



## TECHNICAL REPORT

# ANTIRETROVIRAL MEDICINES IN LOW- AND MIDDLE-INCOME COUNTRIES: FORECASTS OF GLOBAL AND REGIONAL DEMAND FOR 2021–2025

DECEMBER 2021



# **ANTIRETROVIRAL MEDICINES IN LOW- AND MIDDLE-INCOME COUNTRIES: FORECASTS OF GLOBAL AND REGIONAL DEMAND FOR 2021–2025**

DECEMBER 2021

Antiretroviral medicines in low- and middle-income countries: forecasts of global and regional demand for 2021–2025

ISBN 978-92-4-004222-3 (electronic version)

ISBN 978-92-4-004223-0 (print version)

© World Health Organization 2022

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

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

Any mediation relating to disputes arising under the licence shall be conducted in accordance with the mediation rules of the World Intellectual Property Organization (<http://www.wipo.int/amc/en/mediation/rules/>).

**Suggested citation.** Antiretroviral medicines in low- and middle-income countries: forecasts of global and regional demand for 2021–2025. Geneva: World Health Organization; 2022. Licence: CC BY-NC-SA 3.0 IGO.

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

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

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

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

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

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

Design and layout by Brainagent

# CONTENTS

<b>LIST OF FIGURES</b>	<b>iv</b>
<b>LIST OF TABLES</b>	<b>v</b>
<b>ACKNOWLEDGEMENTS</b>	<b>vi</b>
<b>ABBREVIATIONS AND ACRONYMS</b>	<b>vii</b>
<b>EXECUTIVE SUMMARY</b>	<b>viii</b>
<b>1. INTRODUCTION</b>	<b>1</b>
<b>2. METHODS FOR DETERMINING KEY FORECAST VARIABLES</b>	<b>3</b>
2.1 TOTAL NUMBER OF PEOPLE RECEIVING TREATMENT	<b>3</b>
2.2 NUMBER OF PEOPLE RECEIVING FIRST- AND SECOND-LINE THERAPY	<b>4</b>
2.3 PROPORTION OF ADULTS ON FIRST LINE RECEIVING TREATMENT BY ARV DRUG	<b>6</b>
2.4 PROPORTION OF ADULTS ON SECOND LINE RECEIVING TREATMENT BY ARV DRUG	<b>10</b>
2.5 PROPORTION OF CHILDREN ADULTS RECEIVING TREATMENT BY ARV DRUG	<b>12</b>
<b>4. DISCUSSION</b>	<b>14</b>
<b>REFERENCES</b>	<b>15</b>

# LIST OF FIGURES

Fig. 1. Model used for forecasting ARV drug demand	2
Fig. 2. Projections of the number of adults and children receiving ART (millions)	3
Fig. 3. Proportion of adults on ART receiving second-line ART (2011–2020) projected to 2025	5
Fig. 4. Historical and projected market share of primary NRTIs for adults	7
Fig. 5. Market share for secondary NRTIs in first-line ART for adults	8
Fig. 6. NNRTI and DTG: share of first-line ART market for adults	9
Fig. 7. Second-line primary NRTIs for adults	10
Fig. 8. Second-line secondary NRTIs for adults	10
Fig. 9. NNRTIs, PIs and DTG: share of second-line ART market for adults	11
Fig. 10. Distribution of primary NRTIs for children	12
Fig. 11. Distribution of secondary NRTIs for children	13
Fig. 12. Distribution of NNRTIs, PIs and DTG for children	13

# LIST OF TABLES

Table 1. The number of adults and children receiving ART by first- and second-line regimens in low- and middle-income countries	6
Table 2. Market share for AZT, ABC and TAF	8

# ACKNOWLEDGEMENTS

WHO is grateful for the valuable input from the Technical Working Group members who worked to harmonize the assumptions and forecasts for global demand for antiretroviral drugs: Avenir Health (represented by **John Stover**), the Clinton Health Access Initiative (represented by **Aimee Edmondo**, **Jessica Fox** and **Zack Panos**), the Medicines Patent Pool (represented by **Hannah Barron Moak** and **Sandra Nobre**), the Office of the United States Global AIDS Coordinator (represented by **Christine Malati**), the United States Agency for International Development and Global Health Supply Chain Program (represented by **Wesley Kreft**), United Nations Development Programme (represented by **Zafar Yuldashev**), United Nations Children's Fund (represented by **Joyce Bakka**), Joint United Nations Programme on HIV/AIDS (UNAIDS) (represented by **Deepak Mattur**), the UNITAID (represented by **Lorenzo L. Witherspoon**) and WHO (represented by **Boniface Dongmo Nguimfack**).

WHO extends its gratitude to WHO staff members **Daniel Low-Beer**, **Martina Penazzato**, **Marco Vitoria** and **Lara Vojnov** and UNAIDS staff members **Peter Ghys** and **José Antonio Izazola-Licea** for their technical contributions in finalizing the forecasts.

WHO thanks everyone who contributed to this product, especially **Meg Doherty**, **Ren Minghui** and WHO staff members and partners who participated in the joint WHO/UNAIDS consultation with pharmaceutical companies.

WHO expresses its special thanks to the technical review and editing committee: **John Stover** (Avenir Health), **Zack Panos** and **Jessica Fox** (Clinton Health Access Initiative) and **Peter Ghys** and **Deepak Mattur** (UNAIDS).

预览已结束，完整报告链接和二维码如下：

[https://www.yunbaogao.cn/report/index/report?reportId=5\\_23352](https://www.yunbaogao.cn/report/index/report?reportId=5_23352)

