WHO POLICY GUIDANCE ON INTEGRATED ANTIMICROBIAL STEWARDSHIP ACTIVITIES







Antibiotics Antivirals Antifungals Antiparasitics

# WHO POLICY GUIDANCE ON INTEGRATED ANTIMICROBIAL STEWARDSHIP ACTIVITIES



World Health Organization



Antibiotics Antivirals Antifungals Antiparasitics WHO policy guidance on integrated antimicrobial stewardship activities

ISBN 978-92-4-002553-0 (electronic version) ISBN 978-92-4-002554-7 (print version)

#### © World Health Organization 2021

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 (<u>http://www.wipo.int/amc/en/mediation/rules/</u>).

Suggested citation. WHO policy guidance on integrated antimicrobial stewardship activities. Geneva: World Health Organization; 2021. Licence: <u>CC BY-NC-SA 3.0 IGO</u>.

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

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

**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.

### Contents

Acknowledgements	iv
1. Background	1
2. Purpose of the policy guidance	2
3. Target audience of the policy guidance	2
4. Principles of integrated AMS activities	2
5. Package of integrated AMS activities	3
5.1. Establish a national coordination mechanism for AMS and develop guidelines	4
5.2. Ensure access to and regulation of antimicrobials	6
5.3. Improve awareness, education and training	8
5.4. Strengthen water, sanitation and hygiene and infection prevention and control	10
5.5. Surveillance, monitoring and evaluation	11
6. Implementation considerations	15
References	18
Annex: Periodic National and Health-Care Facility Assessment Tools	21

### List of Abbreviations

AWaRe	Access, Watch, Reserve	INNs	International Nonproprietary Names
AMC	antimicrobial medicines consumption	M&E	monitoring and evaluation
AMU	antimicrobial medicines use	NRA	national regulatory authority
CPD	continuous professional development	PHC	primary health care
EML	WHO essential medicines list	ТВ	tuberculosis
GLASS	Global Antimicrobial Resistance Surveillance System	TOR	terms of reference
HAI	health-care-associated infection	UHC	universal health coverage
IPC	infection prevention and control	WAAW	World Antimicrobial Awareness Week
IT	information technology	WASH	water, sanitation and hygiene

## Acknowledgements

WHO Policy Guidance on Integrated Antimicrobial Stewardship Activities in the human health sector was written by Onyema Ajuebor, Benedetta Allegranzi, Jorge Raul Matheu Alvarez, Diane Ashiru-Oredope, Alessandro Cassini, Giorgio Cometti, Carmem Lucia Pessoa Da Silva, Deirdre Dimancesco, Sergey Eremin, Siobhan Caitlin Fitzpatrick, Verica Ivanovska, Thomas Joseph, Kate Olive Medlicott, Lorenzo Moja, Arno Muller, Sarah Paulin, Hiiti Baran Sillo, Kavita Trivedi and Evelyn Wesangula under the overall guidance of Haileyesus Getahun.

## Participants in the expert consultation to review the draft WHO Policy Guidance on Integrated Antimicrobial Stewardship Activities in the human health sector, 2–3 December 2020, ZOOM, who contributed to the revision of the document, including those who sent written feedback to a subsequent draft

