

# The political, financial and technical context of MDR-TB management

**Second MDR-TB Consultant Course  
13-17 November 2006, Riga, Latvia**

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# Effectiveness of TB treatment by drug resistance pattern

Resistance

Cure rates

**Absent**

**Virtually 100%**

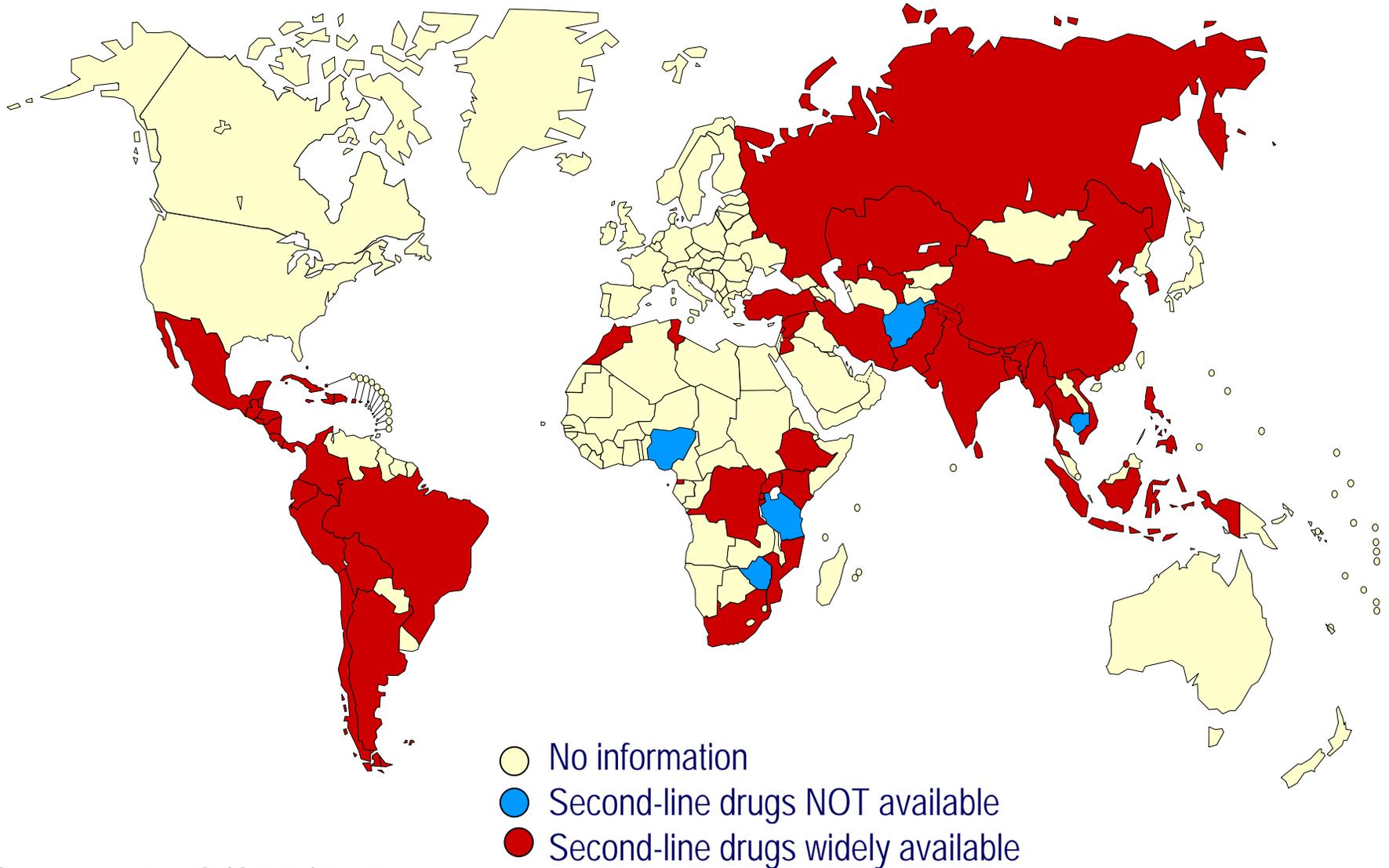
**MDR-TB (resistance to at least R-H)**

**Up to 80%**

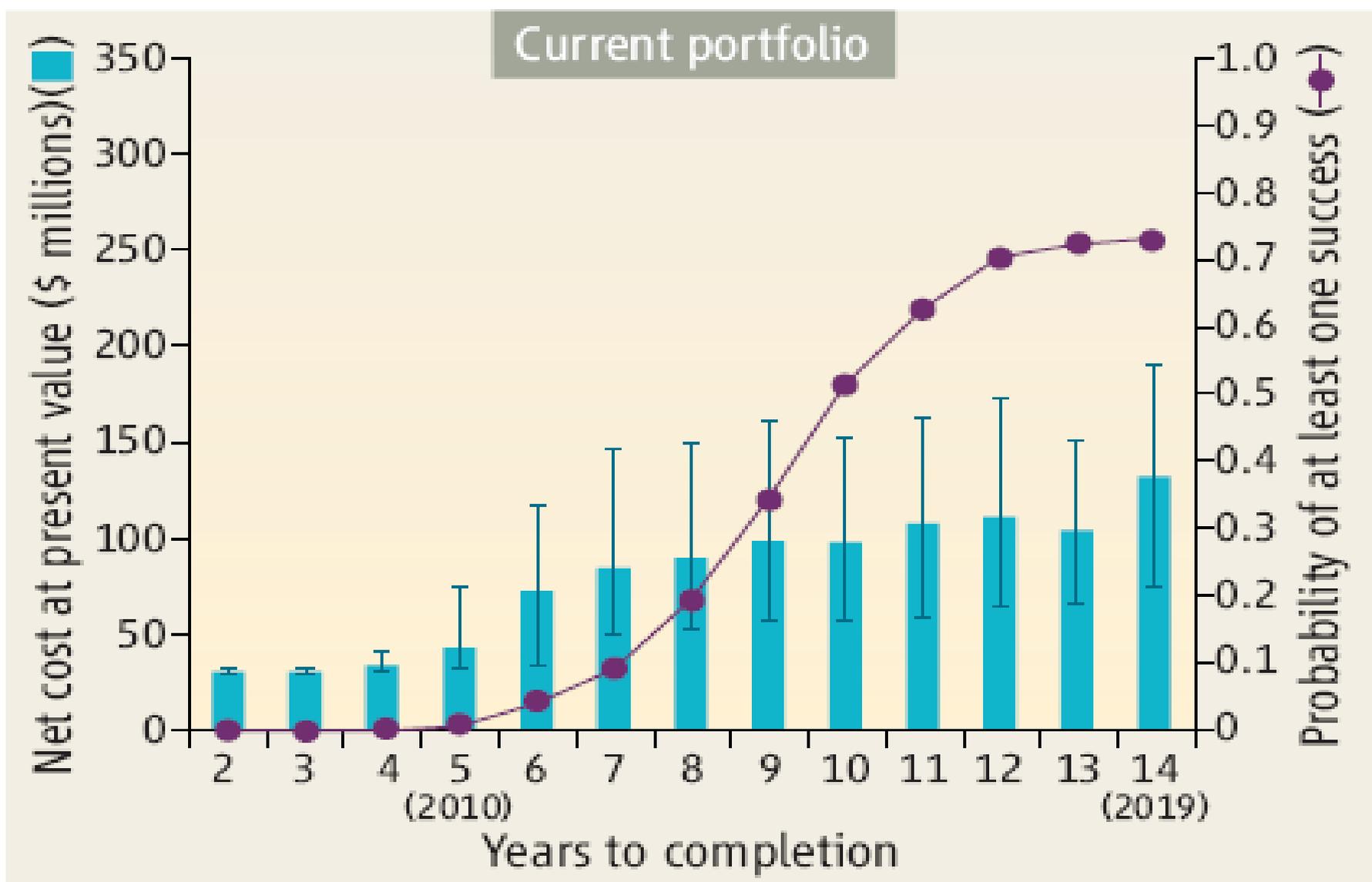
**XDR-TB (resistance to R-H and Fqs and Am or Km or Cm)**

