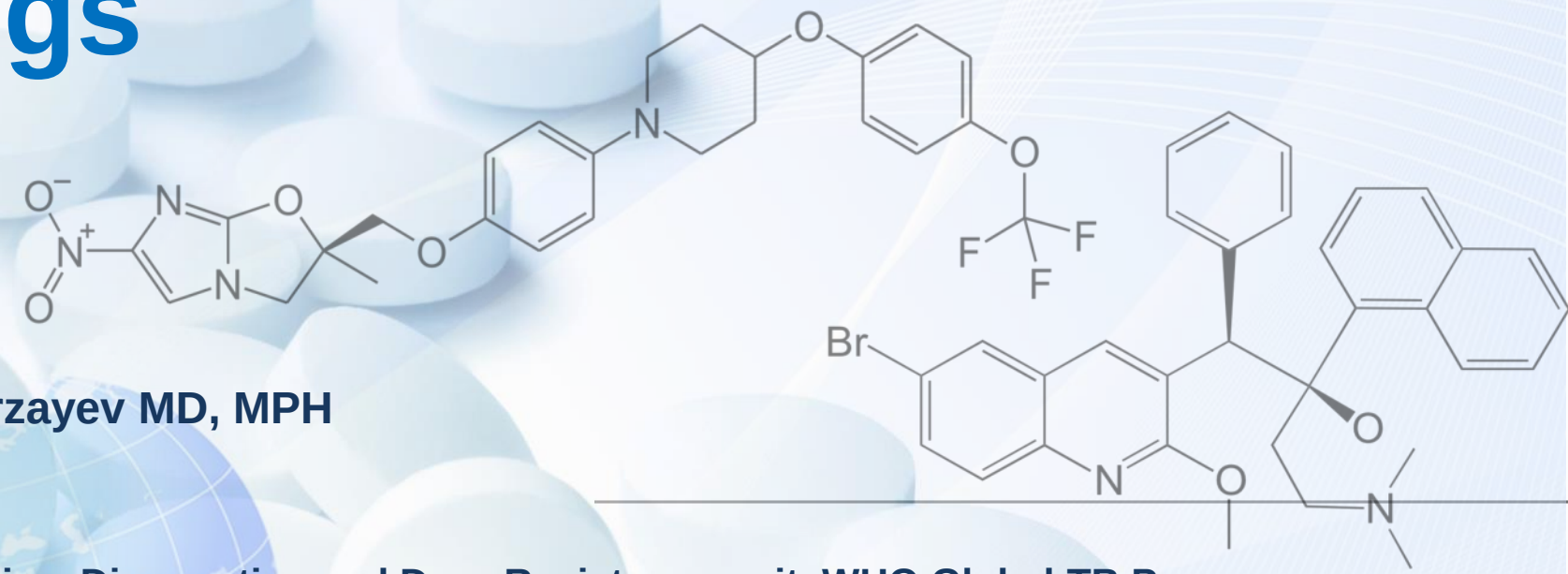
Implementation of new TB drugs



Fuad Mirzayev MD, MPH

Laboratories, Diagnostics and Drug Resistance unit, WHO Global TB Programme

MSF TB symposium, Tbilisi, Georgia, 22-23 March 2016

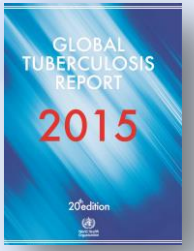
GLOBAL TB PROGRAMME

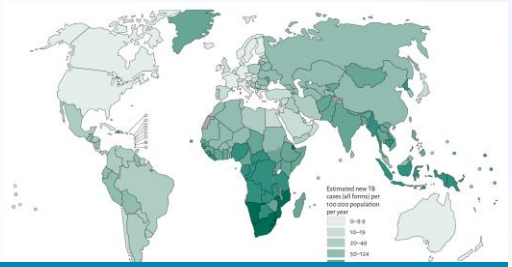
World Health Organization

Outline

- DR-TB globally and need for new TB drugs
- New TB drugs
- WHO guidance
- Availability
- Conclusions

The Global burden of TB, 2014





	Estimated number of cases	Estimated number of deaths
All forms of TB	**9.6** million • 1 million children • 3.2 million women • 5.4 million men	**1.5** million* • 140,000 in children • 480,000 in women • 890,000 in men
HIV-associated TB	**1.2** million (12.5%)	**390,000**
Multidrug-resistant TB	**480,000**	**190,000**

