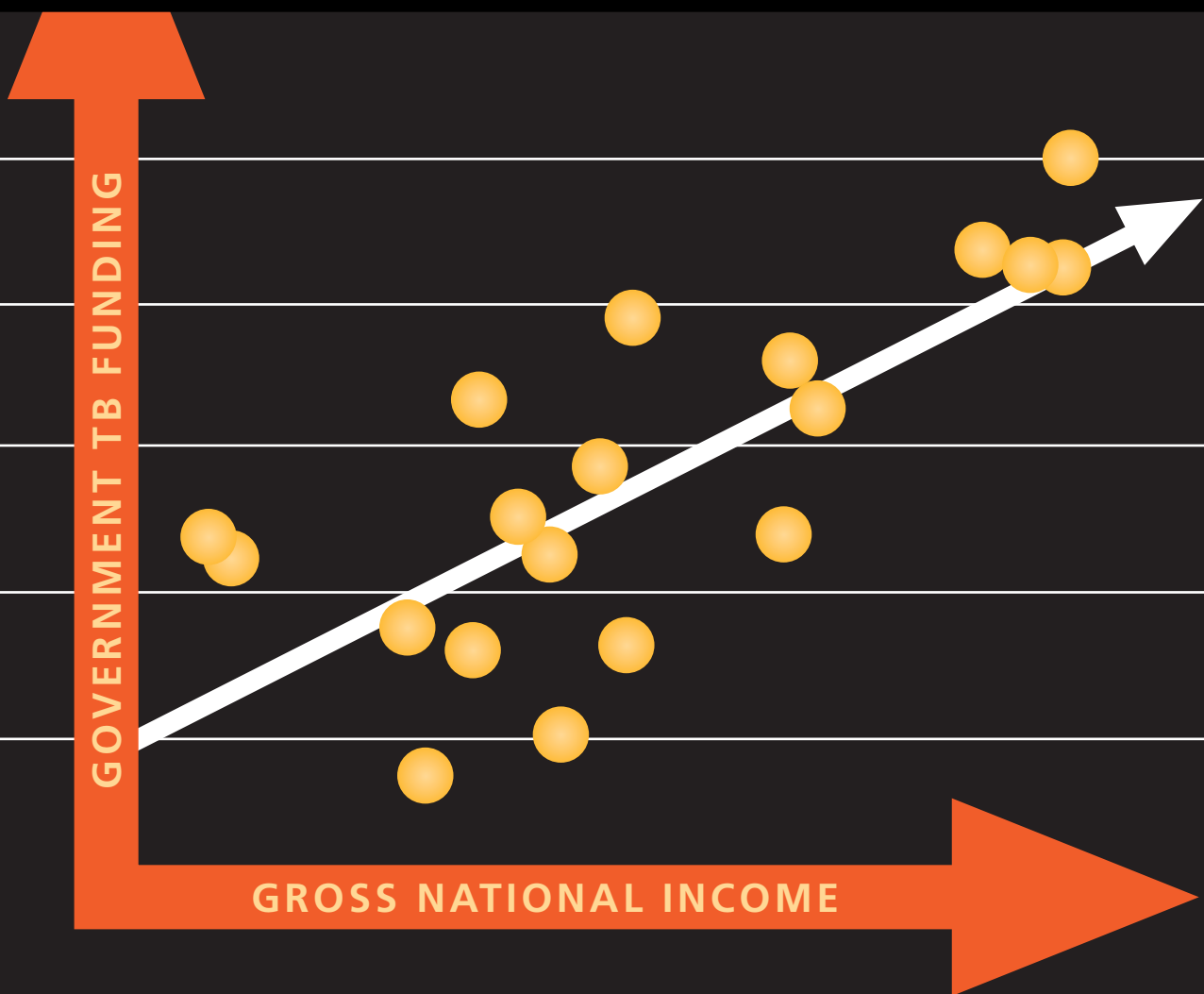


WHO REPORT 2006

Global Tuberculosis Control Surveillance, Planning, Financing

Warning: This report is out-of-date. In particular, entire time-series of TB disease burden estimates are updated every year. For the latest data and analysis, please see the most recent edition of the global TB report.



