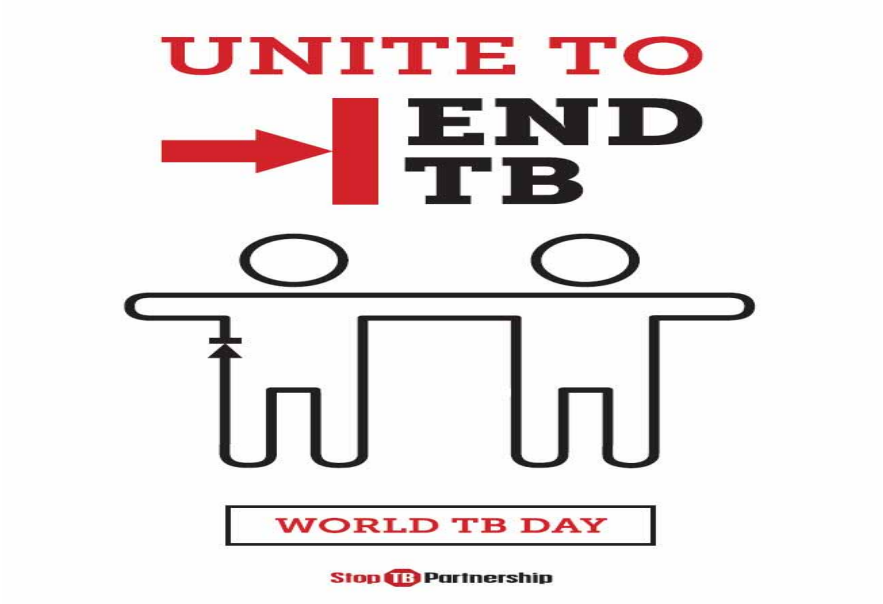


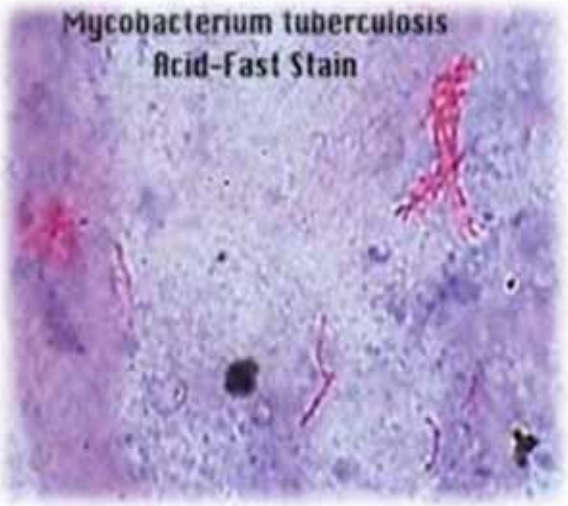
Tuberculosis in Mauritius

Dr R R Purryag

Chest Physician

Chest Clinic

Robert Koch (1843-1910) and……



Nobel Prize in Physiology and Medicine in 1905

…….yet Worldwide in 2014

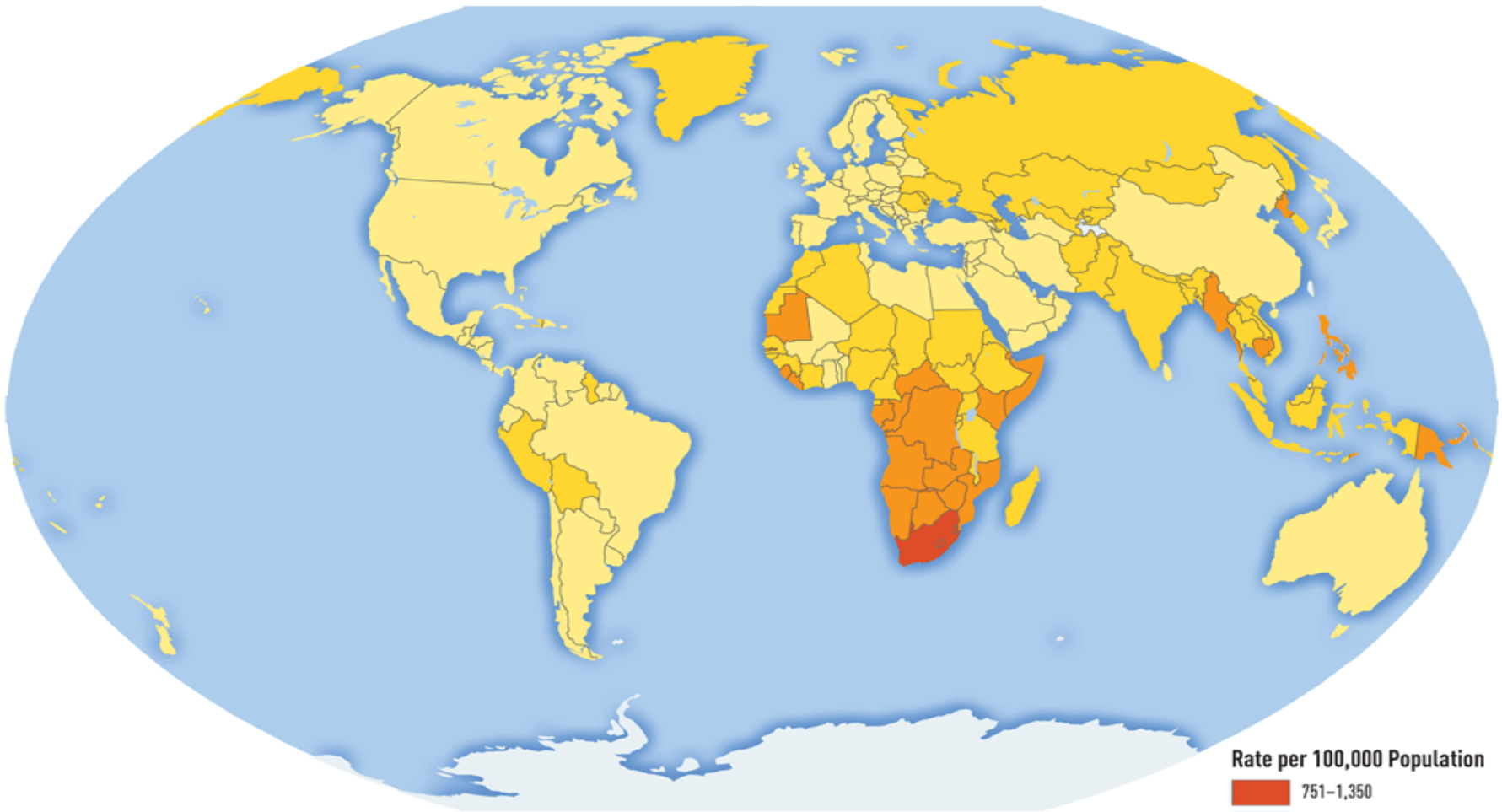
- 9.6 million people were estimated to have fallen ill with TB

- 12% of the 9.6 million new TB cases were HIV-positive

- TB now annually causes more deaths than HIV: 1.5 million TB-related deaths

■ GLOBAL TUBERCULOSIS REPORT 2015

Centers for Disease Control and Prevention
CDC 24/7: Saving Lives, Protecting People™



Estimated tuberculosis incidence rates, 2012

WHO End TB Strategy

- From 2016, the goal is to end the global TB epidemic by implementing the End TB Strategy with specific targets:

  i) to reduce the number of TB deaths by 90% by 2030 (compared with 2015 levels)

  ii) cut new cases by 80% and ensure that no family is burdened with catastrophic costs due to TB

GLOBAL TUBERCULOSIS REPORT 2015

TB Hard Facts

- Someone in the world is newly infected with TB every second
- Nearly 1% of the world's population is newly infected with TB each year
- 1/3 of the world's population is currently infected with the TB bacillus
- But only 5-10% of people who are infected with TB (but who are not infected with HIV) become sick or infectious at some time during their life

