Guidelines for surveillance of drug resistance in tuberculosis

5th Edition



Guidelines for surveillance of drug resistance in tuberculosis

5th Edition



WHO Library Cataloguing-in-Publication Data:

Guidelines for surveillance of drug resistance in tuberculosis-- 5th ed.

- 1. Antitubercular Agents pharmacology. 2. Tuberculosis, Multidrug-Resistant
- epidemiology. 3.Drug Resistance. 4.Epidemiologic Surveillance methods.
- 5. Guideline. I. World Health Organization.

ISBN 978 92 4 154913 4

(NLM classification: WF 360)

© World Health Organization 2015

All rights reserved. Publications of the World Health Organization are available on the WHO website (www.who.int) or can be purchased from WHO Press, World Health Organization, 20 Avenue Appia, 1211 Geneva 27, Switzerland (tel.: +41 22 791 3264; fax: +41 22 791 4857; e-mail: bookorders@who.int).

Requests for permission to reproduce or translate WHO publications –whether for sale or for non-commercial distribution– should be addressed to WHO Press through the WHO website (www.who.int/about/licensing/copyright_form/en/index.html).

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 the World Health Organization 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 the World Health Organization 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 the World Health Organization 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 the World Health Organization be liable for damages arising from its use.

Designed by Fiona Byrne Printed in Switzerland

WHO/HTM/TB/2015.13

Table of Contents

Table of Contents Acknowledgements Abbreviations											
					In	Introduction					
					Pa	art I	Principles of anti-tuberculosis drug resistance surveillance	1			
1	Mechanisms of surveillance that produce data representative of a geographically-defined population		3								
	1.1	Continuous surveillance systems based on routine drug susceptibility testing	4								
	1.2	Periodic surveys for estimating the burden of drug resistance	4								
	1.3	Sentinel surveillance systems for monitoring trends over time	5								
2	Standardized stratification of results by patient characteristcs		6								
	2.1	Patient treatment history classifications	6								
	2.2	Age groups, sex, HIV status and other patient biographical and clinical factors	7								
3	Quality-assured laboratory methods for determining resistance to first- and second-line drugs		9								
	3.1	WHO-recommended methods of drug susceptibility testing	9								
	3.2	Selection of drugs to be tested for susceptibility	11								
	3.3	Quality assurance of drug susceptibility testing	11								
4	Ethi	Ethical considerations									
Pa	art II	Conducting surveys for assessing the proportion of anti-TB drug resistance	17								
5	Survey planning										
	5.1	Forming a national coordination team	19								
	5.2	Setting objectives	19								
	5.3	Defining the diagnostic testing algorithm	20								
	5.4	Development of a protocol and time schedule	21								
	5.5	Minimum required facilities for a survey area	21								
	5.6	Sampling of cases	22								

	5.7	Budgeting	29	
	5.8	Training	30	
	5.9	Laboratory preparedness	30	
	5.10	Pilot study	31	
6	Surv	ey logistics	32	
	6.1	Inclusion and exclusion criteria	32	
	6.2	Patient intake	33	
	6.3	Sputum collection, processing and transport	34	
	6.4	Laboratory methods	35	
	6.5	Monitoring and evaluation	37	
7	Surv	ey data management and analysis	39	
	7.1	Data management	39	
	7.2	Data analysis	40	
	7.3	Interpretation of results	43	
Pā	art III	Sentinel surveillance for monitoring trends over time	45	
8	Desig	gning a sentinel system	47	
	8.1	Setting objectives	47	
	8.2	Defining the diagnostic testing algorithm	47	
	8.3	Sampling of cases	47	
Re	eferen	ces	49	
 Aı	nnexe	25		
		- Approaches for countries without capacity for continuous		
ΛI	IIICX I	surveillance	51	
Ar	Annex 2 - Drug resistance survey protocol checklist			
Ar	nex 3	- Flowchart of enrolled patients	56	
Ar	nex 4	- Results summary tables	57	
Ar	nex 5	- Survey budget template	59	
Ar	Annex 6 - Example of a clinical information form			
Ar	Annex 7 - Safe shipment of infectious material			

Acknowledgements

This updated edition was written by Anna Dean and Matteo Zignol.

Development of this document was guided by the following panel of external experts and staff of the World Health Organization (WHO):

External experts: Daniela Cirillo (San Raffaele Scientific Institute, Milan, Italy), Frank Cobelens (KNCV Tuberculosis Foundation, The Hague, The Netherlands), Ted Cohen (Yale School of Public Health, New Haven, United States), Charlotte Colvin (United States Agency for International Development (USAID), Washington DC, United States), Julia Ershova (Centers for Disease Prevention and Control, Atlanta, United States), Aleksandr Golubkov (USAID, Washington DC, United States), Arax Hovhannesyan (World Vision Armenia, Yerevan, Armenia), Maeve Lalor (Public Health England, London, United Kingdom), Fulvia Mecatti (University of Milan-Bicocca, Milan, Italy), Patrick Moonan (Centers for Disease Prevention and Control, Atlanta, United States), Amy Pietak (USAID, Washington DC, United States), Michael Selgelid (Australian National University, Canberra, Australia), Susan van den Hof (KNCV Tuberculosis Foundation, The Hague, The Netherlands), Marieke van der Werf (European Centre for Disease Prevention and Control, Stockholm, Sweden), Armand Van Deun (Institute of Tropical Medicine, Antwerp, Belgium) and Norio Yamada (Research Institute of Tuberculosis, Tokyo, Japan)

WHO staff: Annabel Baddeley, Samiha Baghdadi, Andrei Dadu, Dennis Falzon, Katherine Floyd, Christopher Gilpin, Philippe Glaziou, Tauhidul Islam, Knut Lonnroth, Alberto Matteelli, Wilfred Nkhoma, Andreas Reis, Charalambos Sismanidis and Karin Weyer, under the direction of Mario Raviglione

Portions of this updated edition are based on materials developed by Abigail Wright and Wayne van Gemert (WHO).

Production of this document was supported by a financial contribution from USAID.

Abbreviations

CPC cetylpyridinium chloride
DST drug susceptibility testing

Global Project On Anti-Tuberculosis Drug Resistance

Surveillance

LPA line probe assay
MAR missing at random

MDR-TB multidrug-resistant tuberculosis
NAAT new nucleic acid amplification tests
PPS probability proportional to size
SRL Supranational Reference Laboratory

SRLN Supranational Reference Laboratory Network

TB tuberculosis

USAID United States Agency for International Development

XDR-TB extensively drug-resistant tuberculosis

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 27401