World Health
Organization

WHO REPORT 2006

Global Tuberculosis Control

Surveillance, Planning, Financing



**World Health
Organization**

WHO Library Cataloguing-in-Publication Data

World Health Organization.

Global tuberculosis control : surveillance, planning, financing : WHO report 2006.

1.Tuberculosis, Pulmonary – prevention and control 2.Tuberculosis, Multidrug-resistant – drug therapy
4.Directly observed therapy 5.Treatment outcome 6.National health programmes – organization and
administration 7.Financing, Health 7.Statistics I. Title.

ISBN 92 4 156314 1

(NLM classification: WF 300)

WHO/HTM/TB/2006.362

Suggested citation:

Global tuberculosis control: surveillance, planning, financing. WHO report 2006. Geneva, World Health Organization (WHO/HTM/TB/2006.362).

© WORLD HEALTH ORGANIZATION 2006

All rights reserved. Publications of the World Health Organization can be obtained from Marketing and Dissemination, World Health Organization, 20 Avenue Appia, 1211 Geneva 27, Switzerland (tel: +41 22 791 2476; fax: +41 22 791 4857; e-mail: bookorders@who.int). Requests for permission to reproduce or translate WHO publications – whether for sale or for noncommercial distribution – should be addressed to Marketing and Dissemination, at the above address (fax: +41 22 791 4806; e-mail: permissions@who.int).

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 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 express 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.

For reasons of space, the names of Member States are sometimes shortened in certain figures.

Cover: Gross national income per capita of 19 high-burden countries compared with the proportion of funds for TB control that is provided by their governments (rather than by donor agencies). Countries with a higher average income per capita tend to contribute more to the cost of TB control. The financial contributions made by governments will be crucial to the success of *The Global Plan to Stop TB, 2006–2015*. The data are presented in detail in Figure 33 of the main text.

Designed by minimum graphics

Printed in Switzerland

Contents

Acknowledgements	v
Abbreviations	vi
Key points	1
Summary	2
Points clés	5
Résumé	6
Puntos clave	10
Resumen	11
Introduction	15
Methods	
Monitoring progress in TB control	17
Goals, target and indicators for TB control	17
Data collection and verification	18
High-burden countries, WHO regions and other subregions of the world	18
DOTS classification	18
DOTS coverage	19
Estimating TB incidence, prevalence and death rates	20
Case detection	21
Comparison of methods for evaluating case detection	22
Outcomes of treatment	22
DOTS implementation and planning	22
Collaborative TB/HIV activities	23
Surveillance and management of drug resistance	23
Financing TB control	24
Data collection	24
Data entry and analysis	25
GFATM contribution to TB control	26
Country reports compared with the Global Plan	26
Results	
Monitoring progress in TB control	27
Countries reporting to WHO	27
Case notifications and incidence estimates	27
DOTS coverage	30
Case detection	33
Comparison of methods for evaluating case detection	36
Outcomes of treatment	37
Trends in case detection and treatment success: overview of national DOTS programmes	41
Trends in prevalence and death rates	43
DOTS implementation and planning	43
Pursuing high-quality DOTS expansion and enhancement	43
Addressing TB/HIV, MDR-TB and other challenges	45