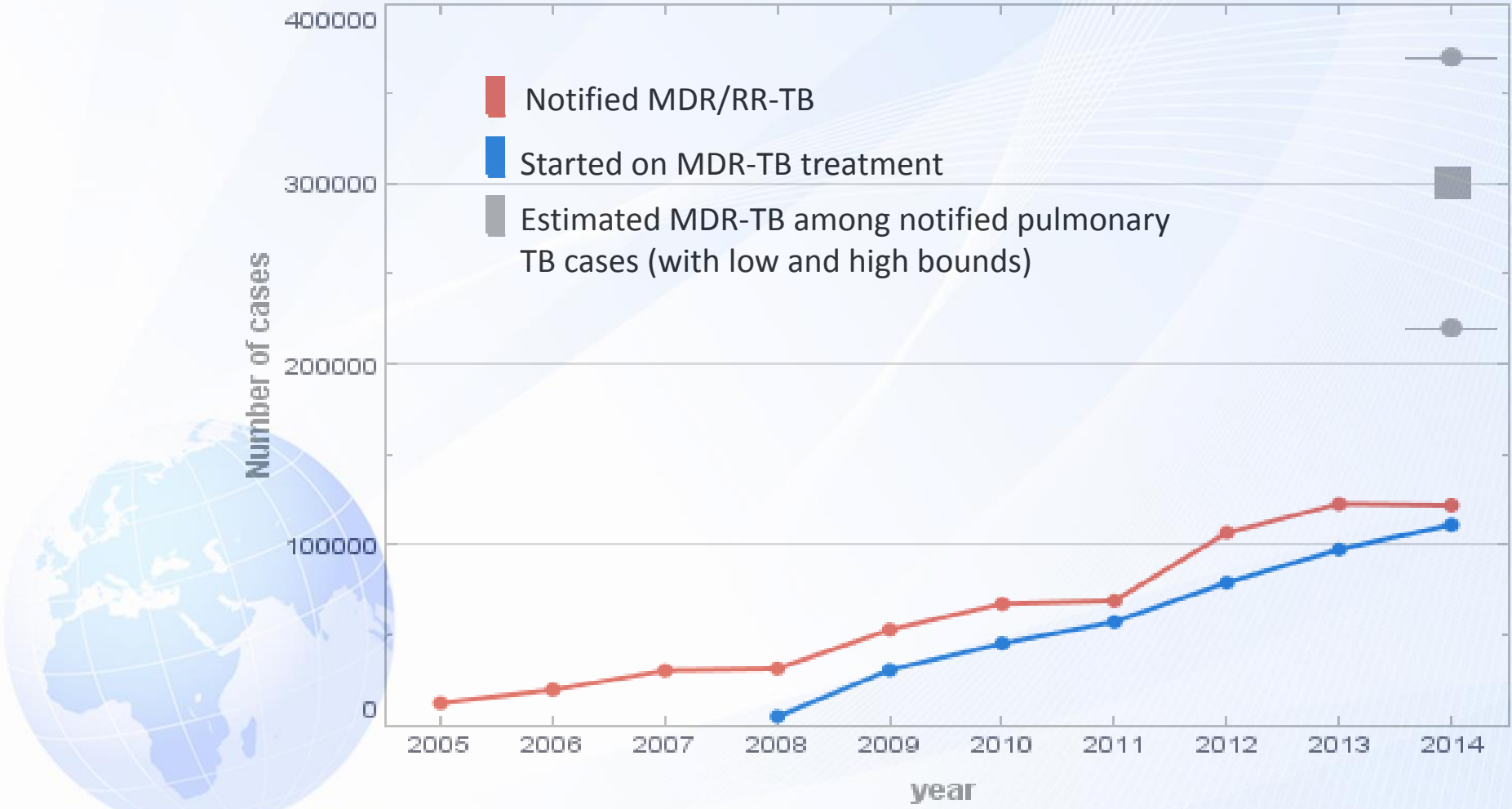
Source: WHO Global TB Report 2015

** Including deaths attributed to HIV/TB*

GLOBAL TB PROGRAMME World Health Organization