**Up to 60%**

# Worldwide use of second-line TB drugs by October 2004



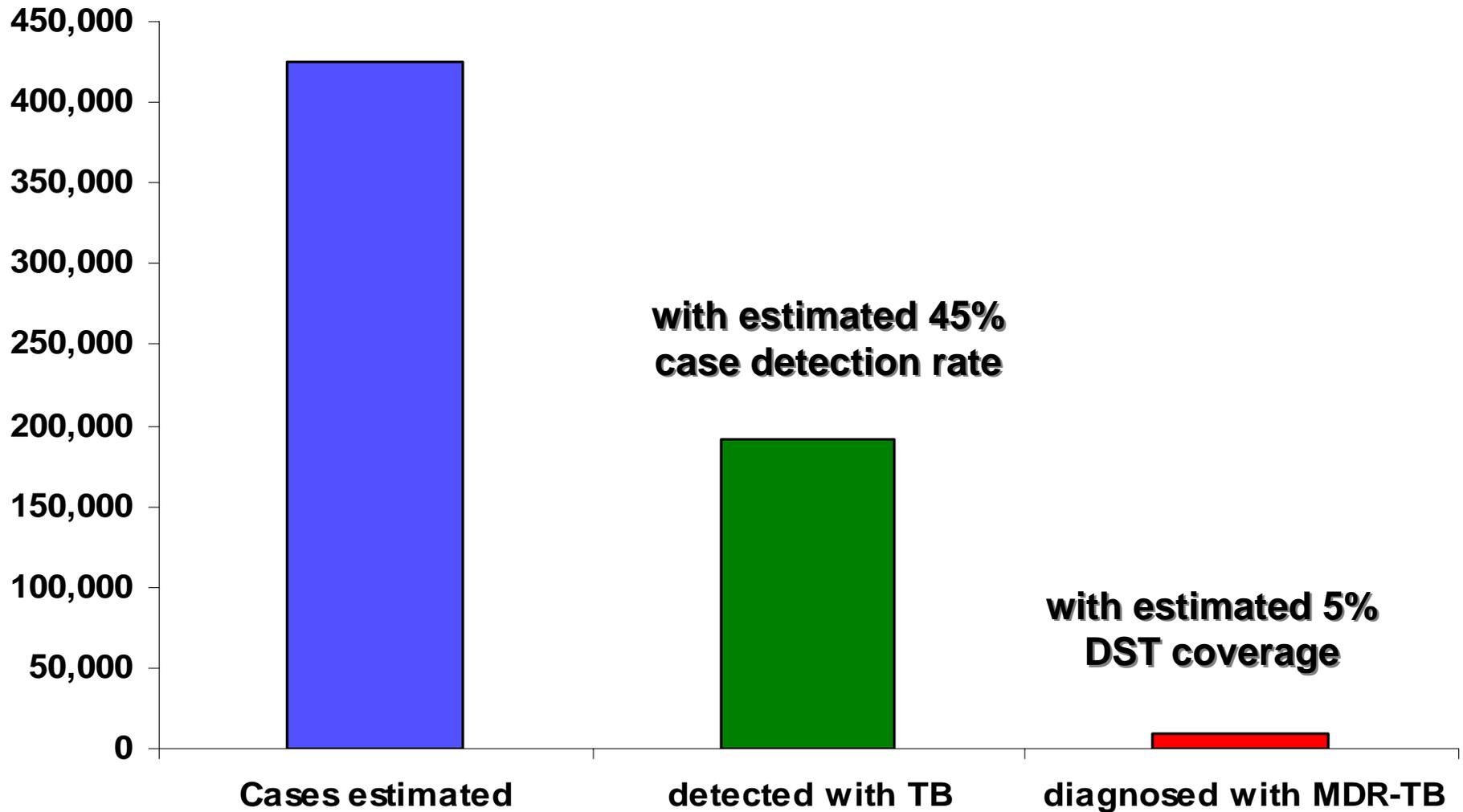
Source: WHO/STB/THD



Simulation model for the likely global TB drug portfolio in 2005.