	Engaging all care providers	49
	Empowering people with TB, and communities	49
	Financing TB control	50
	Data received	50
	Total NTP budgets and funding in high-burden countries	50
	Total costs of TB control and funding in high-burden countries	52
	Budgets and costs per patient	55
	Expenditures in comparison with available funding and case detection	56
	Budgets, funds and targets	57
	GFATM contribution to TB control	59
	NTP budgets by WHO region, HBCs and other countries	59
	Costs: country reports compared with the Global Plan	59
Conclusions	Monitoring progress in TB control	62
	Case detection	62
	Outcomes of treatment	62
	Epidemiological trends and the impact of TB control	63
	DOTS implementation and planning	64
	DOTS expansion and the Stop TB Strategy	64
	Laboratory diagnostic services	64
	Human resource development	64
	Collaborative TB/HIV activities	64
	Management of drug resistance	65
	TB, poverty and health systems	66
	Advocacy, communication and social mobilization	66
	Financing TB control	66
Annex 1	Profiles of high-burden countries	69
Annex 2	Regional and country data	137
	Explanatory notes for regional and country data	139
	Summary by WHO region	141
	Africa	147
	The Americas	163
	Eastern Mediterranean	179
	Europe	195
	South-East Asia	211
	Western Pacific	227

Acknowledgements

The WHO Global TB Surveillance, Planning and Financing Project is coordinated by Christopher Dye, Léopold Blanc and Katherine Floyd. The 2006 report was written by Daniel Bleed, Christopher Dye, José Figueroa-Muñoz, Katherine Floyd, Mehran Hosseini, Eva Nathanson, Andrea Pantoja, Amy Piatek, Alasdair Reid, Catherine Watt, Brian Williams and Abigail Wright.

The following WHO staff assisted in compiling, analysing and editing information:

WHO HQ Geneva: Mohamed Aziz, Karin Bergström, Léopold Blanc, Karen Ciceri, Valérie Diaz, Giuliano Gargioni, Haileyesus Getahun, Andrea Godfrey, Malgorzata Grzemska, Ernesto Jaramillo, Jun-Wook Kwon, Knut Lönnroth, Rafael Lopez-Olarte, Dermot Maher, Pierre-Yves Norval, Paul Nunn, Salah-Eddine Ottmani, Thaddeus Pennas, Rose Pray, Mario Raviglione, Krystyna Ryszewska, Fabio Scano, Igor Toskin, Mukund Uplekar, Lana Velebit, Diana Weil, Matteo Zignol.

WHO African Region: Ayodele Awe (Nigeria), Oumou Bah-Sow (AFRO), Joseph Imoko (Uganda), Joel Kangangi (Kenya), Bah Keita (AFRO, West Africa), Daniel Kibuga (AFRO), Motseng Makhetha (South Africa), Robert Makombe (AFRO), Giampaolo Mezzabotta (Uganda), Vainess Mfungwe (AFRO), Wilfred Nkhoma (AFRO), Angélica Salomão (Mozambique), Henriette Wembanyama (DR Congo).

WHO Region of the Americas: Ademir Albuquerque (Brazil), Raimond Armengol (El Salvador), Marlene Francis (CAREC), Mirtha del Granado (AMRO), Juan Carlos Millan (Peru), Pilar Ramon-Pardo (AMRO), Rodolfo Rodriguez-Cruz (Brazil), Matías Villatoro (Brazil).

WHO Eastern Mediterranean Region: Aaiyad Al Dulaymi Munim (Somalia), Samiha Baghdadi (EMRO), Yuriko Egami (Pakistan), Laura Gillini (Pakistan), Sevil Husseinova (Afghanistan), Akihiro Seita (EMRO), Ireneus Sindani (Sudan).

WHO European Region: Pierpaolo de Colombani (EURO), Irina Danilova (Russian Federation), Lucica Ditiu (Balkans), Wieslaw Jakubowiak (Russian Federation), Konstantin Malakhov (Russian Federation), Kestutis Miskinis (Ukraine), Andrey Mosneaga (Caucasus), Jerod Scholten (EURO), Gombogaram Tsogt (Central Asia), Elena Yurasova (EURO/Russian Federation), Richard Zaleskis (EURO).