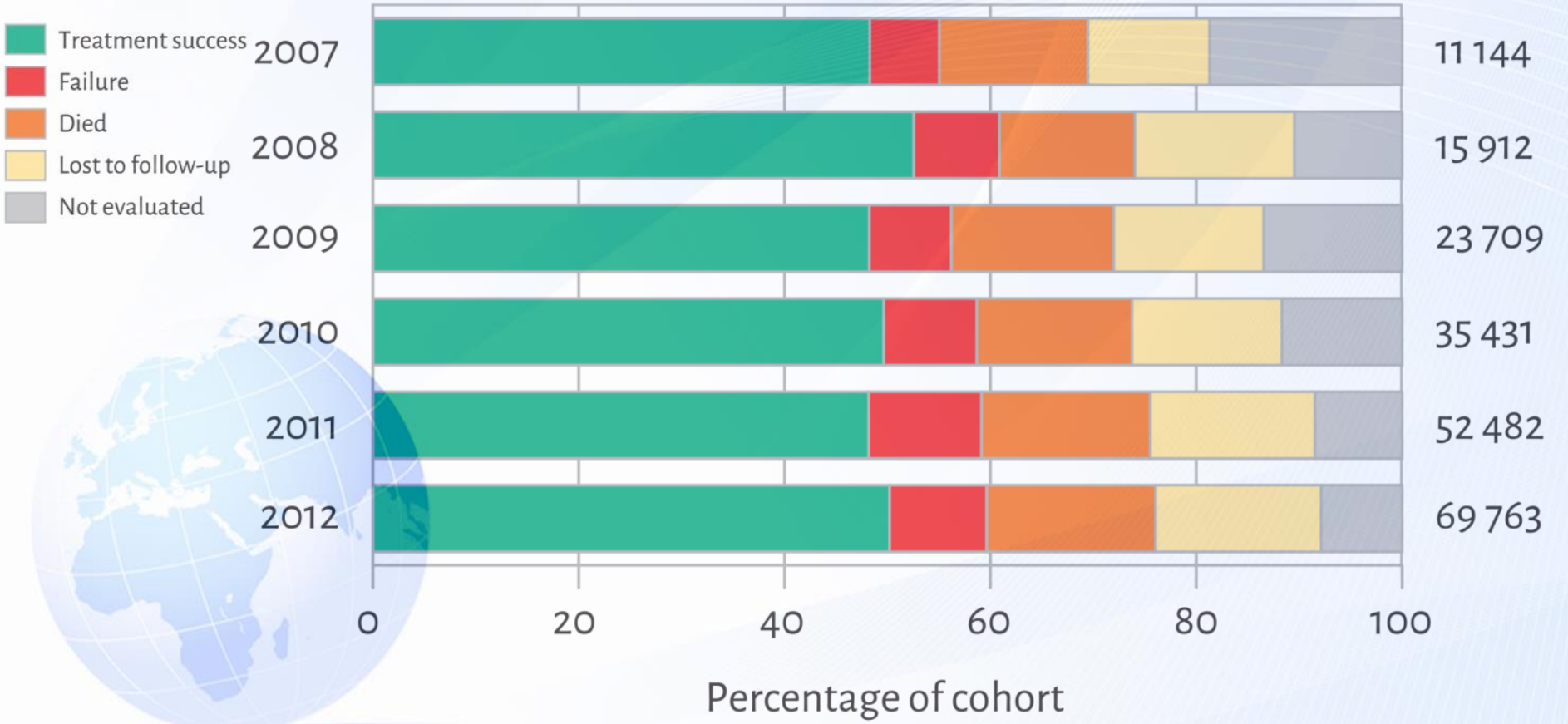
Rifampicin resistant and MDR-TB

Estimated MDR-TB, and notification and treatment of rifampicin-resistant TB, global, 2005-2014