Seth W. Glickman et al (2006) A Portfolio Model of Drug Development for Tuberculosis  
 Science 3 March 2006; 311: 1246-7

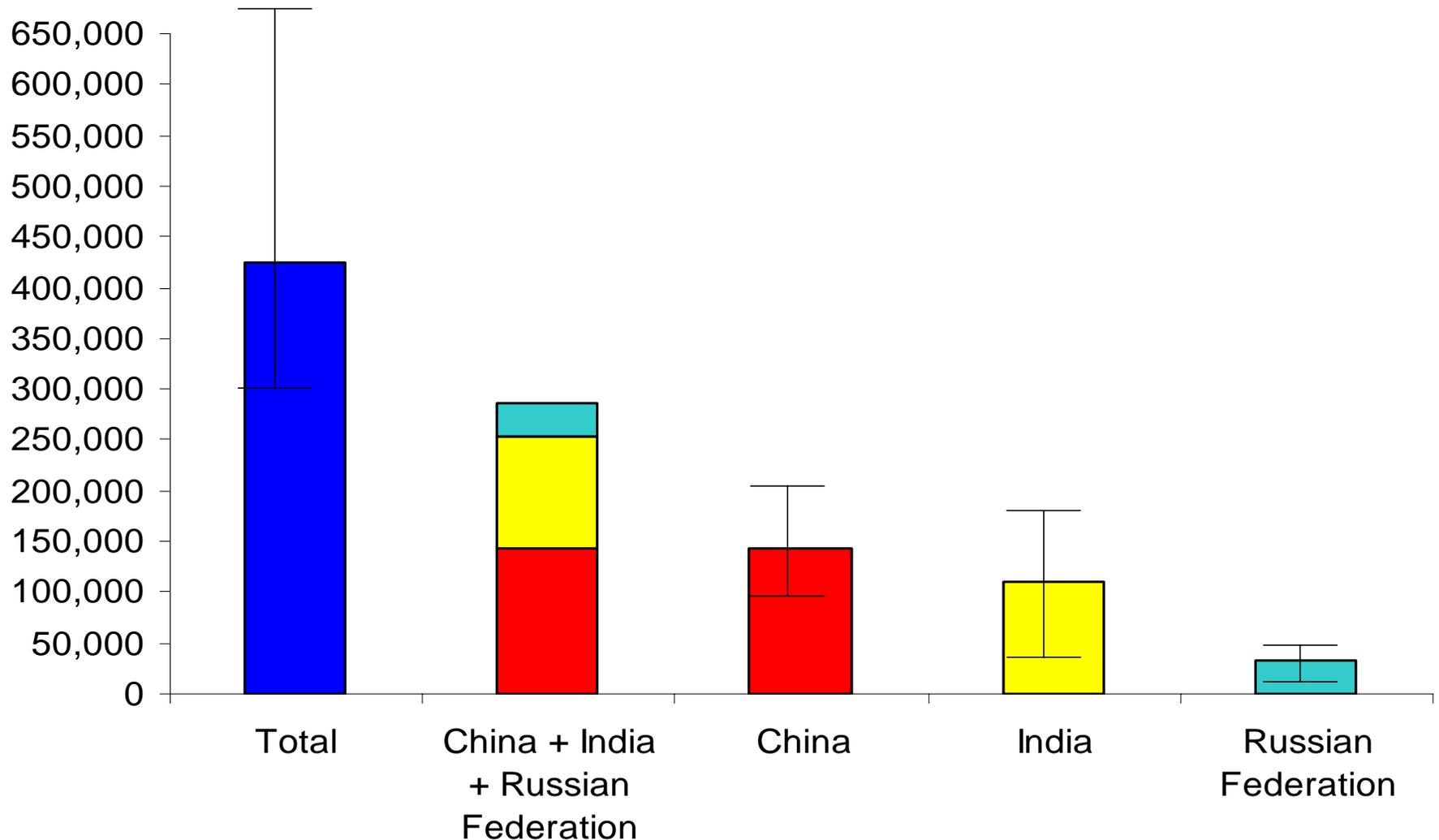
# Most of the MDR-TB burden estimated in 2003 had not yet been diagnosed