WHO South-East Asia Region: Marijke Becx-Bleumink (Bangladesh), Erwin Cooreman (SEARO), Christian Gunneberg (Nepal), Hans Kluge (Myanmar), Franky Loprang (Indonesia), Davide Manissero (Indonesia), Firdosi Mehta (Indonesia), Nani Nair (SEARO), Myo Paing (SEARO/Myanmar), Suvanand Sahu (India), Chawalit Tantinimitkul (Thailand), Fraser Wares (India).

WHO Western Pacific Region: Dong Il Ahn (WPRO), Maarten Bosman (Viet Nam), Daniel Chin (China), Philippe Glaziou (WPRO), Pratap Jayavanth (Cambodia), Wang Lixia (China), Pieter van Maaren (WPRO), Bernard Tomas (WPRO), Michael Voniatis (Philippines).

The primary aim of this report is to share information from national TB control programmes. The data presented here are supplied largely by programme managers, who have been instrumental in driving much of the work on surveillance, planning and financing. We thank all of them, and their staff, for their contributions. The WHO TB Surveillance, Planning and Financing Project is carried out with the financial backing of USAID. The WHO DOTS Expansion Project is supported by funding from the governments of Australia, Belgium, Canada, Germany, Ireland, the Netherlands, Norway, Switzerland, the United Kingdom and the United States. Data for the European Region were collected and validated jointly with EuroTB, a dedicated European TB surveillance network funded by the European Commission; we thank Dennis Falzon of EuroTB for his collaboration. Rhehab Chimzizi and Tony Harries kindly allowed us to present their important data on antiretroviral therapy in Malawi. We also thank Pam Baillie, Kreena Govender and Sue Hobbs for their usual efficiency in helping to get this report published by 24 March, World TB Day.

Copies of *Global tuberculosis control* are available from the World Health Organization, 20 Avenue Appia, CH-1211 Geneva 27, Switzerland, and at www.who.int/tb.

Abbreviations

ACSM	Advocacy, communication and social mobilization	IPT	Isoniazid preventive therapy
AFB	Acid-fast bacilli	ISAC	Intensified support and action in countries, an emergency initiative to reach targets for DOTS implementation by 2005
AFR	WHO African Region	IUATLD	International Union Against Tuberculosis and Lung Disease
AFRO	WHO Regional Office for Africa	JICA	Japan International Cooperation Agency
AIDS	Acquired immunodeficiency syndrome	LACEN	Brazilian public health laboratories
AMR	WHO Region of the Americas	LGU	Local government unit
AMRO	WHO Regional Office for the Americas	LGA	Local government area
ART	Antiretroviral therapy	MDG	Millennium Development Goal
BPHS	Basic package of health-care services	MDR	Multidrug resistance
BRAC	Bangladesh Rural Advancement Committee	MDR-TB	Multidrug-resistant tuberculosis
CAREC	Caribbean Epidemiology Centre	MoH	Ministry of Health
CDP	Community DOT providers	MoPH	Ministry of Public Health
CPT	Co-trimoxazole preventive therapy	MSH	Management Sciences for Health
DCT	Diagnostic counselling and testing for HIV	NAP	National AIDS control programme or equivalent
DFB	Damien Foundation Belgium	NGO	Nongovernmental organization
DFID	UK Department for International Development	NHLS	National Health Laboratory Services
DoH	Department of Health	NPO	National professional officer (WHO-appointed)
DOT	Directly observed treatment	NRL	National reference laboratory
DOTS	The internationally recommended strategy for TB control	NTP	National tuberculosis control programme or equivalent
DRS	Drug resistance surveillance or survey	PAHO	Pan-American Health Organization
DST	Drug susceptibility testing	PAL	Practical Approach to Lung Health
EMR	WHO Eastern Mediterranean Region	PhilTIPS	Philippine Tuberculosis Initiatives for the Private Sector
EMRO	WHO Regional Office for the Eastern Mediterranean	PPM	Public-private or public-public mix
EQA	External quality assurance	SEAR	WHO South-East Asia Region
EUR	WHO European Region	SEARO	WHO Regional Office for South-East Asia
EURO	WHO Regional Office for Europe	SILTB	Brazilian laboratory information system
FDC	Fixed-dose combination (or FDC anti-TB drug)	SINAN	Brazilian health information system
FIDELIS	Fund for Innovative DOTS Expansion, managed by IUATLD	TB	Tuberculosis
GDF	Global TB Drug Facility	TBCTA	Tuberculosis Coalition for Technical Assistance
GFATM	Global Fund to Fight AIDS, Tuberculosis and Malaria	UNAIDS	Joint United Nations Programme on HIV/AIDS
GLC	Green Light Committee	UNDP	United Nations Development Programme
GLRA	German Leprosy and TB Relief Association	USAID	United States Agency for International Development
GNI	Gross national income	VCT	Voluntary counselling and testing for HIV infection
HBC	High-burden country of which there are 22 that account for approximately 80% of all new TB cases arising each year	VHV	Village health volunteers
HEW	Health extension workers	WHO	World Health Organization
HIV	Human immunodeficiency virus	WPR	WHO Western Pacific Region
HNPS	Health Nutrition and Population Sector Programme	WPRO	WHO Regional Office for the Western Pacific
HR	Human resource(s)		
IEC	Information, education, communication		