Burden of TB in Mauritius 2015

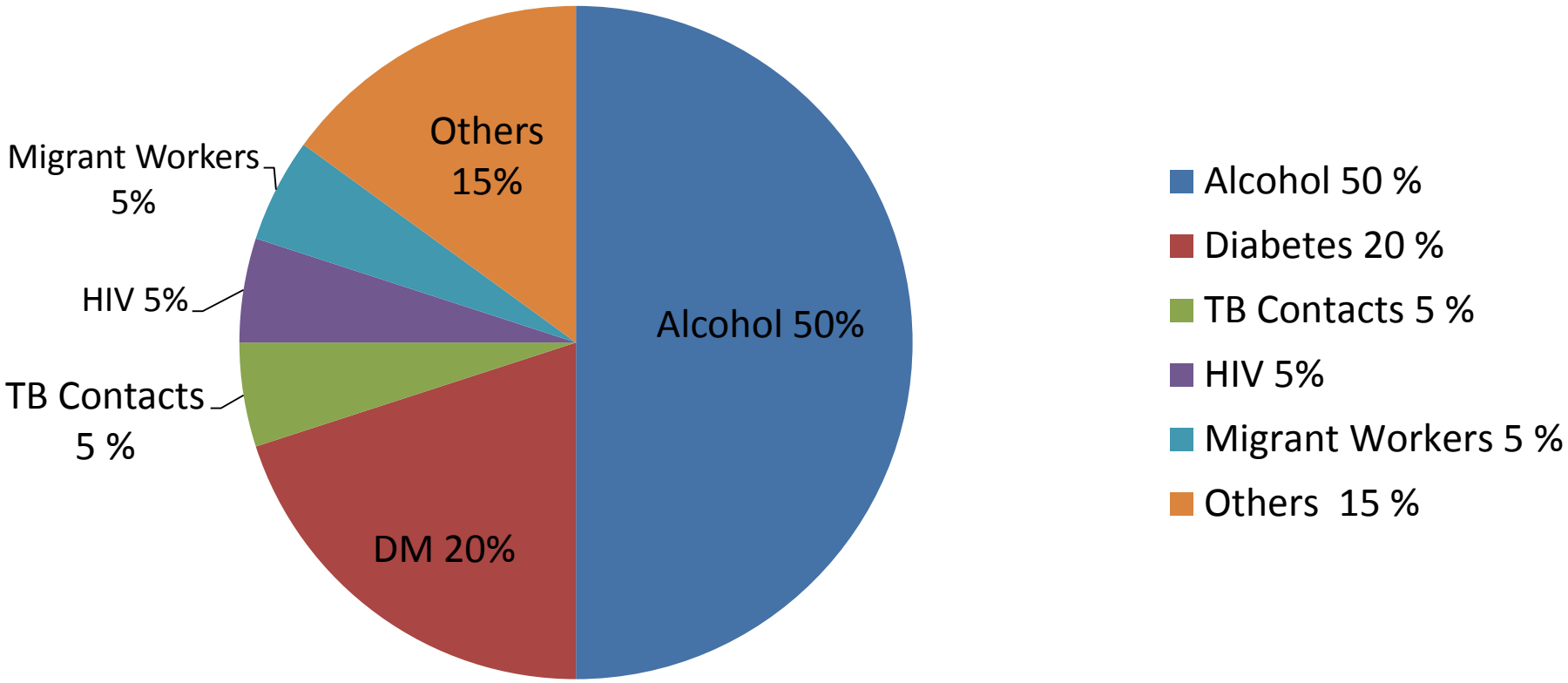
- Low burden country
- Incidence rate: 9.8 per 100,000 pop
- Total number of TB cases notified: 127
- No. of TB/HIV co-infection cases: 14
- Foreigners: 25
- Extrapulmonary TB: 10
- MDR TB: 1
- No. of TB Deaths: 8

