Drugs (study)
DALY	disability-adjusted life-year
DRV	darunavir
DTG	dolutegravir
EFV	efavirenz
FTC	emtricitabine
FPV	fosamprenavir
GRADE	Grading of Recommendations, Assessment, Development and Evaluation
HIV	human immunodeficiency virus
HIVDR	HIV drug resistance
HR	hazard ratio
IDV	indinavir
INSTI	integrase strand transfer inhibitor (also known as integrase inhibitor)
LPV/r	ritonavir-boosted lopinavir
NNRTI	non-nucleoside reverse-transcriptase inhibitor
NRTI	nucleoside reverse-transcriptase inhibitor
NVP	nevirapine
OR	odds ratio
PEP	post-exposure prophylaxis
PI	protease inhibitor
PI/r	ritonavir-boosted protease inhibitors
PICO	population, intervention, comparator, outcome
PMTCT	prevention of mother-to-child transmission of HIV
PrEP	pre-exposure prophylaxis
QALY	quality-adjusted life-year
RAL	raltegravir
RTV	ritonavir
TB	tuberculosis
TDF	tenofovir disoproxil fumarate
UNAIDS	Joint United Nations Programme on HIV/AIDS
XTC	3TC (lamivudine) or FTC (emtricitabine)

DEFINITIONS

HIV drug resistance (HIVDR) is caused by a change (mutation) in the genetic structure of HIV that affects the ability of a particular drug or combination of drugs to block the replication of the virus. All current antiretroviral (ARV) drugs, including newer classes, are at risk of becoming partly or fully inactive because of the emergence of drug-resistant virus. Broadly speaking, there are three main categories of HIVDR.

- **Acquired HIVDR** develops when HIV mutations emerge from viral replication among individuals receiving ARV drugs.
- **Transmitted HIVDR** is detected among ARV drug-naïve people with no history of ARV drug exposure. Transmitted HIVDR occurs when previously uninfected individuals are infected with virus that has drug-resistance mutations.
- **Pretreatment HIVDR** is detected among ARV drug-naïve people initiating ART or people with prior ARV drug exposure initiating or reinitiating first-line ART. It can result from either transmitted or acquired HIV drug resistance, or both. Pretreatment HIVDR may have been transmitted at the time of infection (transmitted HIVDR) or may be acquired from previous ARV drug exposure (such as among women exposed to ARV drugs for the prevention of mother-to-child transmission (PMTCT) of HIV, among individuals reinitiating first-line ART after a period of treatment interruption without documented viral failure or among people who have received pre-exposure prophylaxis (PrEP)).

Age groups – consistent with the WHO consolidated guidelines on the use of antiretroviral drugs for treating and preventing HIV infection, these guidelines use the following definitions for adults, adolescents, children and infants for implementing recommendations for specific age groups. Countries may have other definitions under national laws.

- An **adult** is a person older than 19 years of age.
- An **adolescent** is a person 10 to 19 years of age inclusive.
- A **child** is a person 1 to younger than 10 years of age.

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