

Significance of Accurate & Responsive TB Laboratory System for Enhanced TB Control

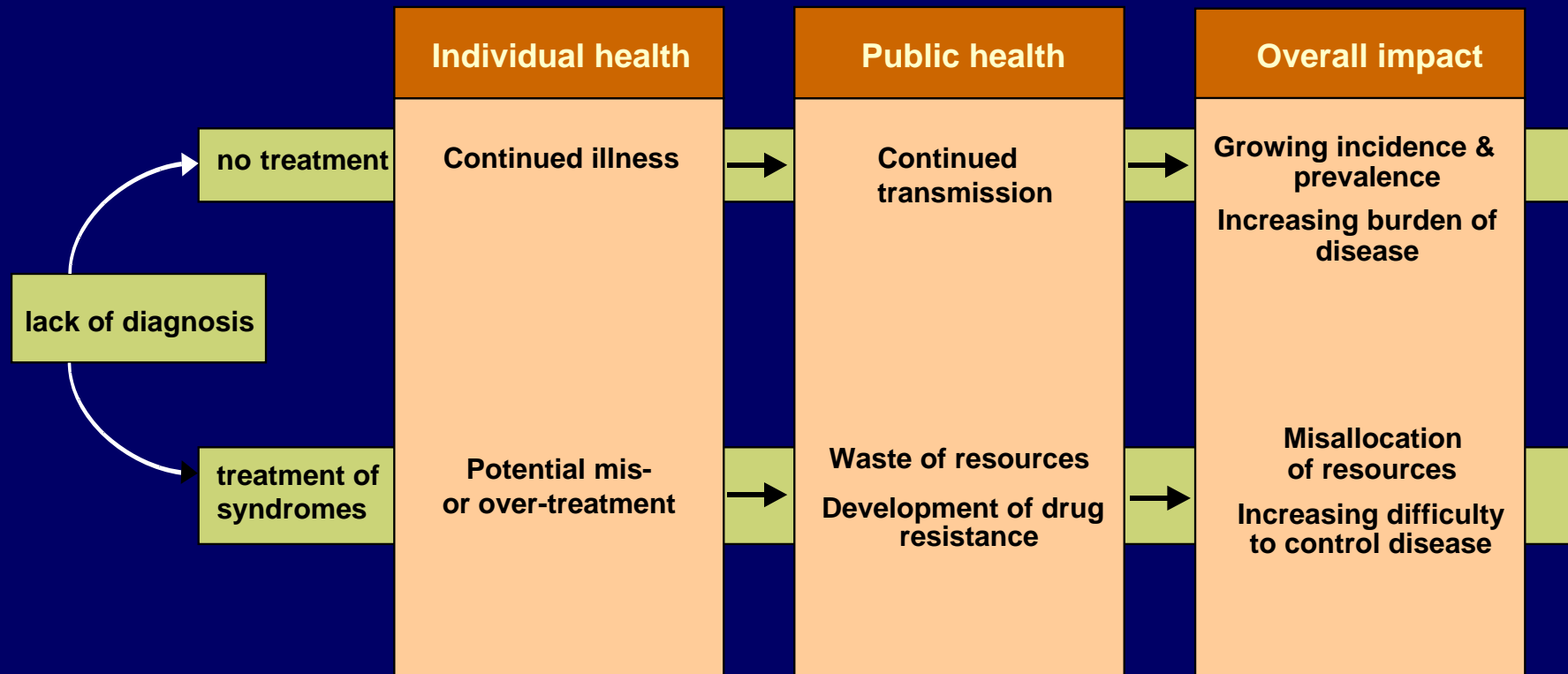
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Centers for Disease Control & Prevention, Global AIDS Program

39th IUATLD Conference

October 20, 2008

Impact of Lack of Lab Diagnostics



Source: FIND diagnostics

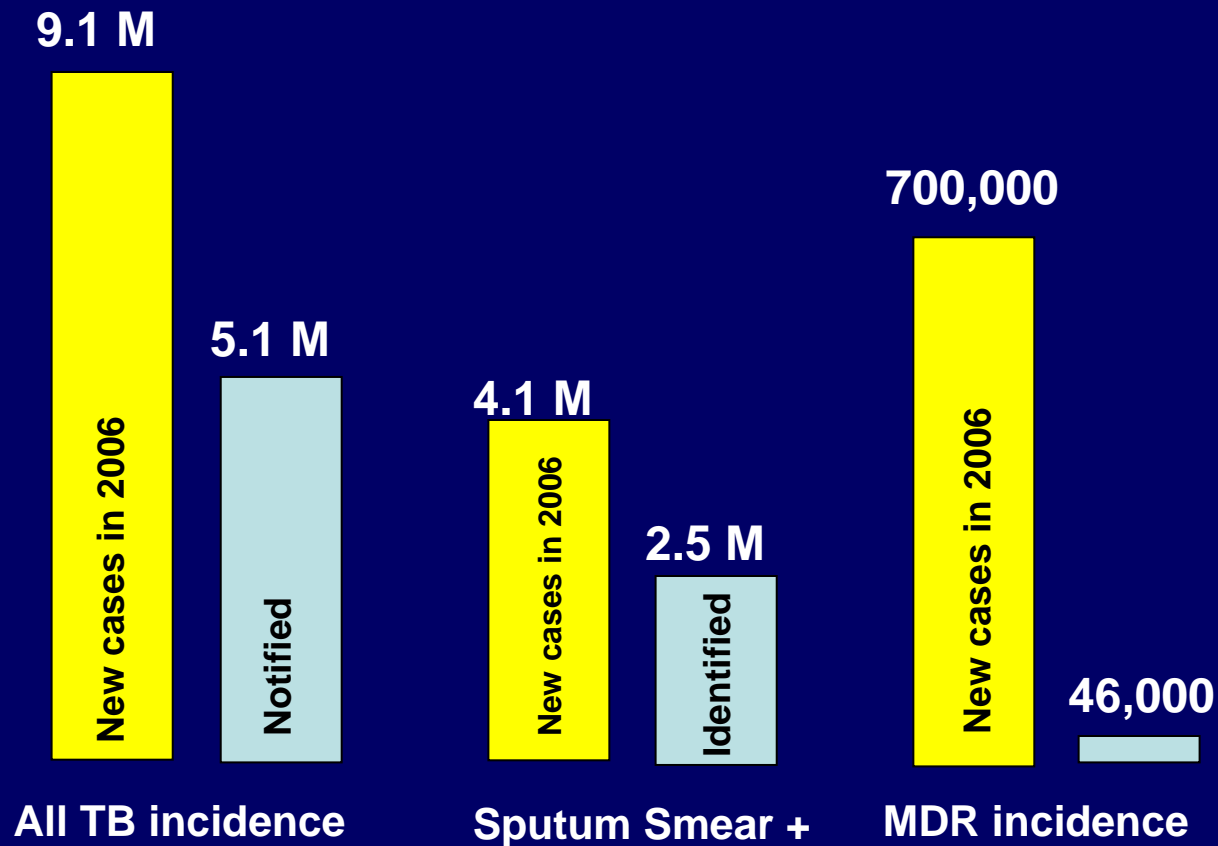
If you can't diagnose it

you can't possibly treat or control it

Role of Laboratories in TB Control

- **Diagnose all TB cases**
- **Monitor patient's response to treatment**
- **Participate in TB surveillance; notification/prevalence of TB; drug resistant cases**
- **Assist in selecting effective treatment regimens for MDR-TB**
- **Support Operational research**
- **Guide policy development/ changes**

TB Remains Far Underdiagnosed



Source: WHO – Global TB Report 2008

Where is the missing link?

- **Poor coordination between program & the lab: improving**
- **Poor allocation of funds for lab strengthening: improving**
- **Microscopy-based case detection**
- **Inadequate access to smear microscopy**
- **Lack of or poor quality assurance**
- **Difficulty in implementation & poor quality of culture/ DST services**

Challenges due to HIV

- Unprecedented demand for TB lab services
- Decentralization of HIV services are exponentially increasing number of facilities needing access to TB diagnostic services
- Increase in smear negative TB making diagnosis difficult

Response to HIV Challenges

- **Decentralize microscopy services**
- **Improve quality of existing microscopy services**
- **Improve turn around time of lab results for quick decision making**
- **Develop culture capacity including liquid culture**
- **Develop point-of-care rapid diagnostic tool to improve care for PLHIV**