TB comorbidities and risk factors

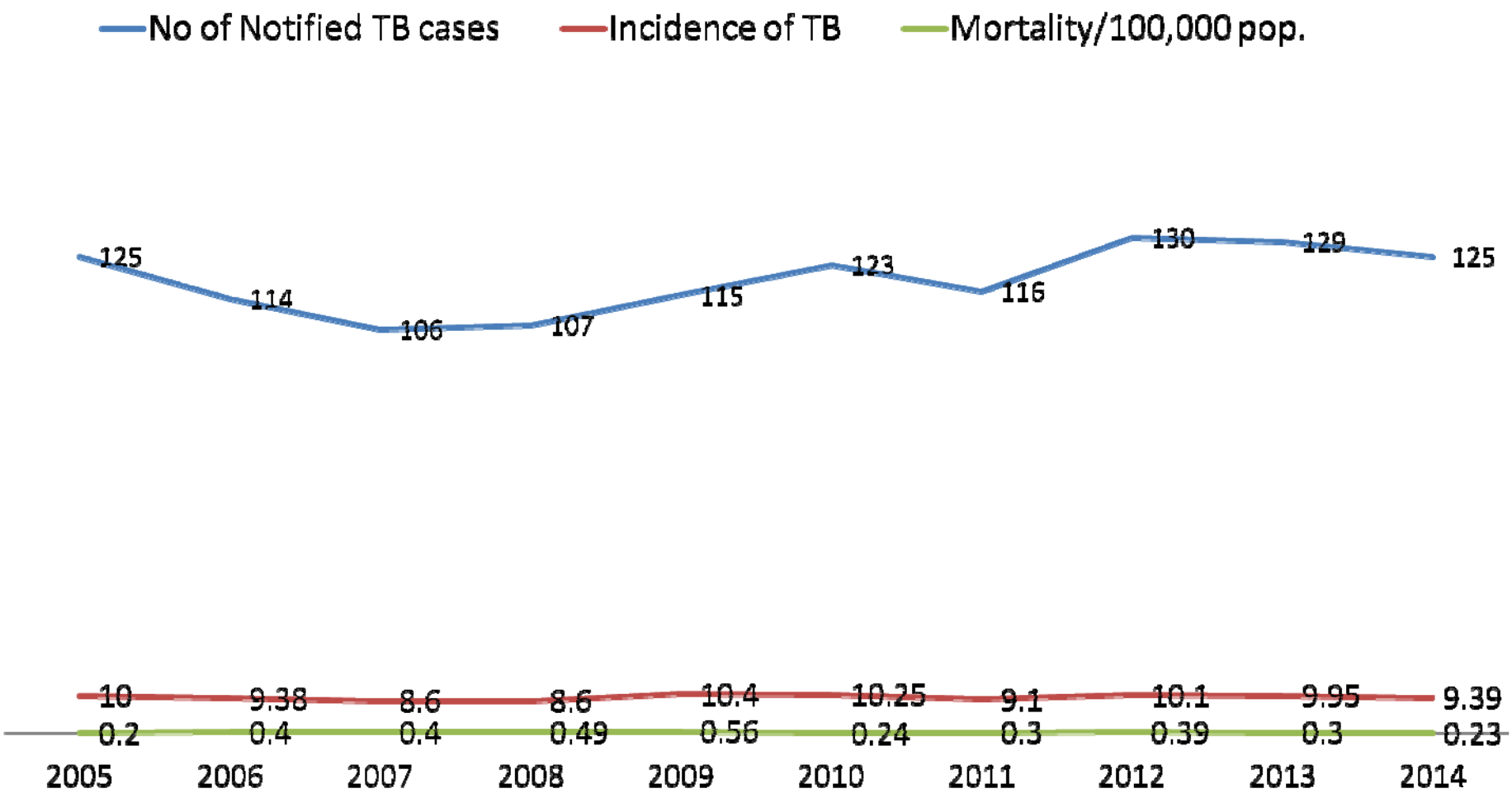
- HIV: PLHIV are from 26-31 times more likely to develop TB than persons without HIV
- Diabetes: Diabetes × 3 the risk of TB
- Nutrition: Malnutrition ↑ the risk of TB and TB can lead to malnutrition
- Tobacco smoking: ↑risk of TB 2-3 fold, and is associated with poor TB treatment results
- Harmful use of alcohol: ↑ the risk of TB × 3