Source: WHO/STB/THD

# HIV epidemic worsening in the areas with the highest number of MDR-TB cases estimated in 2003

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Source: WHO/STB/THD

# XDR-TB: extensive drug-resistance TB



## MMWR™

Morbidity and Mortality Weekly Report

Weekly

March 24, 2006 / Vol. 55 / No. 11

### World TB Day — March 24, 2006

World TB Day is March 24. This annual event commemorates the date in 1882 when Robert Koch announced his discovery of *Mycobacterium tuberculosis*, the bacterium that causes tuberculosis (TB). Worldwide, TB remains one of the leading causes of death from infectious disease. An estimated 2 billion persons (i.e., one third of the world's population) are infected with *M. tuberculosis*. Each year, approximately 9 million persons become ill from TB, and approximately 2 million die as a result. World TB Day provides an opportunity for TB programs, nongovernmental organizations, and other partners to describe TB-related problems and solutions and to support TB control worldwide.

During 1985–1992, after more than 30 years of decline, the number of TB cases reported in the United States increased by 20%. This resurgence generated a renewed emphasis on TB control and prevention during the 1990s, which reversed the trend. Although the 2005 TB rate was the lowest recorded in the United States since national reporting began in 1953, the average annual decline has slowed during the past 3 years, multidrug-resistant TB remains a threat, and disparate rates of TB persist among certain racial, ethnic, and foreign-born populations.

Many states are offering educational programs organized by local TB coalitions in recognition of World TB Day. For example, the Georgia Department of Human Resources, Division of Public Health, Tuberculosis Program is hosting an observance recognizing the activities of a coalition working to reduce disparities in TB among blacks in the Atlanta area. Additional information about World TB Day and CDC TB-elimination activities is available at <http://www.cdc.gov/nchstp/tb/worldtbdays/2006/activities.htm>.

### Emergence of *Mycobacterium tuberculosis* with Extensive Resistance to Second-Line Drugs — Worldwide, 2000–2004

During the 1990s, multidrug-resistant (MDR) tuberculosis (TB), defined as resistance to at least isoniazid and rifampin, emerged as a threat to TB control, both in the United States (1) and worldwide (2). MDR TB treatment requires the use of second-line drugs (SLDs) that are less effective, more toxic, and costlier than first-line isoniazid- and rifampin-based regimens (3). In 2000, the Stop TB Partnership's Green Light Committee was created to increase access to SLDs worldwide while ensuring their proper use to prevent increased drug resistance. While assisting MDR TB treatment programs worldwide, the committee encountered reports of multiple cases of TB with resistance to virtually all SLDs. To assess the frequency and distribution of extensively drug-resistant (XDR) TB cases,\* CDC and the World Health Organization (WHO) surveyed an international network of TB laboratories. This report summarizes the results of that survey, which determined that, during 2000–2004, of 17,690 TB isolates, 20% were MDR and 2% were XDR. In addition, population-based data

\* Defined as cases in persons with TB whose isolates were resistant to isoniazid and rifampin and at least three of the six main classes of SLDs (aminoglycosides, polypeptides, fluoroquinolones, thioamides, cycloserine, and para-aminosalicylic acid).

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DEPARTMENT OF HEALTH AND HUMAN SERVICES  
CENTERS FOR DISEASE CONTROL AND PREVENTION

XDR: MDR-TB plus resistance to any fluoroquinolone and, at least, 1 of 3 injectables (ami, kana or capreo)

Of 17,690 isolates from 49 countries during 2000-2004  
20% were MDR; 2% XDR

XDR found in:  
USA: 4% of MDR  
Latvia: 19% of MDR  
S Korea: 15% of MDR

XDR found in Southern Africa associated with HIV

58<sup>th</sup> World Health Assembly resolution,  
23 May 2005

- **Requests the Director General of WHO to**  
  
**"strengthen strategies for the effective control of, and management of persons with, drug resistant tuberculosis"**

## WHO vision on MDR-TB (2006-2015)

Drug resistance surveillance and management of MDR-TB integrated as routine components of TB control, providing access to diagnosis and treatment for **all** TB patients and by **all** health care providers.

# The global plan for TB control: MDR-TB management has a place

- 800,000 patients to be treated, at least.
- USD 6 billions to be raised.
- To be updated with XDR-TB new evidence.



# The strategy for TB control: MDR-TB management should be part of sound TB control



## THE STOP TB STRATEGY

### VISION

### A WORLD FREE OF TB

### GOAL

To dramatically reduce the global burden of TB by 2015 in line with the Millennium Development Goals and the Stop TB Partnership targets

### OBJECTIVES

- Achieve universal access to high-quality diagnosis and patient-centred treatment
- Reduce the human suffering and socioeconomic burden associated with TB
- Protect poor and vulnerable populations from TB, TB/HIV and multidrug-resistant TB
- Support development of new tools and enable their timely and effective use

### TARGETS

- MDG 6, Target 8: Halt and begin to reverse the incidence of TB by 2015
- Targets linked to the MDGs and endorsed by Stop TB Partnership:
  - By 2005: detect at least 70% of new sputum smear-positive TB cases and cure at least 85% of these cases
  - By 2015: reduce prevalence of and deaths due to TB by 50% relative to 1990
  - By 2050: eliminate TB as a public health problem (<1 case per million population)

## COMPONENTS OF THE STOP TB STRATEGY

### 1 PURSUE HIGH-QUALITY DOTS EXPANSION AND ENHANCEMENT

- a. Political commitment with increased and sustained financing
- b. Case detection through quality-assured bacteriology
- c. Standardized treatment with supervision and patient support
- d. An effective drug supply and management system
- e. Monitoring and evaluation system, and impact measurement

### 2 ADDRESS TB/HIV, MDR-TB AND OTHER CHALLENGES

- Implement collaborative TB/HIV activities
- Prevent and control multidrug-resistant TB
- Address prisoners, refugees and other high-risk groups and special situations

### 3 CONTRIBUTE TO HEALTH SYSTEM STRENGTHENING

- Actively participate in efforts to improve system-wide policy, human resources, financing, management, service delivery, and information systems
- Share innovations that strengthen systems, including the Practical Approach to Lung Health (PAL)
- Adapt innovations from other fields

### 4 ENGAGE ALL CARE PROVIDERS

- Public-Public, and Public-Private Mix (PPM) approaches
- International Standards for TB Care (ISTC)

### 5 EMPOWER PEOPLE WITH TB, AND COMMUNITIES

- Advocacy, communication and social mobilization
- Community participation in TB care
- Patients' Charter for Tuberculosis Care

### 6 ENABLE AND PROMOTE RESEARCH

- Programme-based operational research
- Research to develop new diagnostics, drugs and vaccines



World Health Organization

Stop TB Partnership

## THE STOP TB STRATEGY

Building on and enhancing DOTS to meet the TB-related Millennium Development Goals

## Financial tools:

Global Fund to Fight AIDS, tuberculosis and malaria

- **Funding for capacity development and commodities needed to manage MDR-TB in eligible countries since 2002**
- **Limited funding for services of the Green Light Committee expected since 2007**

# GFATM endorses GLC

- *"To help contain resistance to second-line anti-TB drugs and consistent with the policies of other international funding sources, all procurement of medications to treat MDR-TB must be conducted through the Green Light Committee (GLC)"*

Third Board Meeting, 10-11 October, 2002

*"The board reaffirms its decision taken at its Third Board Meeting...all procurement of medications to treat MDR-TB must be conducted through the Green Light Committee (GLC)"*

Thirteenth Board Meeting, 27-28 April, 2006

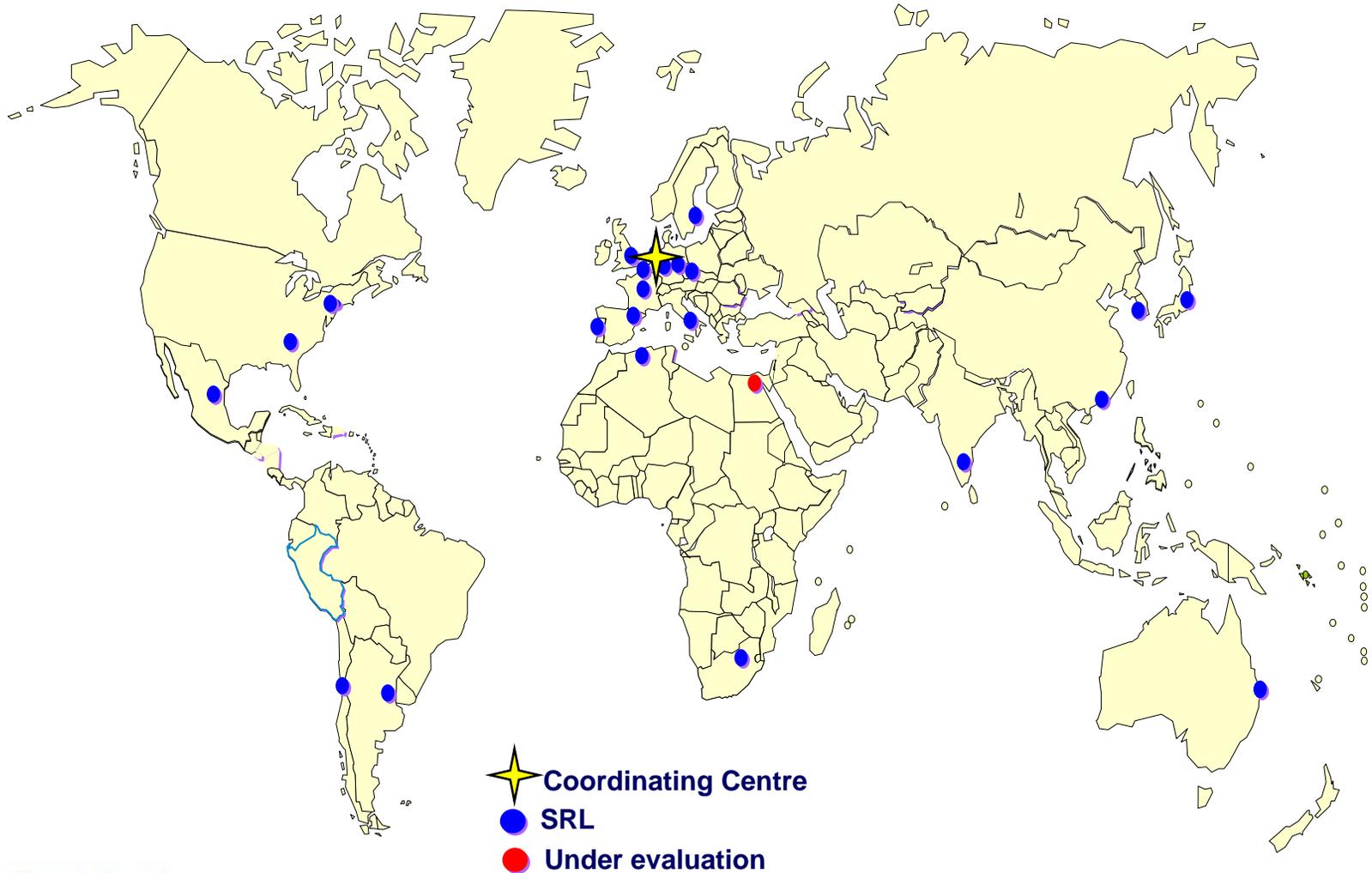
The Global Fund to Fight AIDS, Tuberculosis and Malaria