Key points

TB EPIDEMIC

- There were 9 million new TB cases and approximately 2 million TB deaths in 2004.
- The number of TB cases was stable or falling in 5 of 6 WHO regions, but growing in Africa where the TB epidemic is still driven by the spread of HIV.
- More than 80% of all TB patients live in sub-Saharan Africa and Asia.

DOTS AND THE NEW STOP TB STRATEGY

- DOTS, which remains at the heart of the new Stop TB Strategy, was being applied in 183 countries in 2004; population coverage was complete in 9 of 22 high-burden countries (HBCs), and almost complete in 5 others.
- Expanding areas of work within the new strategy include: community and NGO participation in TB care; advocacy, communication and social mobilization; and improved management of multidrug-resistant TB and TB/HIV.
- Six Asian countries and Kenya have already improved links between national TB control programmes (NTPs), hospitals and other health-care providers, but PPM-DOTS is still at an early stage in most other HBCs.
- Areas of particular weakness are laboratory services, human resource development and the monitoring of TB/HIV control.

FINANCES

- The total cost of TB control in 2006, including NTP budgets and costs to the general health-care system, has grown to US\$ 1.6 billion in the 22 HBCs. This increases to US\$ 2.0 billion for all 74 countries that provided financial data.
- Funding to support TB control in the 22 HBCs has increased by almost US\$ 500 million since 2002, reaching US\$ 1.4 billion in 2006.
- Governments of the wealthier HBCs (notably Brazil, China, the Russian Federation and South Africa) provide most of the funding needed for TB control in their countries; other countries rely more on grants from donors, including the Global Fund to Fight AIDS, Tuberculosis and Malaria.
- The funding gap reported by the 22 HBCs for 2006 was US\$ 141 million; it was US\$ 180 million in total for the 74 countries that reported data.
- NTP budgets for 2006 are broadly in line with the Global Plan to Stop TB, 2006–2015, except for TB/HIV control where NTP budgets are much lower.

TARGETS

- Case detection was 53% globally in 2004, and is likely to exceed 60% in 2005, falling short of the 70% target.
- Treatment success was 82% in the 2003 cohort of 1.7 million patients, approaching the 85% target.
- Three WHO regions are expected to have met both of the 2005 targets: the Region of the Americas and the South-East Asia and Western Pacific regions.
- At least 7 HBCs should have met the 2005 targets: Cambodia, China, India, Indonesia, Myanmar, the Philippines

预览已结束，完整报告链接和二

<https://www.yunbaogao.cn/report/index/report?rep>