Oladipo Aboderin (Obafemi Awolowo University Teaching Hospital, Nigeria), Seif Al-Abri (Ministry of Health, Oman), Jameela Al-Salman (Salmaniya Medical Complex, Bahrain), Zina Alhalasah (Ministry of Health, Jordan), Yewande Alimi (Africa CDC, Ethiopia), Celia Alpuche Aranda (National Institute of Public Health, Mexico), Ndoye Babacar (Infection Control African Network (ICAN), Senegal), Luis Bavestrello (Antimicrobial Committee, Chilean Infectious Diseases Society, Chile), Margarita Villafane Britos (Ministry of Health, Paraguay), Kwame Ohene Buabeng (Ministry of Health, Ghana), Vanessa Carter (South African Antibiotic Stewardship Program (SAASP), South Africa), Sujith Chandy (ReAct, India), Gemma Chery (Ministry of Health, Saint Lucia), Francesca Chiara (Wellcome Trust, United Kingdom), Mathew Chow (International Federation of Medical Students' Associations (IFMSA), Denmark), Pem Chuki (Jigme Dorji Wangchuck National Referral Hospital, Bhutan), Jemima Clarke (Fleming Fund, Department of Health and Social Care, United Kingdom), Alexandre Costa (UNICEF, USA), Ephrem Engidawork (Addis Ababa College of Health Sciences, Ethiopia), Sabiha Essack (University of Kwazulu Natal, South Africa), Cecilia Ferreyra (FIND, Switzerland), Lyalya Gabbasova (Ministry of Health, Russia), Debbie Goff (The Ohio State University Wexner Medical Center, USA), Claire Gordon (Mott MacDonald, United Kingdom), Emily Heil (University of Maryland Medical Center, USA), Moska Hellamand (Access to Medicine Foundation, Netherlands), Mohan Joshi (MTaPS, USA), Baktygul Kambaralieva (Government Office of the Kyrgyz Republic, Kyrgyzstan), Dalel Kamoun (Ministry of Health, Tunisia), Otridah Kapona (Zambia National Public Health Institute, Zambia), Tomislav Kostyanev (COMBACTE LAB-Net, Belgium), Ndinda Kusu (MTaPS, Kenya), Jose Pablo Diaz Madriz (Clinical Biblica, Costa Rica), Gustavo Marin (PAHO/WHO Collaborating Center, Argentina), Lama Masaadeh (Ministry of Health, Jordan), Tapfumanei Mashe (National Microbiology Reference Laboratory, Zimbabwe), Caline Mattar (World Medical Association, USA), Marc Mendelson (University of Cape Town, South Africa), Janet Midega (Wellcome Trust, United Kingdom), Neda Milevska-Kostova (Studiorum, United Kingdom), Yara Mohsen (International Medical Center, Egypt), Nyambura Muroki (International Federation of Medical Students' Associations (IFMSA), Denmark), Winnie Nambatya (Makerere University, Uganda), Seamus O'Brien (GARDP, Switzerland), Norio Ohmagari (National Center for Global Health and Medicine, Japan), Vera Vlahovic Palcevski (University Hospital Rijeka, Croatia), Marie-Cécile Ploy (Université de Limoges, France), Todd Pollack (The Partnership for Health Advancement in Vietnam, Viet Nam), Celine Pulcini (Ministry of Health, France), Rodolfo Quiros (ProAnet Platform for Antimicrobial Stewardship, Bolivia), Victoria Rutter (Commonwealth Pharmacists Association (CPA), United Kingdom), Mounerou Salou (Ministry of Health of Togo, Togo), Enrique Castro Sanchez (School of Health Sciences City, University of London Northampton Square, United Kingdom), Nancy Virginia Sandoval (Universidad Rafael Landivar, Guatemala), Jeroen Schouten (European Society of Clinical Microbiology and Infectious Diseases (ESCMID), Netherlands), Makeda Semret (McGill University Health Centre, Canada), Michael Sharland (St George's, University of London, United Kingdom), Jasmin Shepherd (Ministry of Health, United Kingdom), Robert Skov (ICARS Statens Serum Institut, Denmark), Ingrid Smith (Haukeland University Hospital, Norway), Maria Souza (UNICEF, USA), Arjun Srinivasan (Centers for Disease Control and Prevention, USA), Gunilla Skoog Stahlgren (Public Health of Sweden, Sweden), Rebecca Sugden (Wellcome Trust, United Kingdom), Emmanuel Tanui (Ministry of Health, Kenya), Jennifer Wenjing Tao (Public Health of Sweden, Sweden), Samiha Toumi (Directorate of Pharmacy and Drugs Tunisia), Kavita Trivedi (Trivedi Consults, USA), Natalie Vestin (Center for Infectious Disease Research and Policy Antimicrobial Stewardship Project, University of Minnesota, USA), Sophie Walsh (Department of Health and Social Care, Ministry of Health, United Kingdom), Karim Wanga (Pharmacy and Poisons Board, Ministry of Health, Kenya), Niniola Williams (Dr Ameyo Stella Adadevoh (DRASA) Health Trust, Nigeria), Yonghong Xiao (State Key Laboratory for Diagnosis & Treatment of Infectious Diseases, Zhejiang University School of Medicine, China), Marcus Zervos (Henry Ford Health System, USA).