# Financial tools: UNITAID

- **Sustained funding for...**
  - **Procurement of quality assured second-line anti-TB drugs (SLD) for selected countries**
  - **Buffer stock of SLD**
  - **WHO Prequalification programme**

# Technical resources

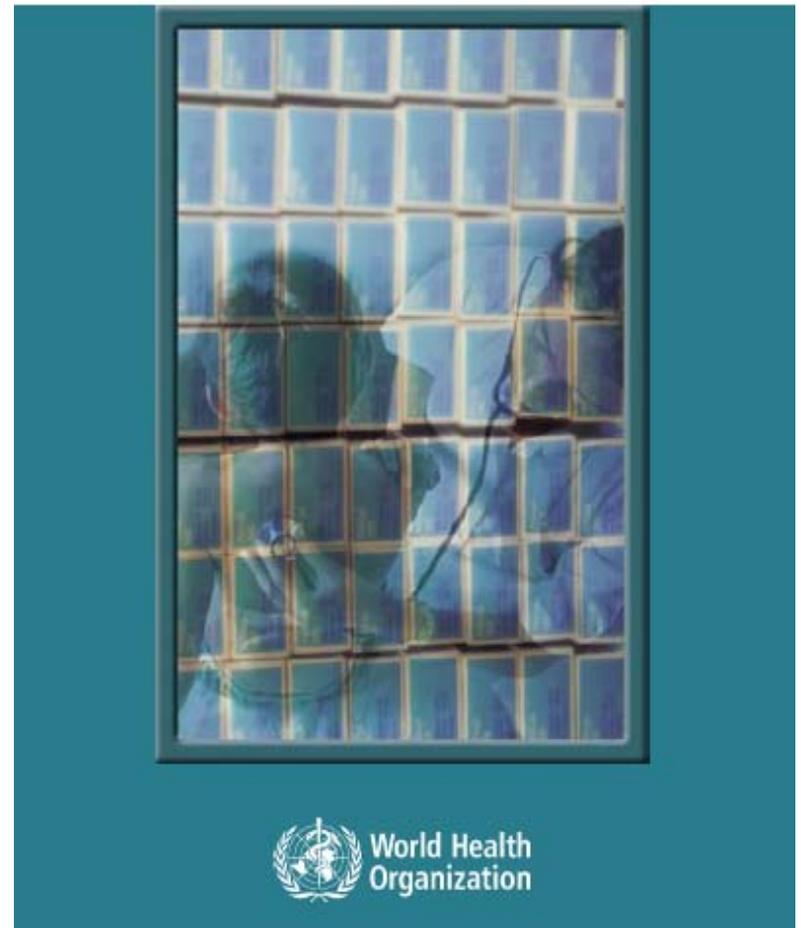
## The supranational reference laboratory network



# WHO Guidelines for the programmatic management of drug resistant TB

Guidelines for the  
programmatic management of  
drug-resistant tuberculosis

- Drawing on the best evidence available
- Based on the DOTS framework



# Working Group on MDR-TB

- **Core Group**
- **Subgroups**
  - **GLC**
  - **Drug management**
  - **Research**
  - **Spokes persons in SCLS**
  - **Resource mobilization**
  - **Infection control (provisionally)**

# The WHO Green Light Committee mechanism

- **A technical panel**
  - A legal advisory body of WHO
  - A sub-group of the Working Group on MDR-TB
    - Which reviews applications
    - Monitors approved projects
    - Assists WHO on MDR-TB policy
- **A drug management function at the GDF**

# The context for MDR-TB management?

- **Public health problem acknowledged**
- **Policy**
- **Strategy**
- **Plan**
- **Technical guidelines**
- **Tools**
  - **Working Group on MDR-TB**
  - **Global surveillance project**
  - **Green Light Committee mechanism**
  - **Global Fund to Fight AIDS, Tuberculosis, and Malaria**
  - **UNITAID**