http://www.who.int/tb/areas-of-work/treatment/risk-factors/en/

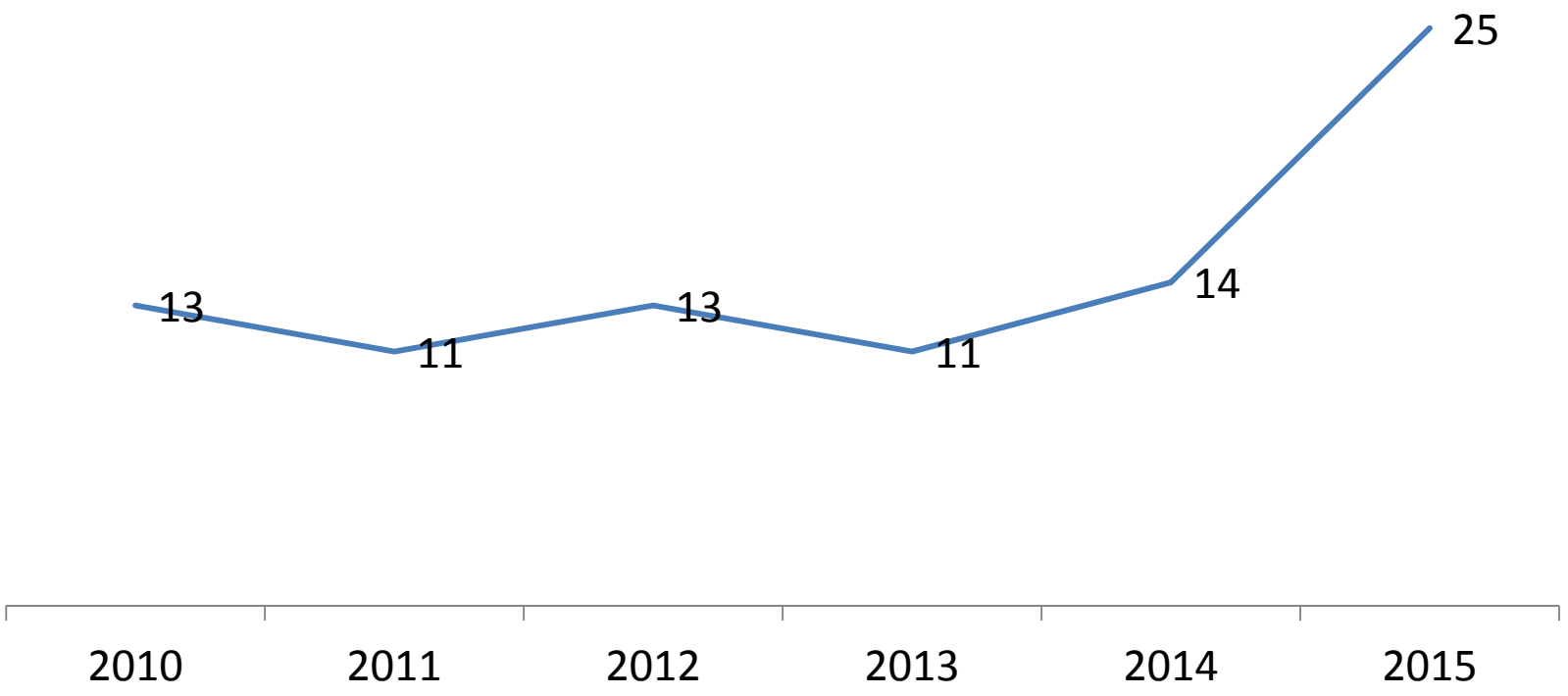
Risk factors predisposing to TB in Mauritius



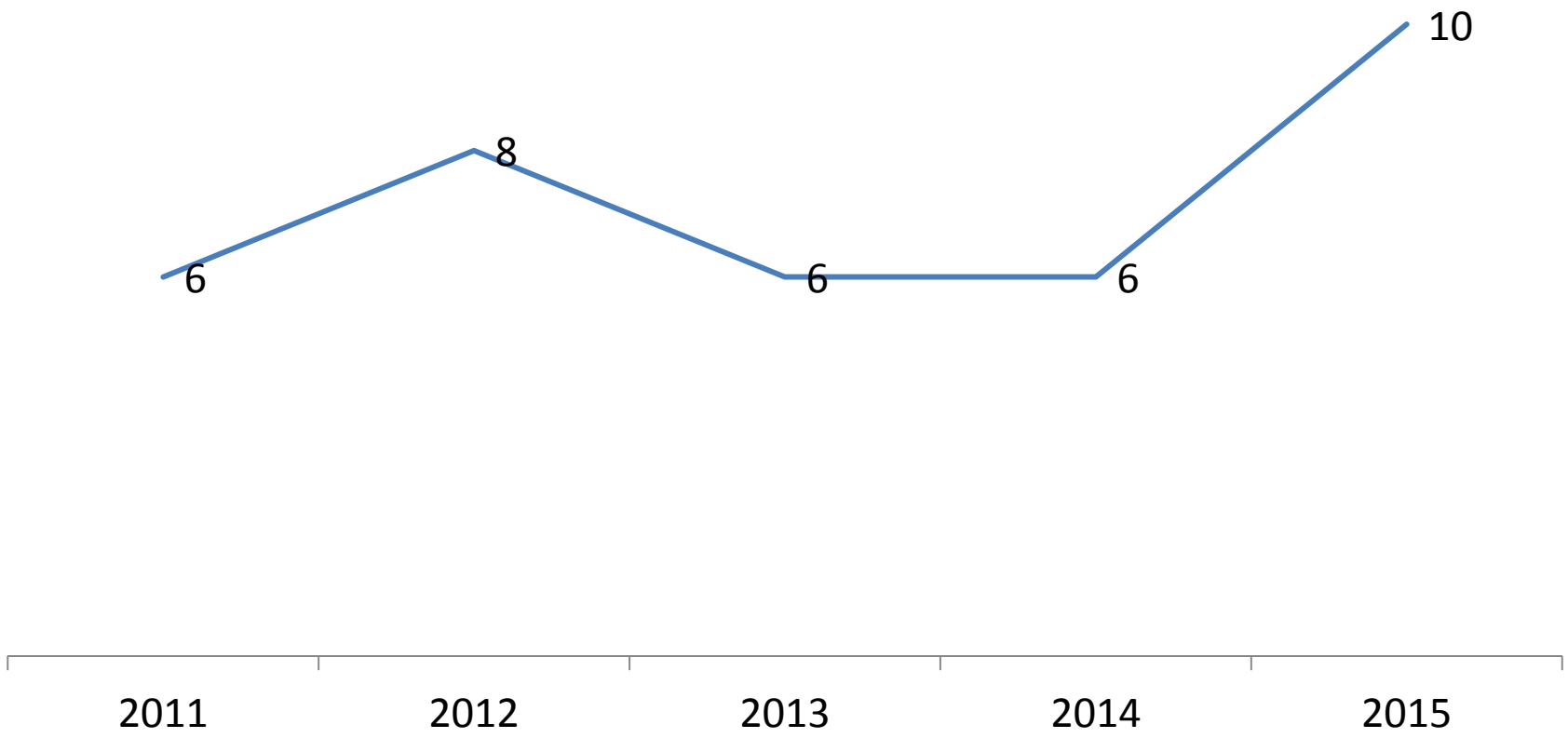
Trends in Total no. of TB cases, Incidence Rate and Mortality Rate (2005-2014)



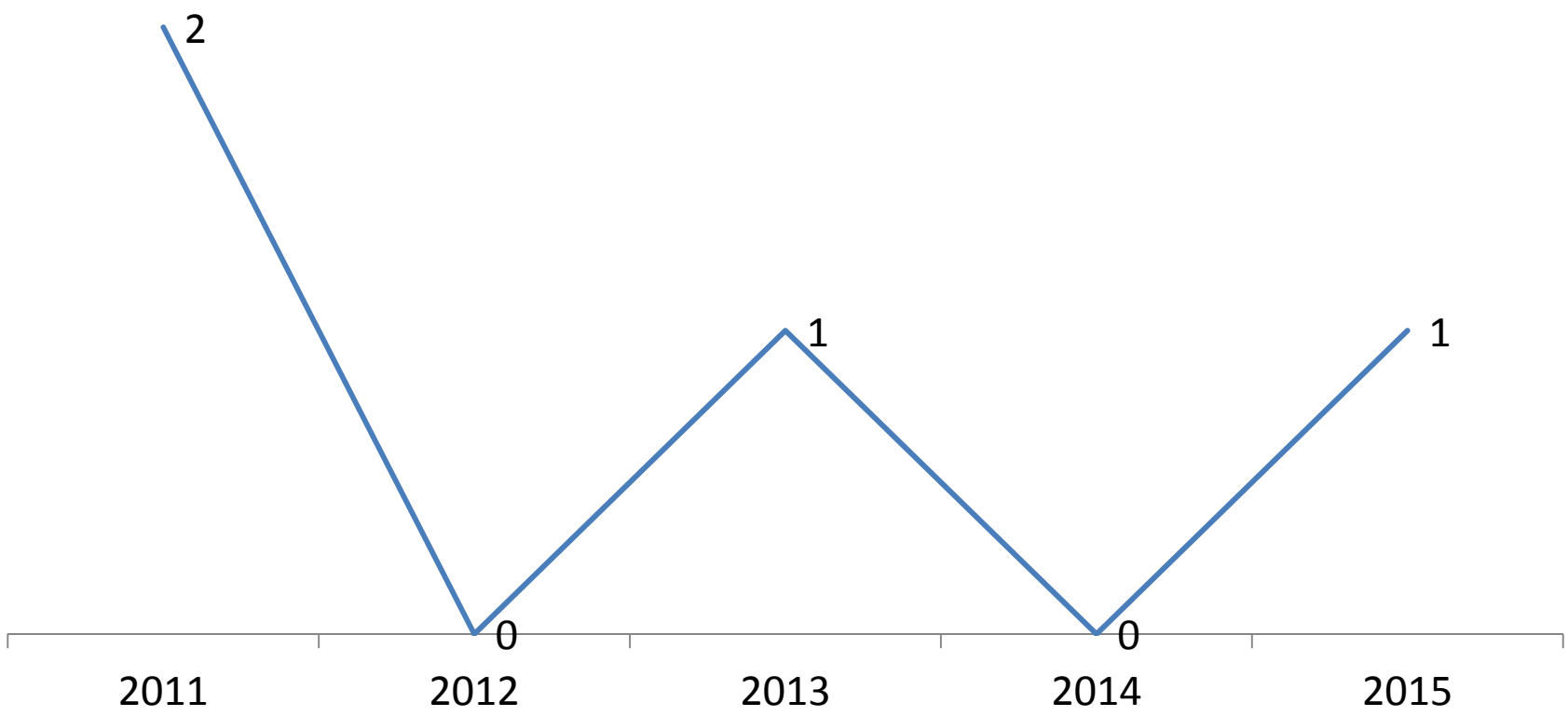
Trend of foreigners with TB