Challenges Due to Rising MDR/XDR TB

- **Need to conduct drug resistance surveys & monitor trends**
- **Second line drugs are available and a growing number of countries implement DOTS-Plus strategy**
- **Without rapid detection, MDR & XDR case fatality and risk of further drug resistance are high**

Response to MDR/ XDR TB

- **Improve availability & quality of culture & drug susceptibility testing**
- **Improve availability of second line testing**
- **Implement molecular tests like line probe assay for rapid diagnosis & appropriate treatment**
- **Develop point-of-care rapid diagnostic tests**

WHO recommended Stop TB Strategy to reach the 2015 MDGs



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)

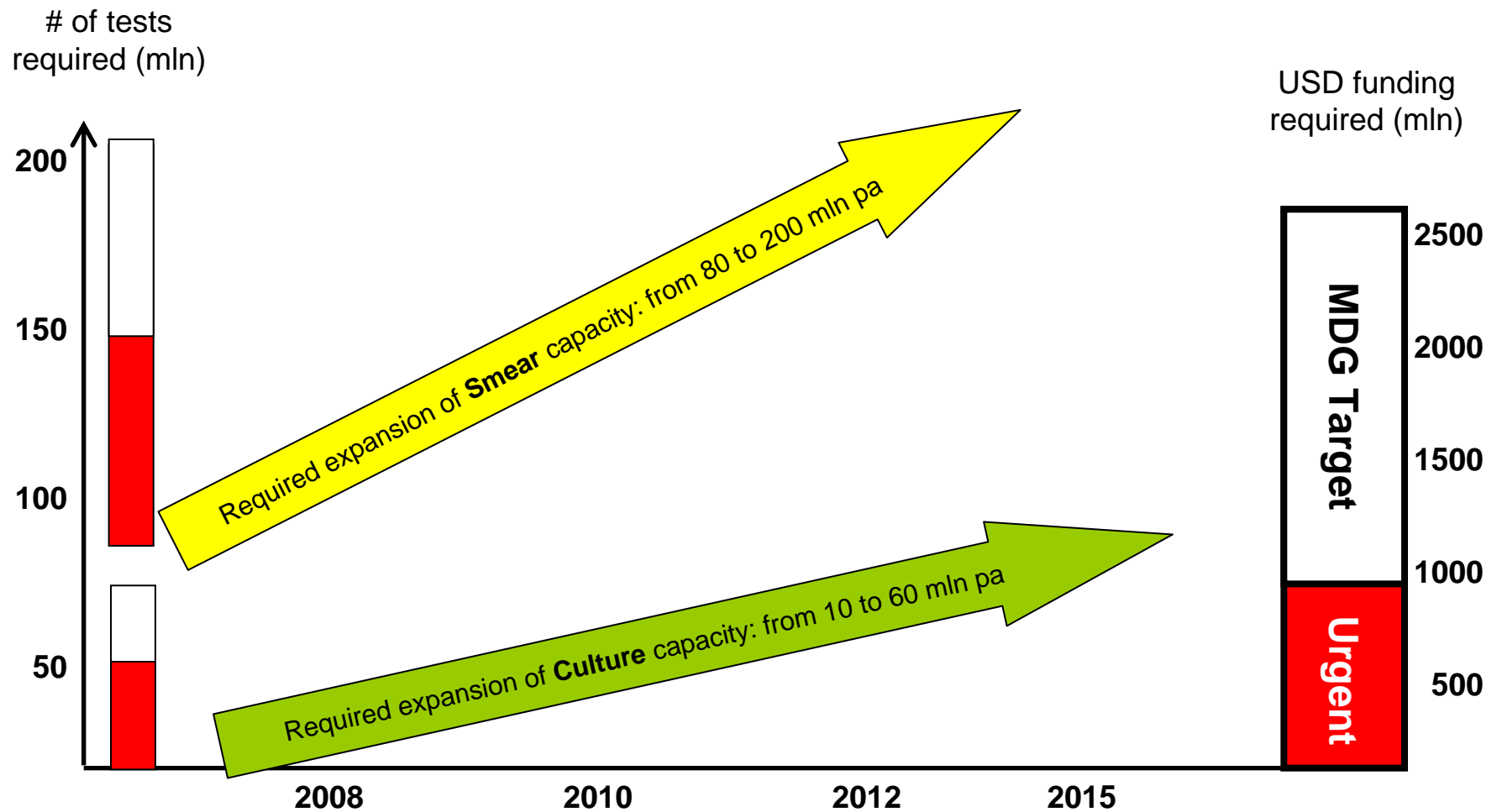
5 EMPOWER PEOPLE WITH TB, AND COMMUNITIES

- 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

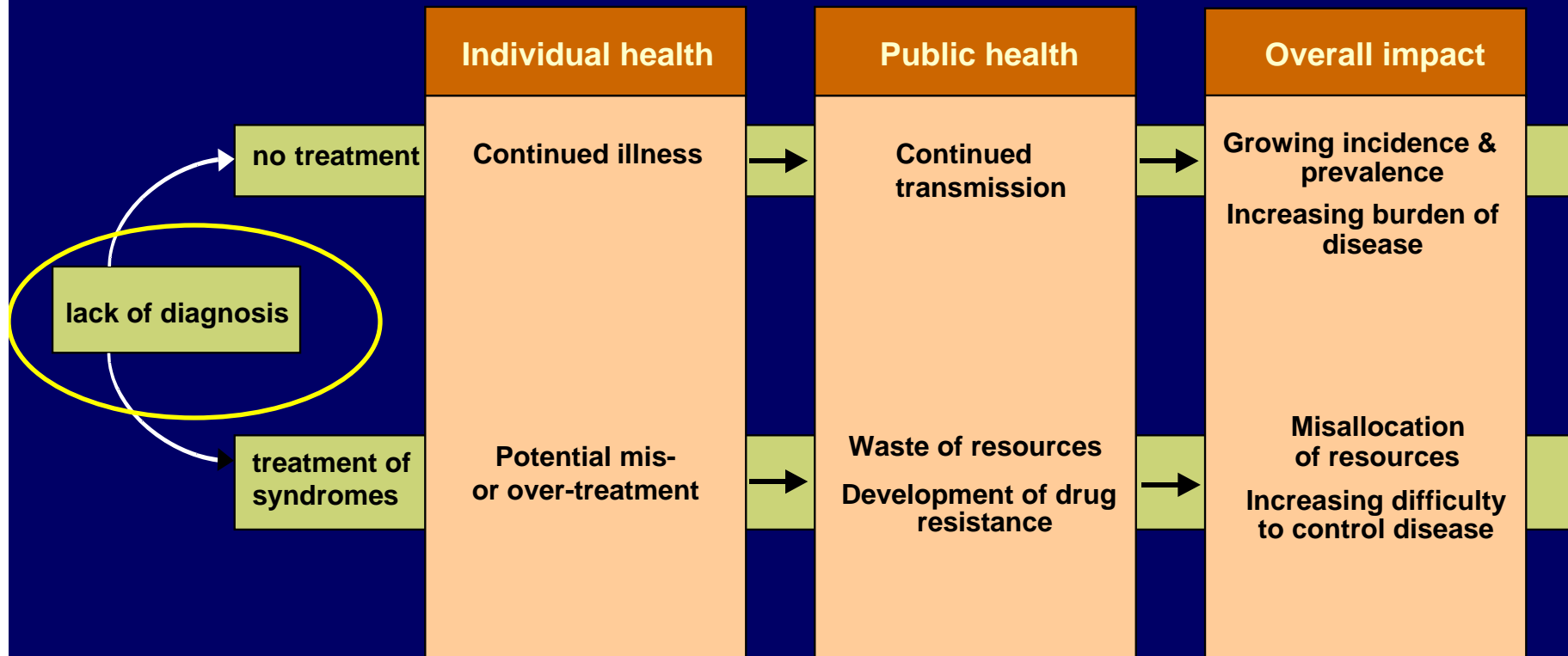
To reach MDG targets, a global capacity need of **120 million smears**, **60 million cultures** and **6 million DST investigations** must be met by 2015, requiring at least **1 billion USD** investment in laboratory infrastructure and annual variable cost



Critical Elements

- **Access & coverage**
 - **Network of laboratories**
 - **Trained human resources**
 - **System for referral & reporting**
- **Quality assurance program**
- **Bio-safety**

Impact of Lack of Diagnostics



Source: FIND diagnostics

**Irrational optimism
is the pre-requisite for success**

~ Tom Frieden

Yes We Can!!

Thank you!