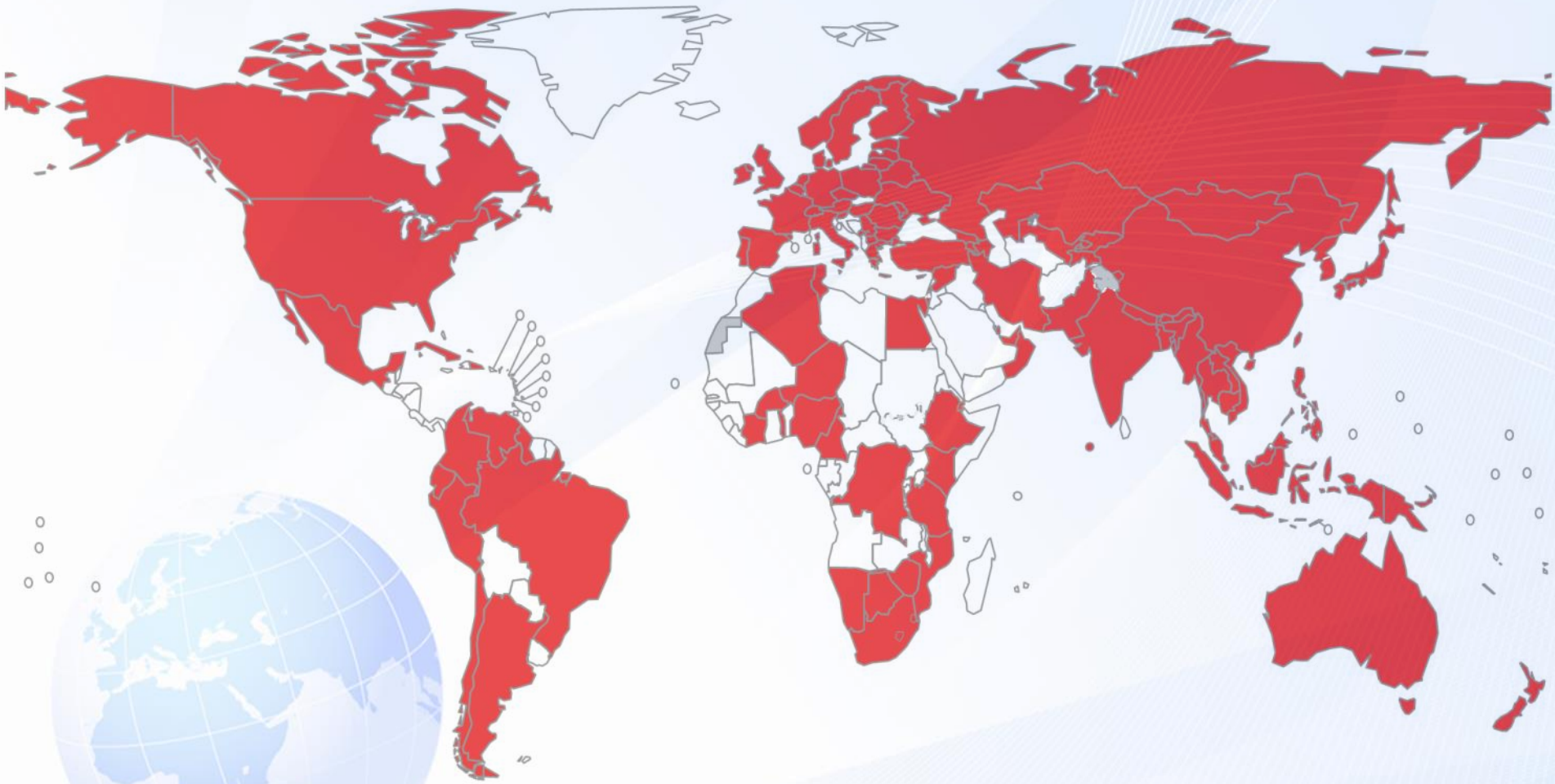


Outcomes of MDR-TB treatment

MDR-TB cohorts 2007-2012, global

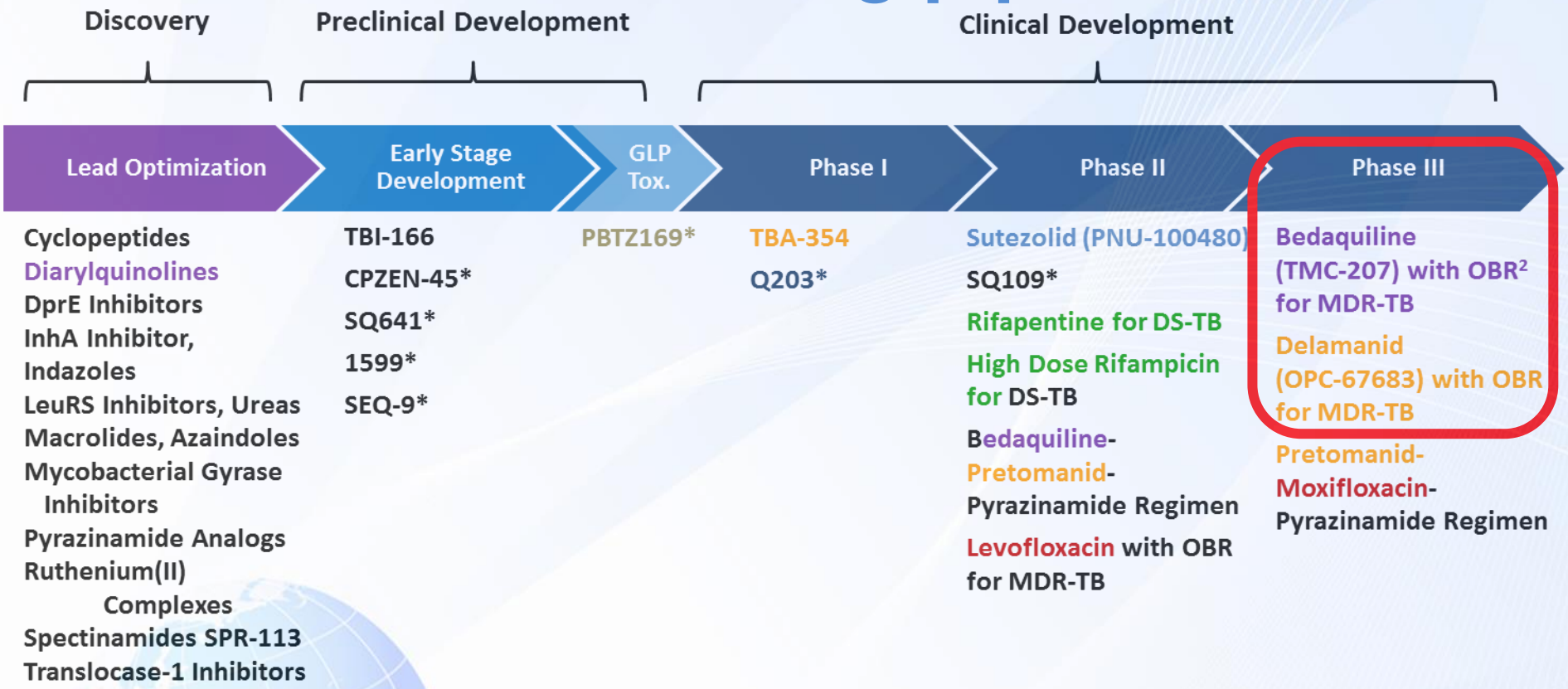


Countries notifying XDR-TB



The boundaries and names shown and the designations used on this map 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.

Global TB drug pipeline[1]



Chemical classes: fluoroquinolone, rifamycin, oxazolidinone, nitroimidazole, diarylquinoline, benzothiazinone, , imidazopyridine amide, New chemical class*

[1] Details for projects listed can be found at http://www.newtbdrugs.org/pipeline.php and ongoing projects without a lead compound series identified can be viewed at http://www.newtbdrugs.org/pipeline-discovery.php

[2]OBR = Optimized Background Regimen

WORKING GROUP ON NEW TB DRUGS

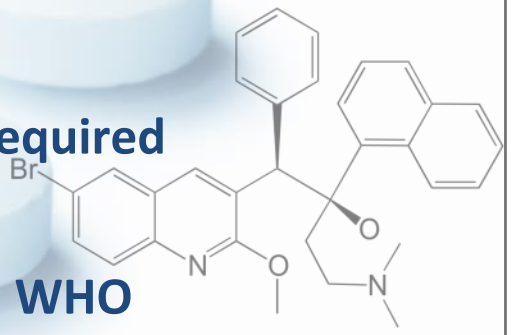
www.newtbdrugs.org

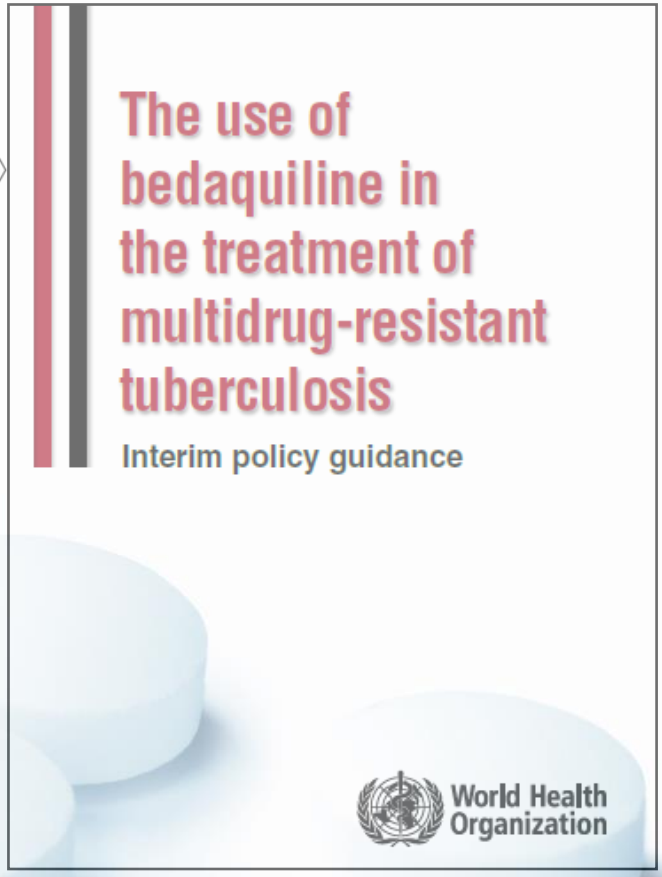
Updated: September 2015

Interim WHO guidance on bedaquiline

Bedaquiline may be added to a WHO-recommended regimen in adult patients with pulmonary MDR-TB, under five specific conditions *(conditional recommendation, very low confidence in estimates of effect*)

1. **Proper selection of patients**
2. **Patient informed consent required**
3. **Treatment design based on WHO recommendations**
4. **Close monitoring conditions**
5. **Active drug safety monitoring and management**



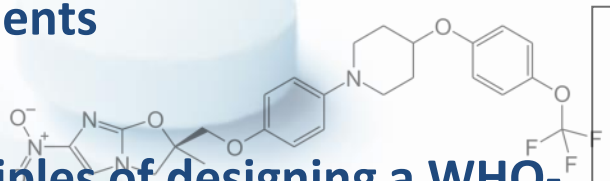


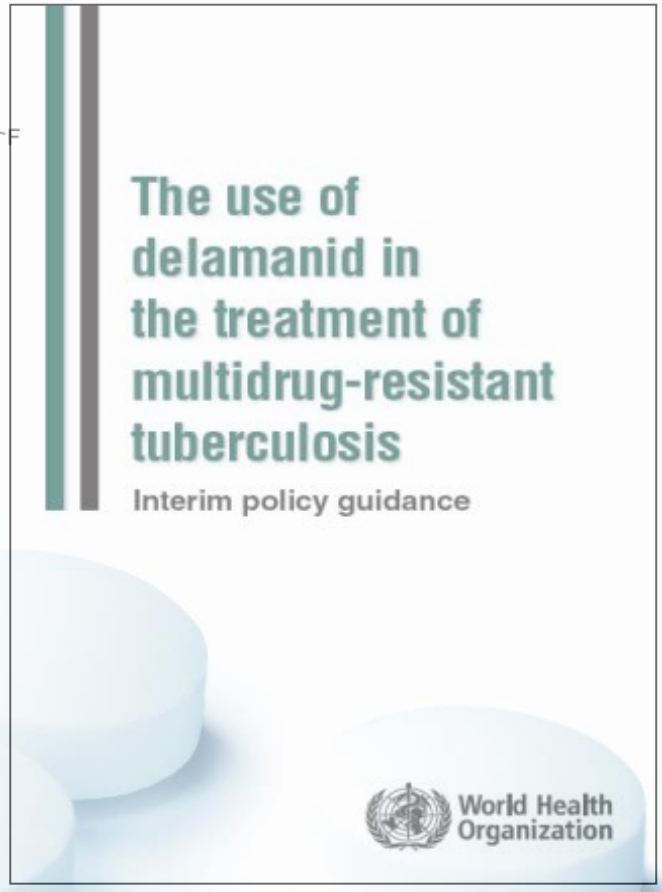
WHO, June 2013

Interim WHO guidance on delamanid

Delamanid may be added to a WHO-recommended regimen in adult patients with pulmonary MDR-TB, under five specific conditions" ***(conditional recommendation, very low confidence in estimates of effect)***

1. **Proper selection of patients**
2. **Adherence to the principles of designing a WHO-recommended MDR-TB regimen**
3. **Treatment under close monitoring**
4. **Active drug safety monitoring and management**
5. **Patient informed consent required**



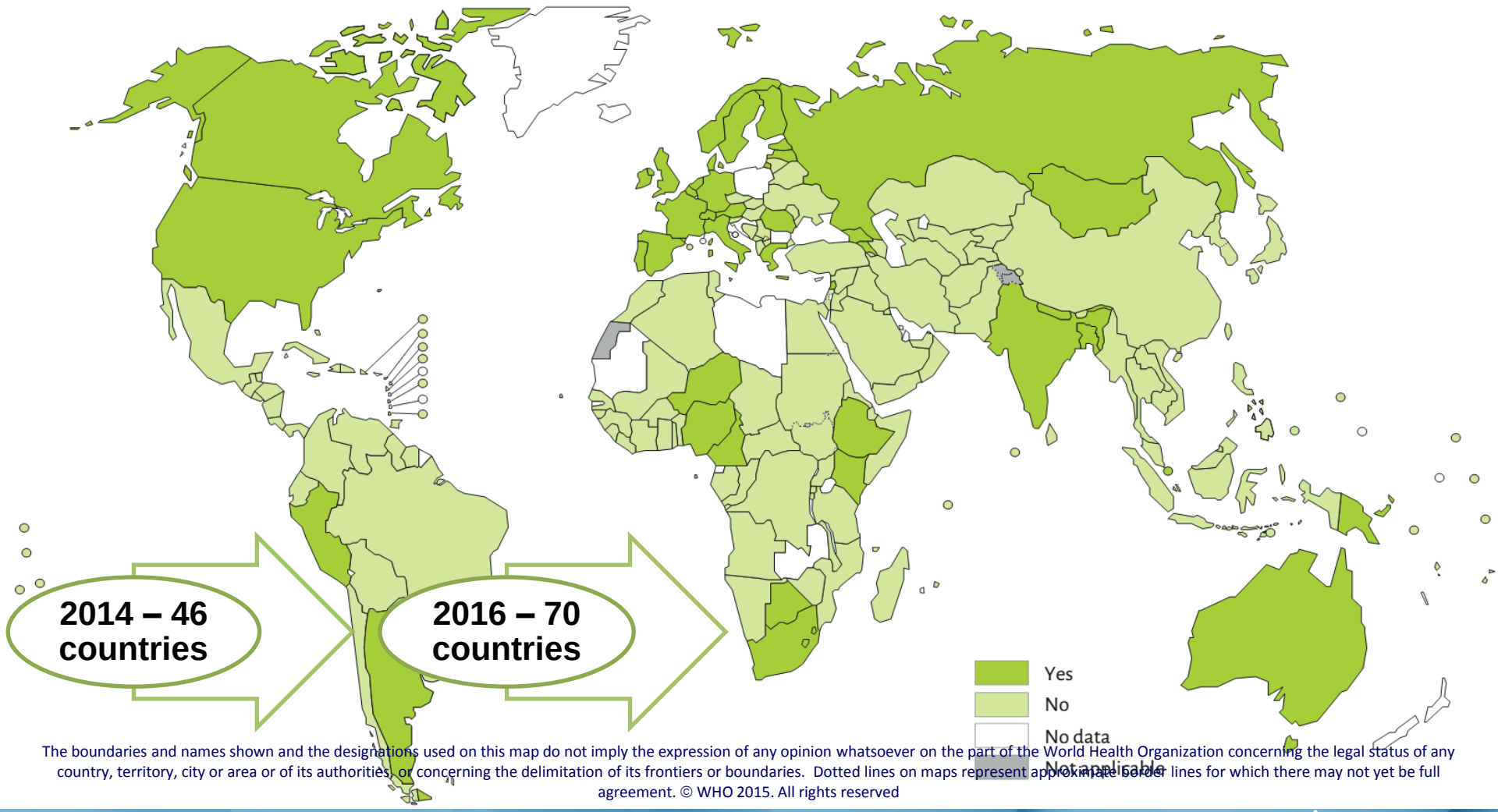


WHO, October 2014

Availability of new TB drugs

- USAID Bedaquiline donation program in partnership with Janssen Pharmaceuticals (30’000 treatment courses available via GDF 2015-19)
- Stop TB Partnership and Otsuka Pharmaceuticals announced in February 2016 that Delamanid is available via GDF at USD 1’700 per course of treatment
- With a few exceptions, both medicines are available to all countries eligible for financing through the Global Fund and follow WHO guidelines for the proper management of MDR-TB in quality-assured programs

Countries that had used bedaquiline for the treatment of M/XDR−TB as part of expanded access, compassionate use or under normal programmatic conditions by the end of 2014



GLOBAL TB PROGRAMME

World Health Organization

Public health challenges of introduction of new TB drugs in countries

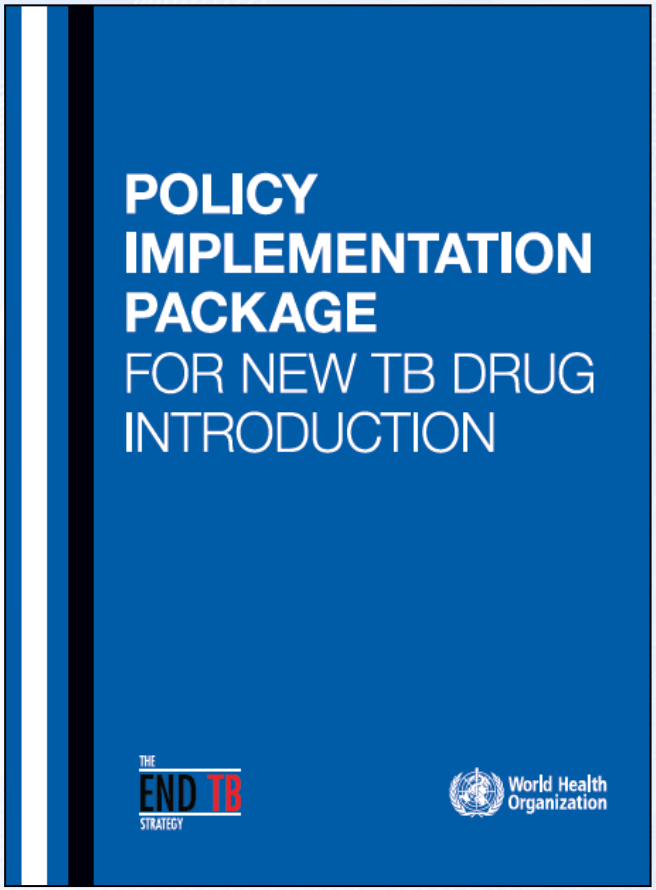
Implications for TB control programmes:

- Determine optimal regimens for treatment of DS- and DR-TB under programmatic conditions;
- evaluate requirements for patients' eligibility;
- assess programmatic feasibility;
- evaluate effectiveness and cost-effectiveness;
- ensure proper surveillance and pharmacovigilance – especially if accelerated/conditional approval;
- ensure responsible use (appropriate indication, doses, drug combination(s), and treatment duration) ;
- prevent emergence of resistance.

WHO PIP for Introduction of new TB Drugs or Drug Regimens in Countries

The goal of the Policy Implementation Package is to assist countries in preparing for introduction of new TB drugs and/or regimens, based on WHO policy guidance, in order to better serve patients and communities in need.

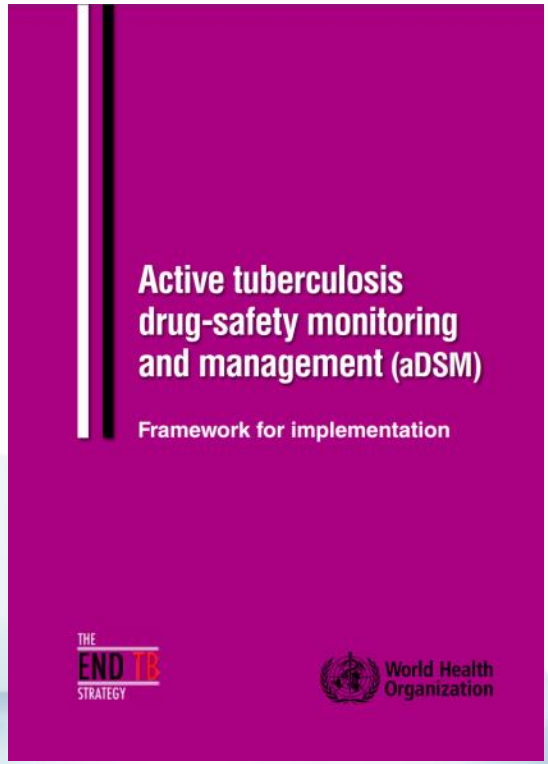
WHO – Oct 2014



http://http://www.who.int/tb/PIPnewTBdrugs.pdf/

active TB drug-safety monitoring & management (aDSM)

- active and systematic clinical and laboratory assessment of patients on treatment with new TB drugs, novel MDR-TB regimens or XDR-TB regimens to detect, manage and report suspected or confirmed drug toxicities.
- All adverse events detected in a patient require appropriate clinical management.
- core package of aDSM is focused only on serious adverse events
- It is envisaged that aDSM will become an integral component of the programmatic management of drug-resistant TB (PMDT).



Conclusions

- Global TB data indicate clear and urgent need in new TB drugs and regimens
- Drug development pipeline is lean but some new compounds are marketed already
- Global initiatives to facilitate availability of these drugs do exist
- WHO Policy and implementation guidance on new TB drugs has been published
- Use of one of the new TB drugs, bedaquiline, is gradually expanding but needs to accelerate

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