### **WHO Staff**

Onyema Ajuebor (Headquarters), Benedetta Allegranzi (Headquarters), Adi AL-Nuseirat (Regional Office for the Eastern Mediterranean), Alessandro Cassini (Headquarters), Amy Collins (Headquarters), Deirdre Dimancesco (Headquarters), Sergey Eremin (Headquarters), Walter Fuller (Regional Office for Africa), Terence Fusire (Regional Office for South-East Asia), Laetitia Gahimbare (Regional Office for Africa), Engy Hamed (Regional Office for the Eastern Mediterranean), Omotayo Hamzat (Nigeria Country Office), Maha Talaat Ismail (Regional Office for the Eastern Mediterranean), Verica Ivanovska (Headquarters), Manish Kakkar (Regional Office for South-East Asia), Ketevan Kandelaki (Regional Office for Europe), Stanley Midzi (Zimbabwe Country Office), Diriba Mosissa (Headquarters), Takeshi Nishijima (Regional Office for the Western Pacific), Pilar Ramon Pardo (Pan American Health Organization), Sarah Paulin (Headquarters), Asaeli Raikabakaba (Regional Office for the Western Pacific), Edgard Rojas (Pan American Health Organization), Roderick Salenga (Papua New Guinea Country Office), German Esparza Sanchez (Pan American Health Organization), Hiiti Baran Sillo (Headquarters), Ute Soenksen (Regional Office for Europe), Klara Tisocki (Regional Office for South-East Asia), Danilo Lo Fo Wong (Regional Office for Europe), Ali Ahmed Yahaya (Regional Office for Africa), Bassim Zayed (Regional Office for the Eastern Mediterranean).

Additional inputs to the draft document were provided by Elizabeth Beech (NHS England and NHS Improvement, United Kingdom), Colin Brown (Public Health England, United Kingdom), Mandy Chesworth (Department of Health and Social Care, United Kingdom), Kieran Hand (NHS England and NHS Improvement, United Kingdom), Philip Howard (Leeds Teaching Hospitals NHS Trust, United Kingdom), Nicholas Reid (Public Health Wales, United Kingdom) and Jacqueline Sneddon (Healthcare Improvement Scotland, United Kingdom).

### **Periodic National and Health-Care Facility Assessment Tools**

The Periodic National and Health Care Facility Assessment Tools were written by Diane Ashiru-Oredope (WHO), Kwame Peprah Boaitey (WHO), Thomas Joseph (WHO), Sarah Paulin (WHO), Ingrid Smith (WHO), Kavita Trivedi (WHO), and Evelyn Wesangula (WHO) under the overall guidance of Haileyesus Getahun, Director of the Department of Global Coordination and Partnerships on AMR at WHO.

The Health Care Facility Assessment Tool was piloted in Fiji, Ghana, Jordan and Tunisia. George Hedidor (WHO Ghana Country Office), Asaeli Raikabakaba (Regional Office for the Western Pacific) and Sarah Tolba (Regional Office for the Eastern Mediterranean) facilitated piloting of the tool. Additional inputs on this tool were also received from Jose Luis Castro (Pan American Health Organization), Walter Fuller (Regional Office for Africa), Terence Fusire (Regional Office for South-East Asia), Engy Hamed (Regional Office for the Eastern Mediterranean), Ketevan Kandelaki (Regional Office for Europe), Takeshi Nishijima (Regional Office for the Western Pacific), Pilar Ramon Pardo (Pan American Health Organization) and Bassim Zayed (Regional Office for the Eastern Mediterranean).

Financial support for the development of this WHO Policy Guidance and the assessment tools was provided by the governments of Norway and Germany and core funding from WHO.

### 预览已结束, 完整报告链接和二维码如下:



