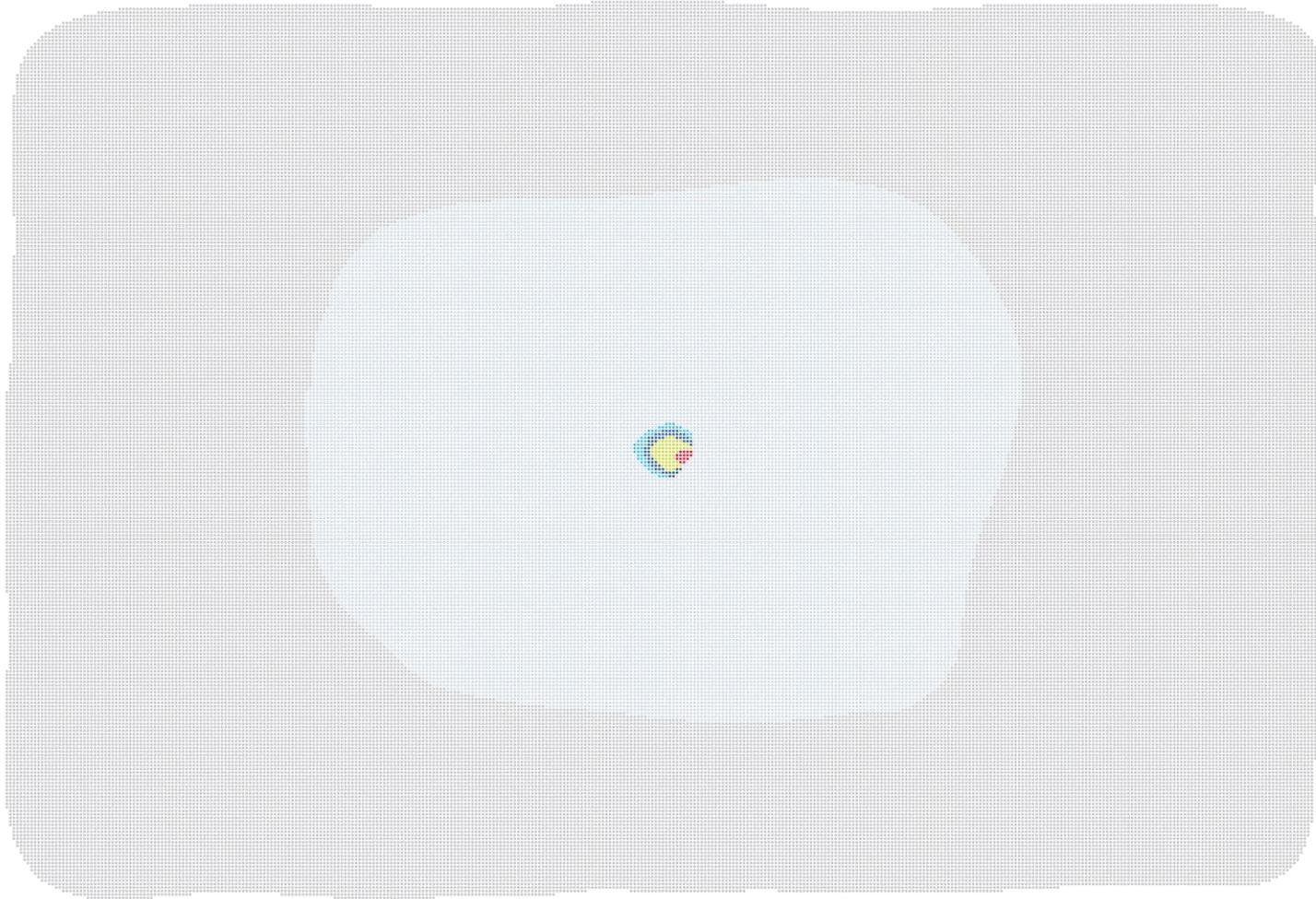# Are we doing the right things to end TB?

How can we address the full need for impact?

Stop TB Partnership Secretariat

Stop TB Board meeting, Berlin, 18 May 2017

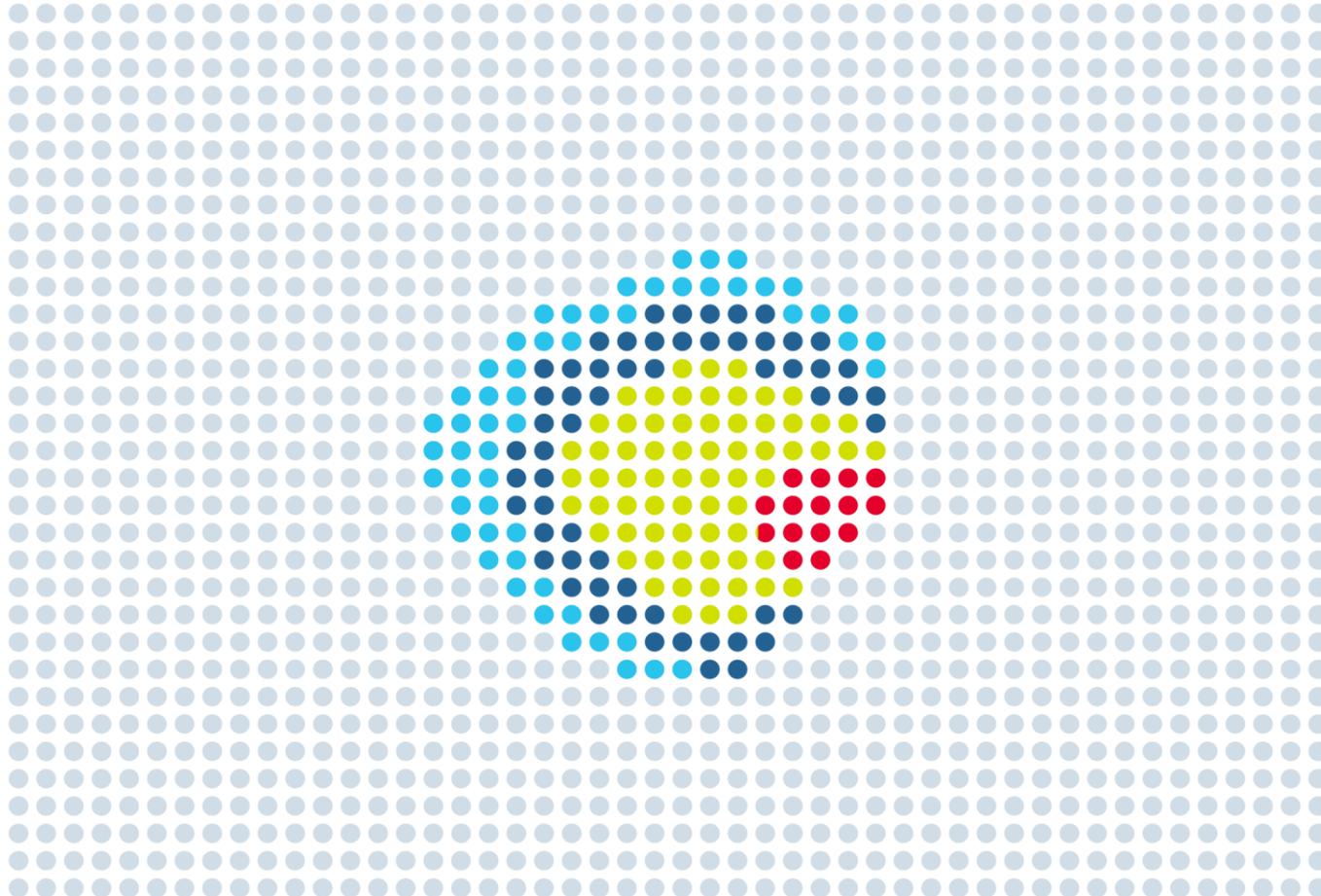# We are focusing on a small part of the huge TB burden

1 dot = 74 074 people

Global Population in 2015 - 7 billion   **People infected with TB** - 2 billion   **TB Prevalence**

# We are focusing on a small part of the huge TB burden

○ 1 dot = 74 074 people

● People who fell sick during previous years

● People who successfully completed or are likely to complete treatment in 2015

● People who developed TB in 2015, and are not reached by services

● People with unsuccessful treatment, except death

What is needed to hit the course to end TB?

- Currently we are not on track to end TB

- What is needed to be on-track to end TB?
  - Modelling done for the Global Plan shows that to be on track to end TB we need to scale up diagnosis and treatment to reach at least 90% coverage and 90% treatment success as early as possible.

- Current rate of progress is not heading towards such high levels of coverage and treatment success.

1 in 2 people with TB fall between the cracks
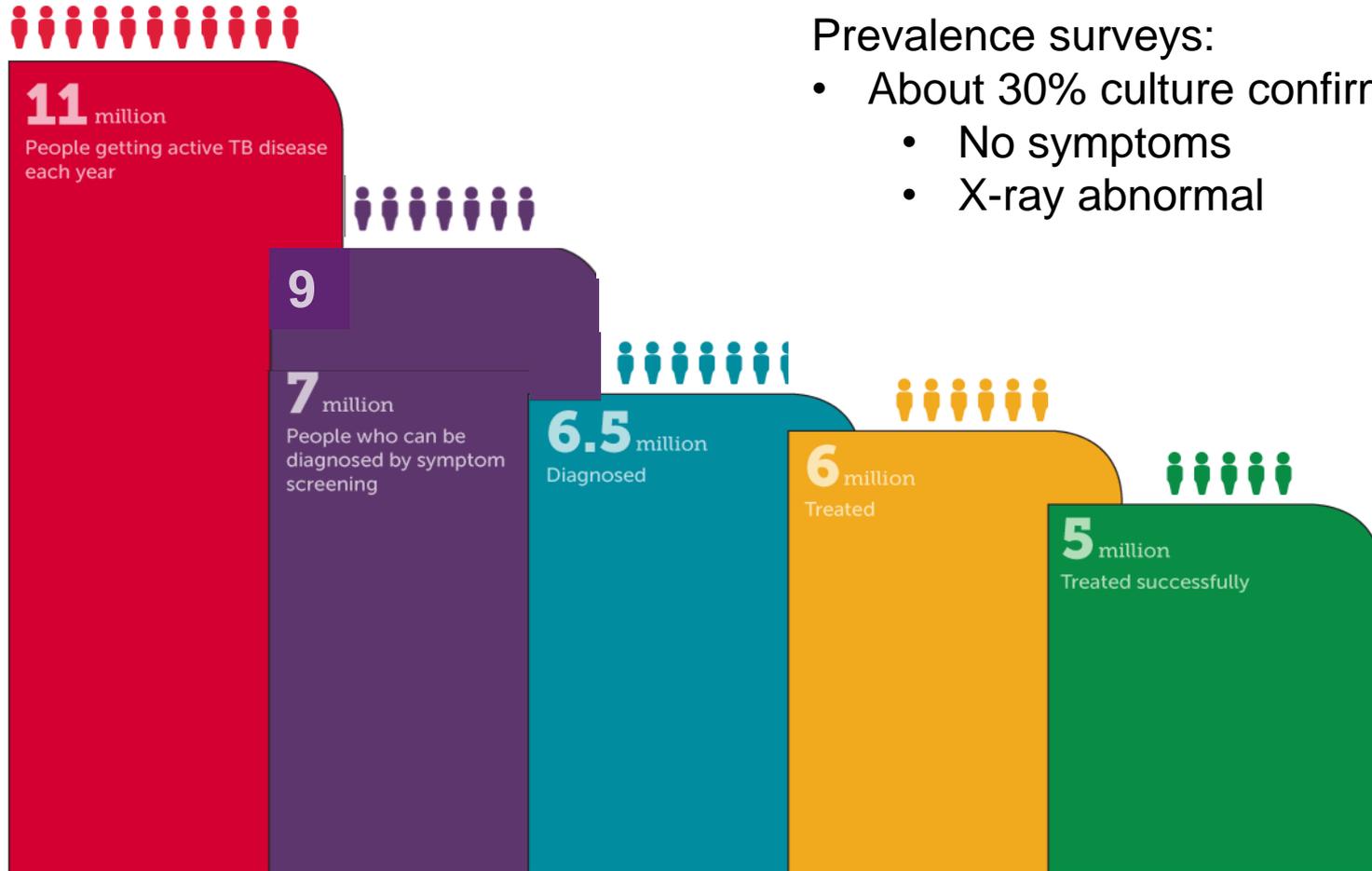
Prevalence surveys:
- About 30% culture confirmed had
  - No symptoms
  - X-ray abnormal

1 in 2 people with TB fall between the cracks

11 million
People getting active TB disease each year

7 million
People who can be diagnosed by symptom screening

6.5 million
Diagnosed

6 million
Treated

5 million
Treated successfully

- Biggest drop in the cascade
  - No symptoms,
  - Minimal symptoms with access barriers
  - Seek access in private/informal sector
- Current diagnostic algorithms miss TB:
  - Symptoms is a starting point
- Should the asymptomatic be diagnosed and treated at all?

1 in 2 people with TB fall between the cracks

11 million
People getting active TB disease each year

7 million
People who can diagnosed by sy screening

Asymtomatic TB with bacteria in sputum

Self heal → Good, but has the disease already spread? Not to be included in targets for case detection

Remain asymptomatic → Invisible but potentially could spread the disease?

Progress to symptoms → Diagnose when they have symptoms, but by then the disease would have spread?

Die → Hidden mortality due to TB?

Fate of people with TB without treatment

- **Rural Bangalore, 1961-65**

- **Population did not have access to TB treatment**

- **4 consecutive prevalence survey of TB infection and TB disease**

BULL. WORLD HEALTH ORGAN., 1974, 51 (pages 473-488)

*"The __incidence cases__ showed a natural **cure rate of 52%** and a mortality of 14% over the immediate observation period of 1½ years. __Prevalence cases__ showed a **cure rate of 39%** and a mortality of 17% during the same period."*

Tuberculosis in a rural population of South India: a five-year epidemiological study*

NATIONAL TUBERCULOSIS INSTITUTE, BANGALORE[1]

| 3292 | | - 473 - | | BULL. WORLD HEALTH ORGAN., 1974, 51 |

Table 10. Fate of incidence cases

Incidence cases between :	Total	No. followed up	Cured	Dead	Remained bacillary
Surveys I and II	70	63 [a]	33 (52.4%)	9 (14.3%)	21 (33.3%)
Surveys II and III	40	39 [b]	11 (28.2%)	15 (38.5%)	13 (33.3%)

[a] Followed up for 1½ years.
[b] Followed up for 2 years.

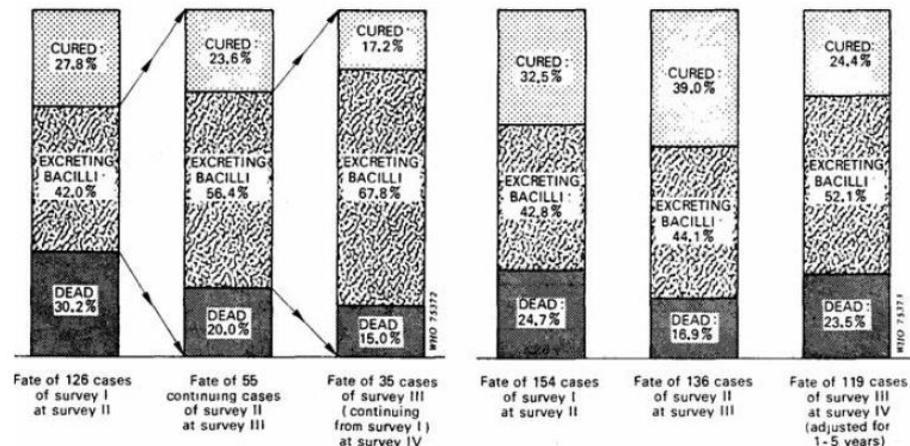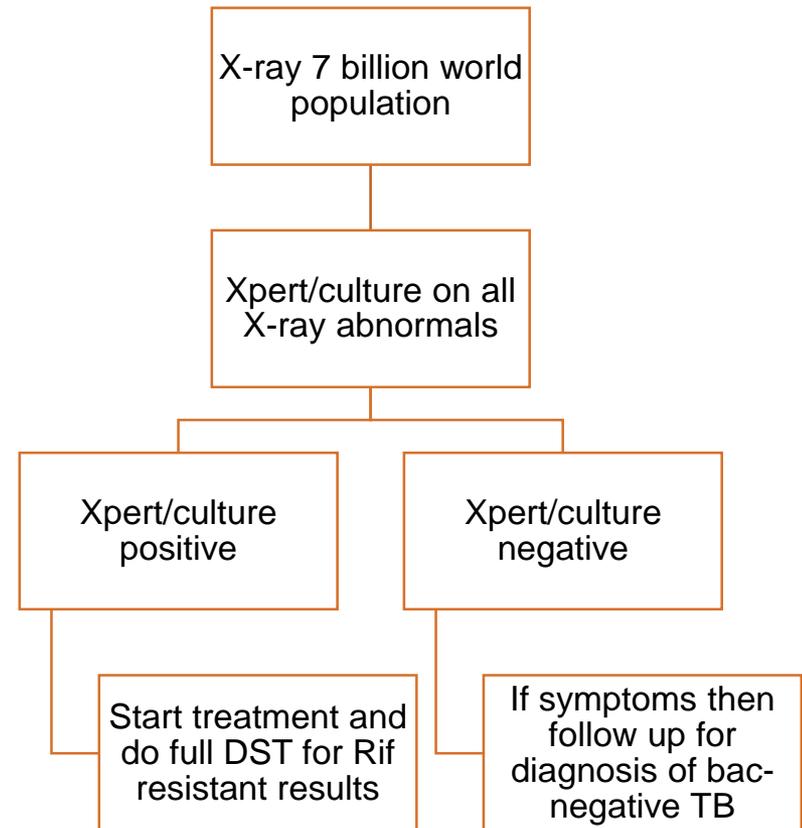484   NATIONAL TUBERCULOSIS INSTITUTE, BANGALORE

Fig. 2. Fate of cases discovered at the first survey and of patients who were still excreting bacilli when examined at subsequent surveys.
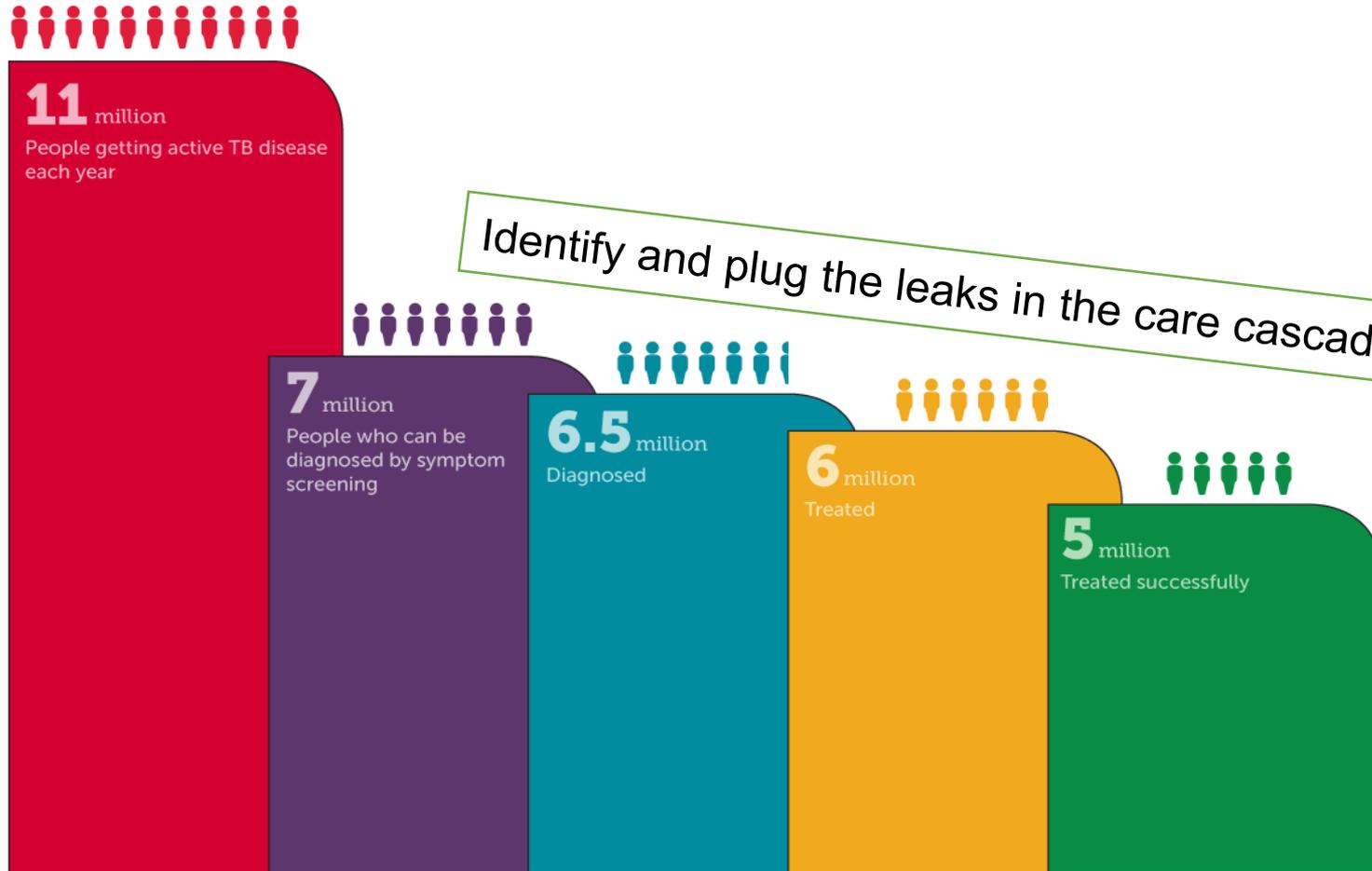
Fig. 3. Fate of prevalence cases discovered at surveys I, II, and III over a period of 1.5 years.

How can we diagnose all people with TB

- Prevalence surveys diagnose all pulmonary TB in adults using existing diagnostic tools:
  - X-ray, culture, Xpert
  - Done in the community

- If resources are unrestricted a periodic prevalence survey approach would be the best diagnostic approach
  - Additional approaches required for children and extra-pulmonary TB

- If resources are restricted more targeted application of prevalence survey approach could be designed

- Symptom based passive approach will surely not diagnose all people with TB

X-ray 7 billion world population

→ Xpert/culture on all X-ray abnormals

→ Xpert/culture positive → Start treatment and do full DST for Rif resistant results

→ Xpert/culture negative → If symptoms then follow up for diagnosis of bac-negative TB

1 in 2 people with TB fall between the cracks

9 in 10 people with DR-TB fall between the cracks

600.000
People getting DR-TB each year

130.000
Diagnosed

120.000
Treated

60.000 Treated successfully

- This is the biggest drop in the care cascade
  - Failure to test for drug resistance (DST)
- Most of the estimated numbers of DR-TB is among new TB cases and globally only 12% get a DST
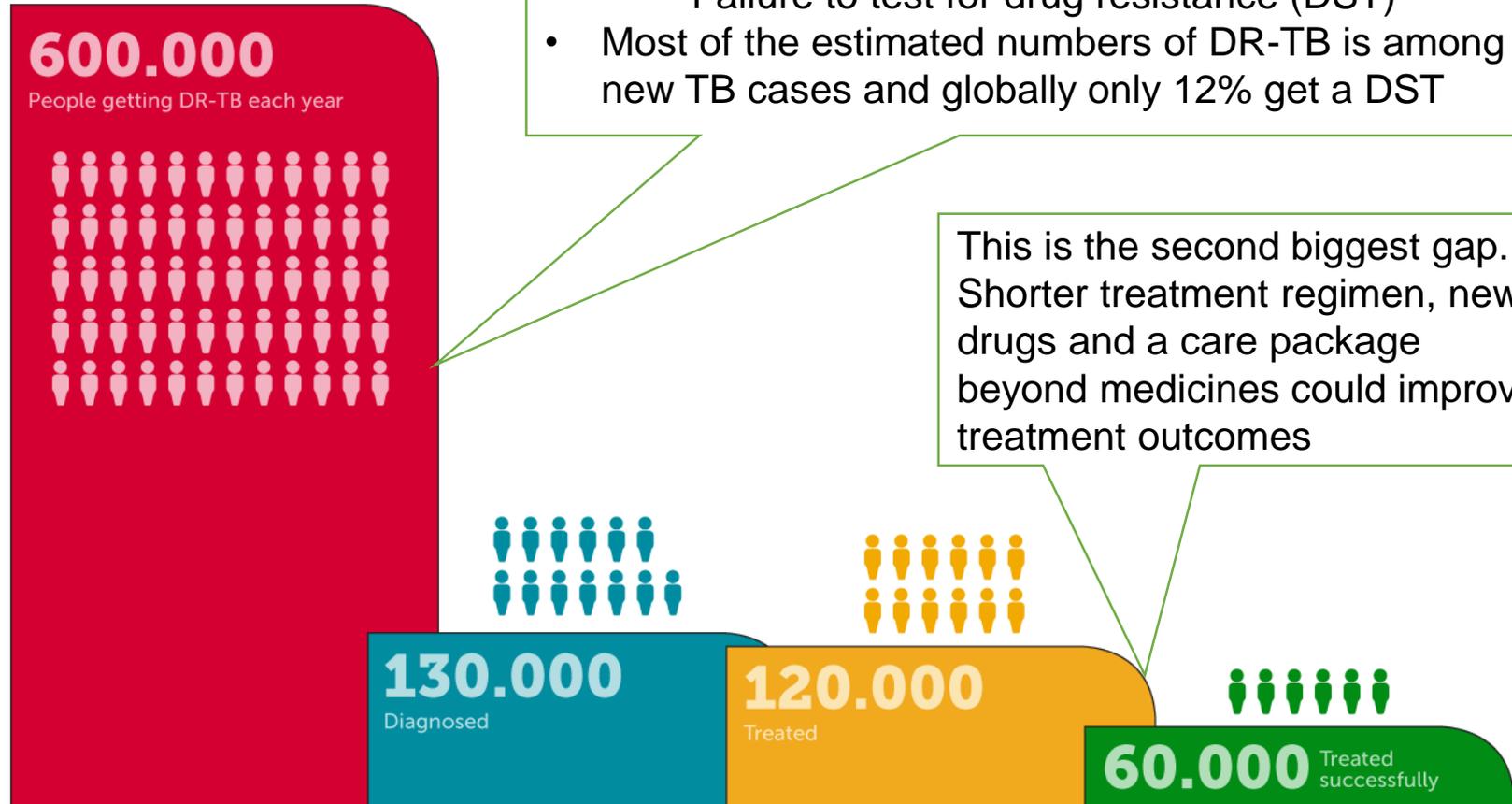
9 in 10 people with DR-TB fall between the cracks

- This is the biggest drop in the care cascade
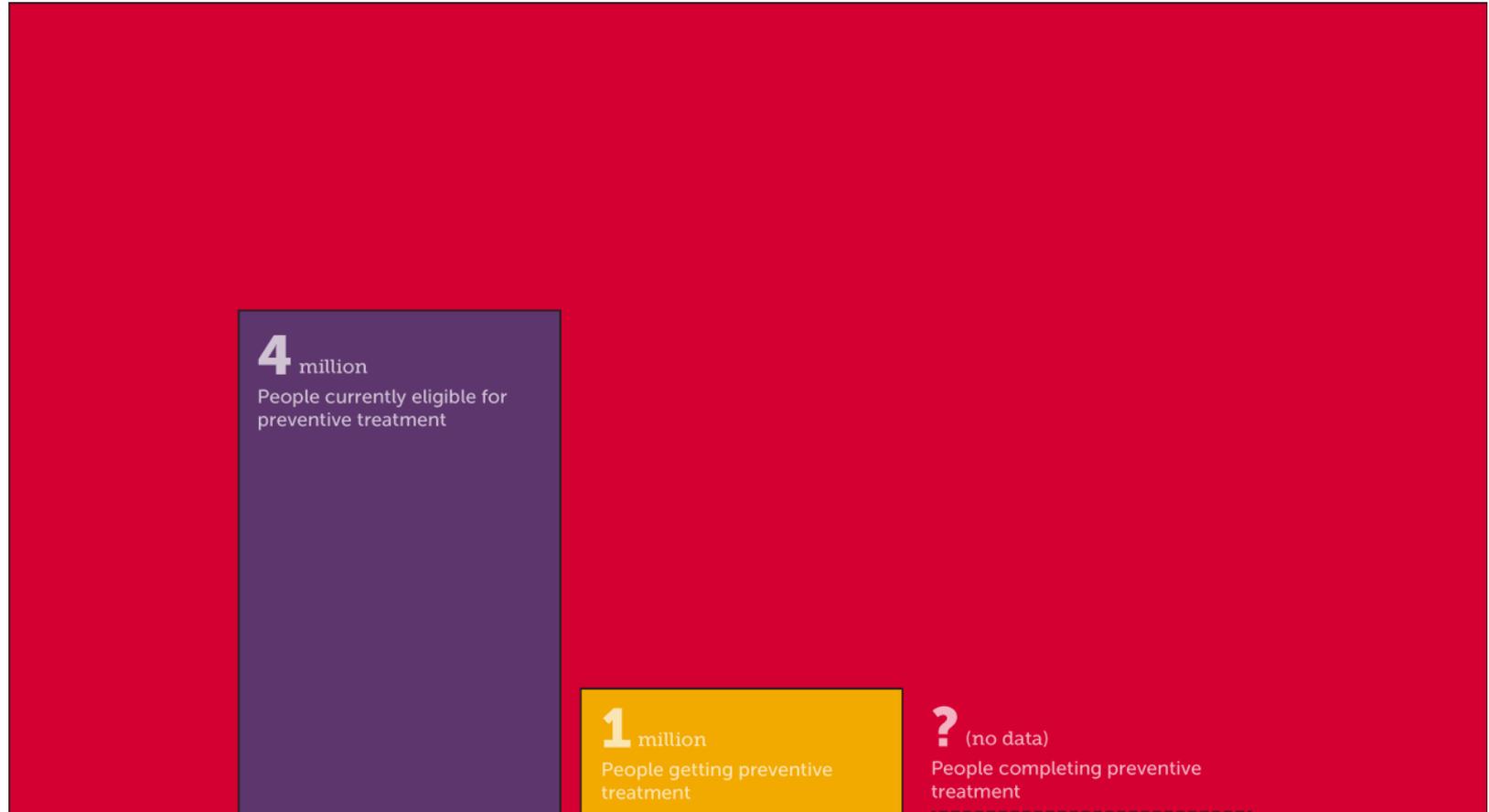 - Failure to test for drug resistance (DST)
- Most of the estimated numbers of DR-TB is among new TB cases and globally only 12% get a DST

This is the second biggest gap. Shorter treatment regimen, new drugs and a care package beyond medicines could improve treatment outcomes

600.000
People getting DR-TB each year

130.000
Diagnosed

120.000
Treated

60.000 Treated successfully

Almost all people infected with TB fall between the cracks

2 billion
People infected with TB

4 million
People currently eligible for preventive treatment

1 million
People getting preventive treatment

? (no data)
People completing preventive treatment

Almost all people infected with TB fall between the cracks

4 million
People currently eligible for preventive treatment

1 million
People getting preventive treatment

? (no data)
People completing preventive treatment

Almost all people infected with TB fall between the cracks

- Currently only 1 million get preventive therapy.
- Even with full coverage of eligible groups we may reach 4 million.
- But there are 2 billion infected
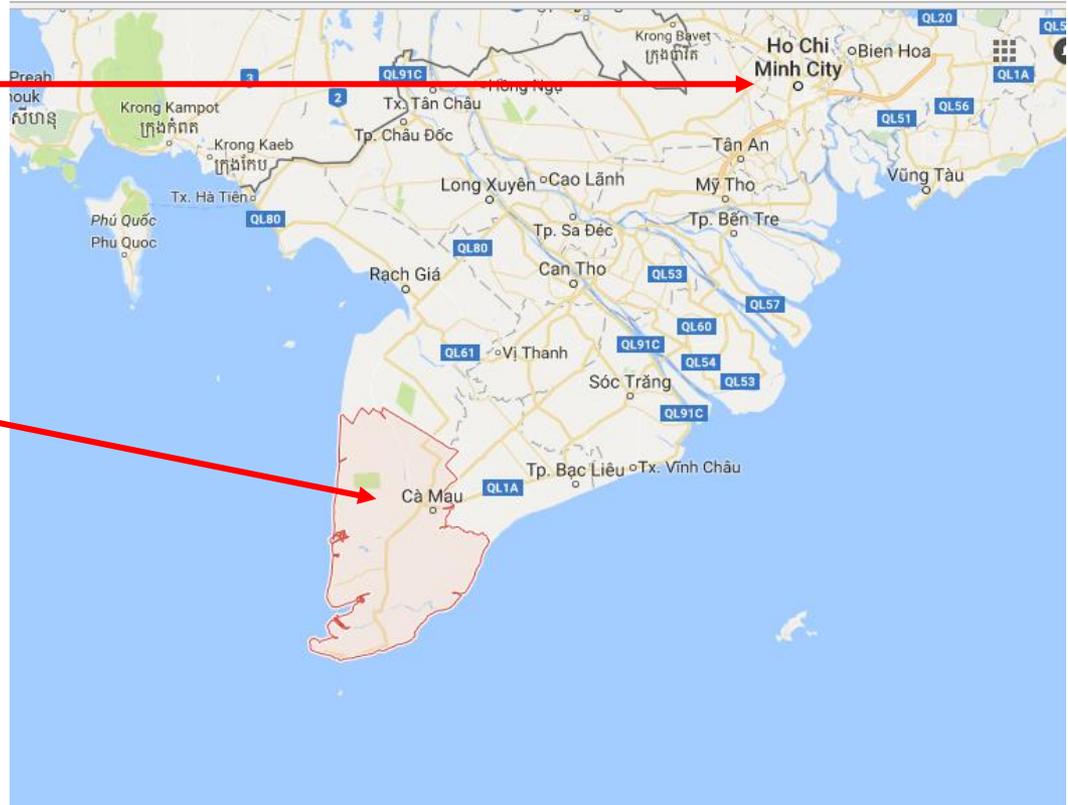- How can we select more groups of people for preventive therapy?

4 million
People currently eligible for preventive treatment

1 million
People getting preventive treatment

? (no data)
People completing preventive treatment

Next

1. **Filling gaps and making impact - What does modelling show? Which gaps are important for impact?**

2. **Some country examples of doing things differently**
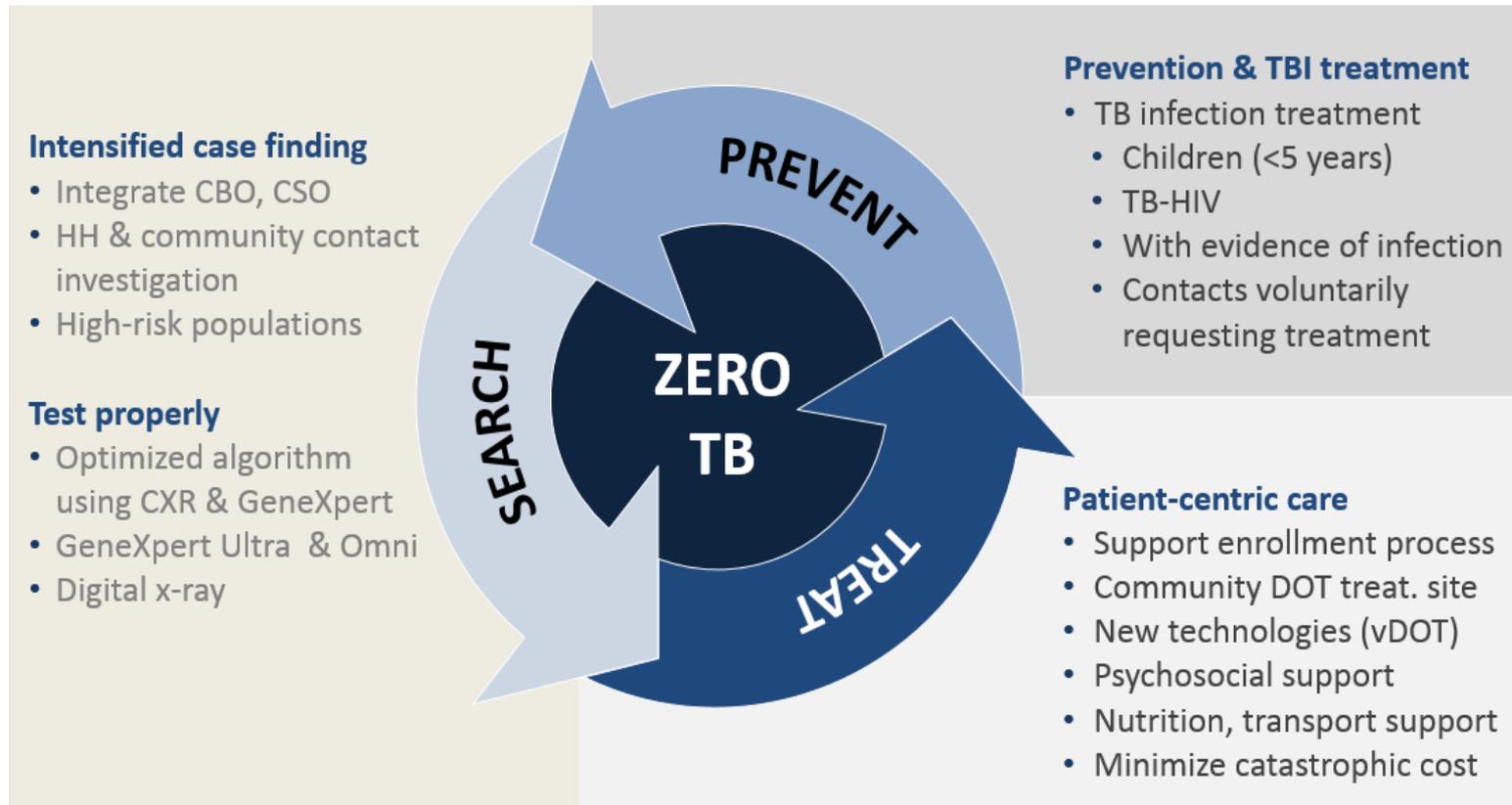
3. **Comments by Eric Goosby**

Viet Nam

Ho Chi Mihn City

Cà Mau Province

Comprehensive TB patient care to achieve "Zero TB"

Intensified case finding
- Integrate CBO, CSO
- HH & community contact investigation
- High-risk populations

Test properly
- Optimized algorithm using CXR & GeneXpert
- GeneXpert Ultra & Omni
- Digital x-ray

Prevention & TBI treatment
- TB infection treatment
  - Children (<5 years)
  - TB-HIV
  - With evidence of infection
  - Contacts voluntarily requesting treatment

Patient-centric care
- Support enrollment process
- Community DOT treat. site
- New technologies (vDOT)
- Psychosocial support
- Nutrition, transport support
- Minimize catastrophic cost

SEARCH · PREVENT · TREAT · ZERO TB

Trend of TB Case Finding - Cà Mau Province

- 4 Year active case finding approach

- 60 Intervention communities

- Annual screening – <u>anyone >= 15 years old who can produce sputum receives Xpert</u>

- 60 Control communities will be measured at the end of year 4

Bar chart:
- Năm 1: 389
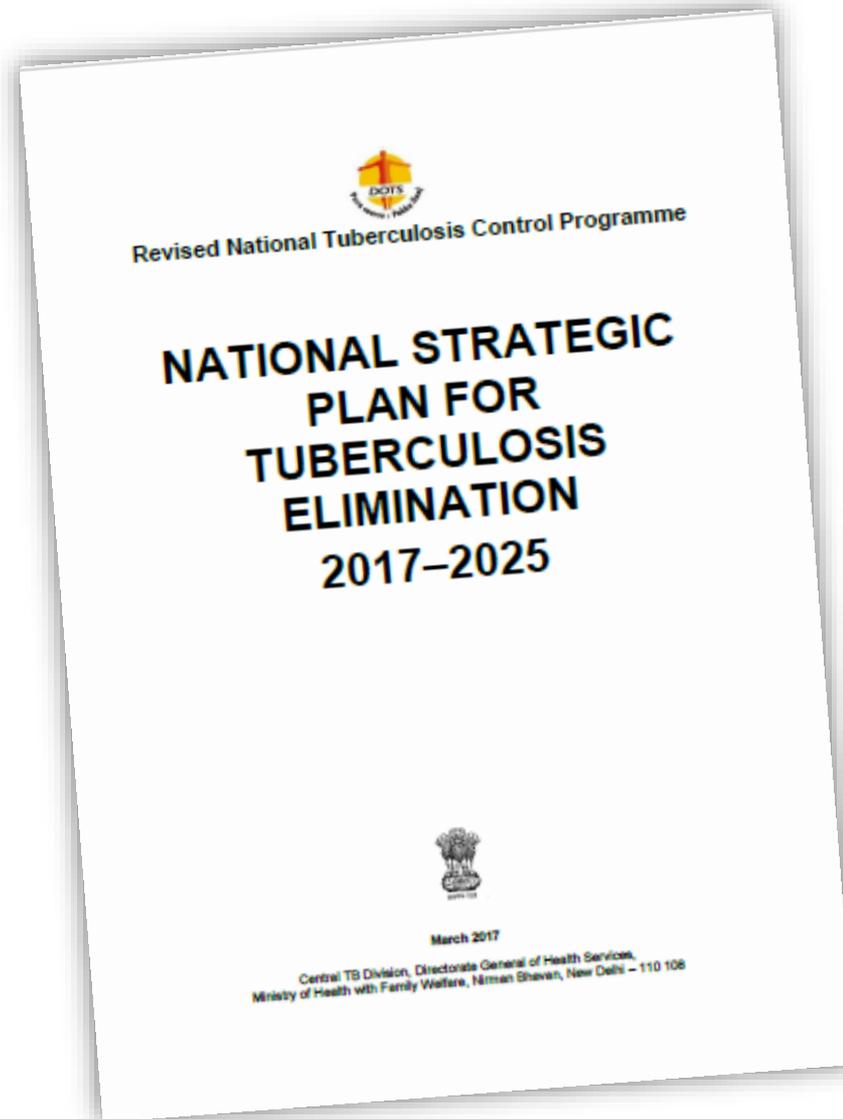- Năm 2: 309
- Năm 3: 176
- -55%
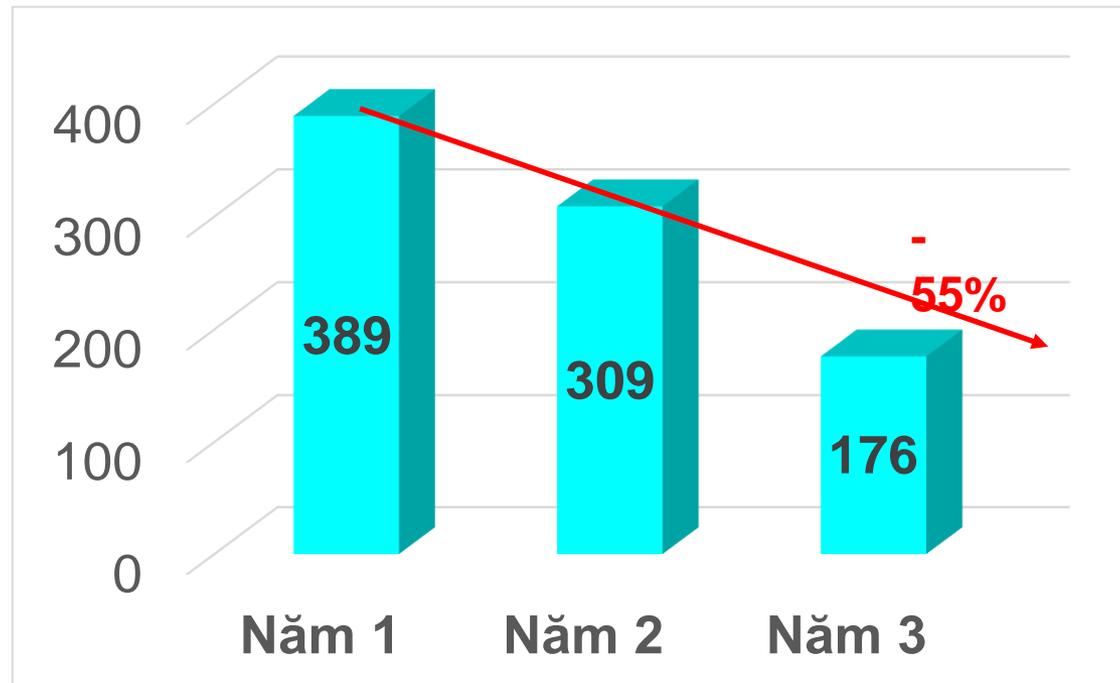
TB Case Finding activities

Reaching all people with TB means more efforts, leaving the health facilities, and a paradigm shift in the way we operate

India

Detect
Treat
Prevent
Build

Bold and innovative approaches

- Active case finding (ACF)
  - Experience (early 2017)
    - 2-week long ACF campaign done in 50 districts
    - 26,000 people tested
    - 1800 (7%) diagnosed as TB
  - Planned: ACF in 184 districts, plus 4 cities and 1 State
    - A combination of ACF in health facilities and in community.
    - Information campaign along with ACF in a campaign mode will be conducted 3 times a year
  - Scale up of X-ray and X-pert
  - Universal DST

Bold and innovative approaches ….2

- Private sector TB care
    - Experience:
        - Innovative models in few cities/districts (e.g. Mumbai, Patna)
        - Notification made easy by eNIKSHAYA
        - Vouchers for reimbursements to patient
        - ICT and call centre
        - Dramatic increases in notification
    - Planned:
        - Scale up of the private sector models
        - "Follow the patient" approach
- Patient support: Direct Benefit Transfer (DBT) to patients
    - Using smart card and unique ID number "AADHAR"

- **Discussion points for the Board**

- **How can we proceed to address the biggest gaps with impact in sight and not continue to focus only on small subsets of the need and low hanging fruits?**

- **Are we guided by available resources?**

- **Is it time to be guided by science and peoples aspiration to end TB?**

- **How can we promote new approaches in countries**

- **What should global partners do to help countries**