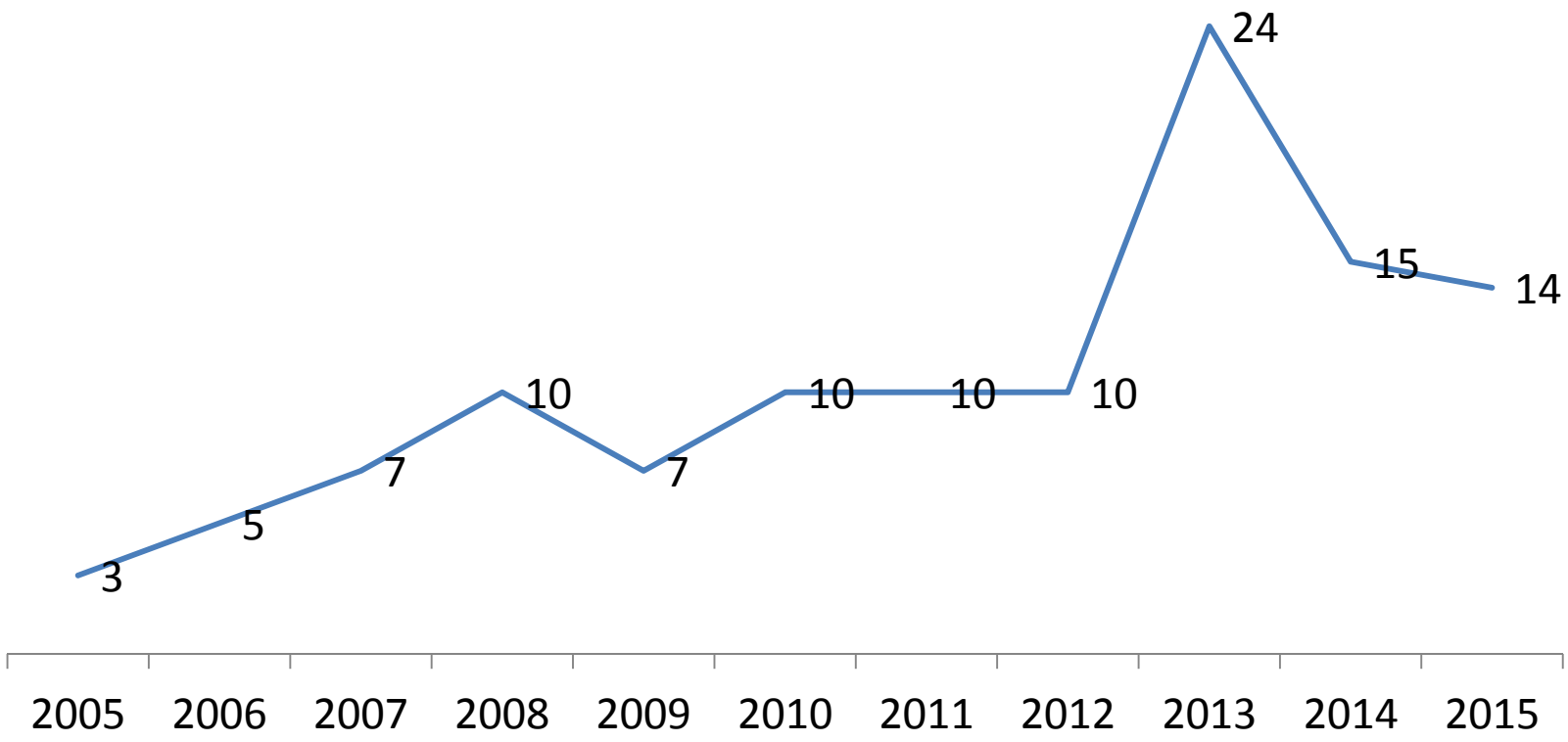
Extrapulmonary TB



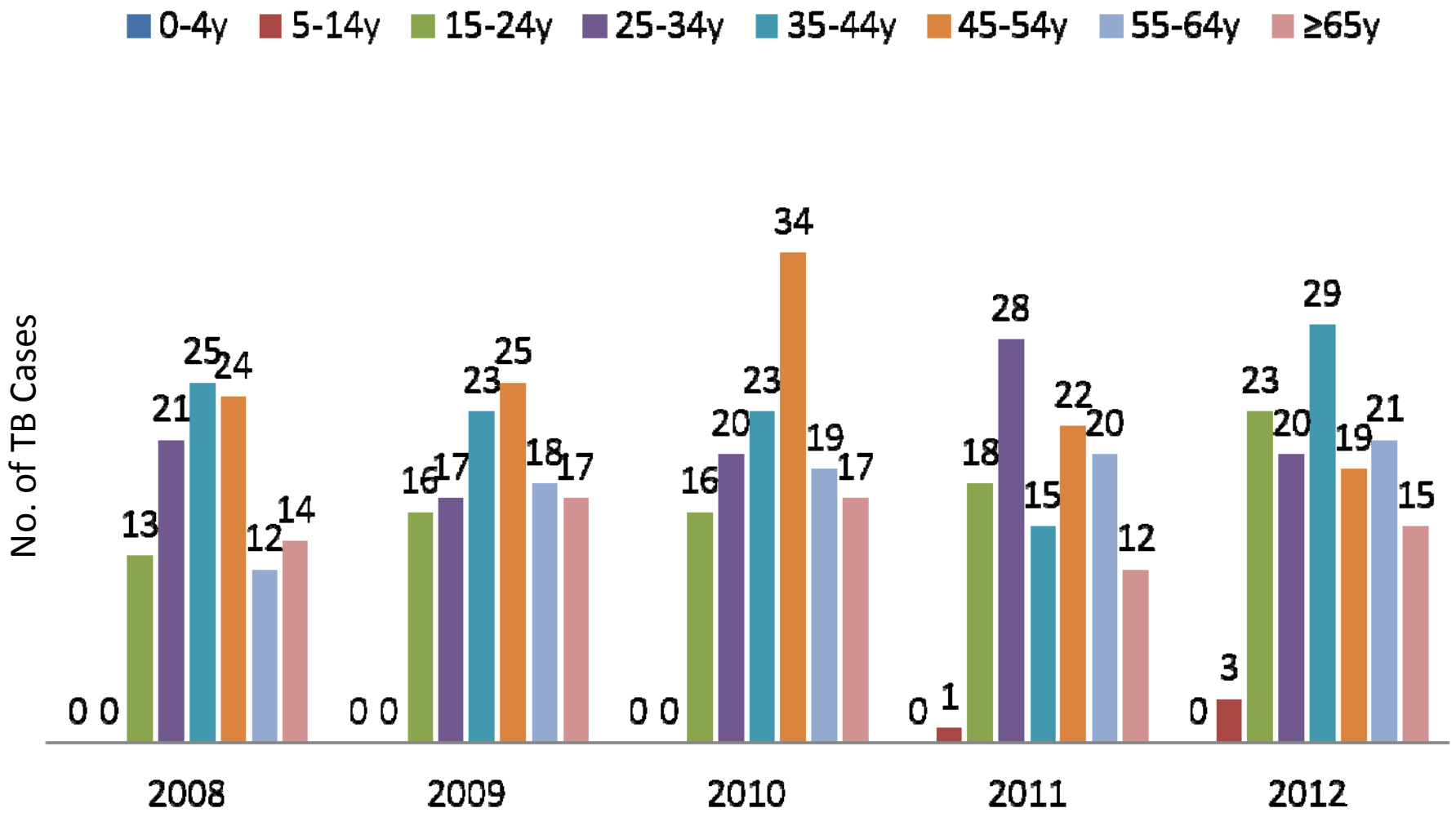
MDR TB



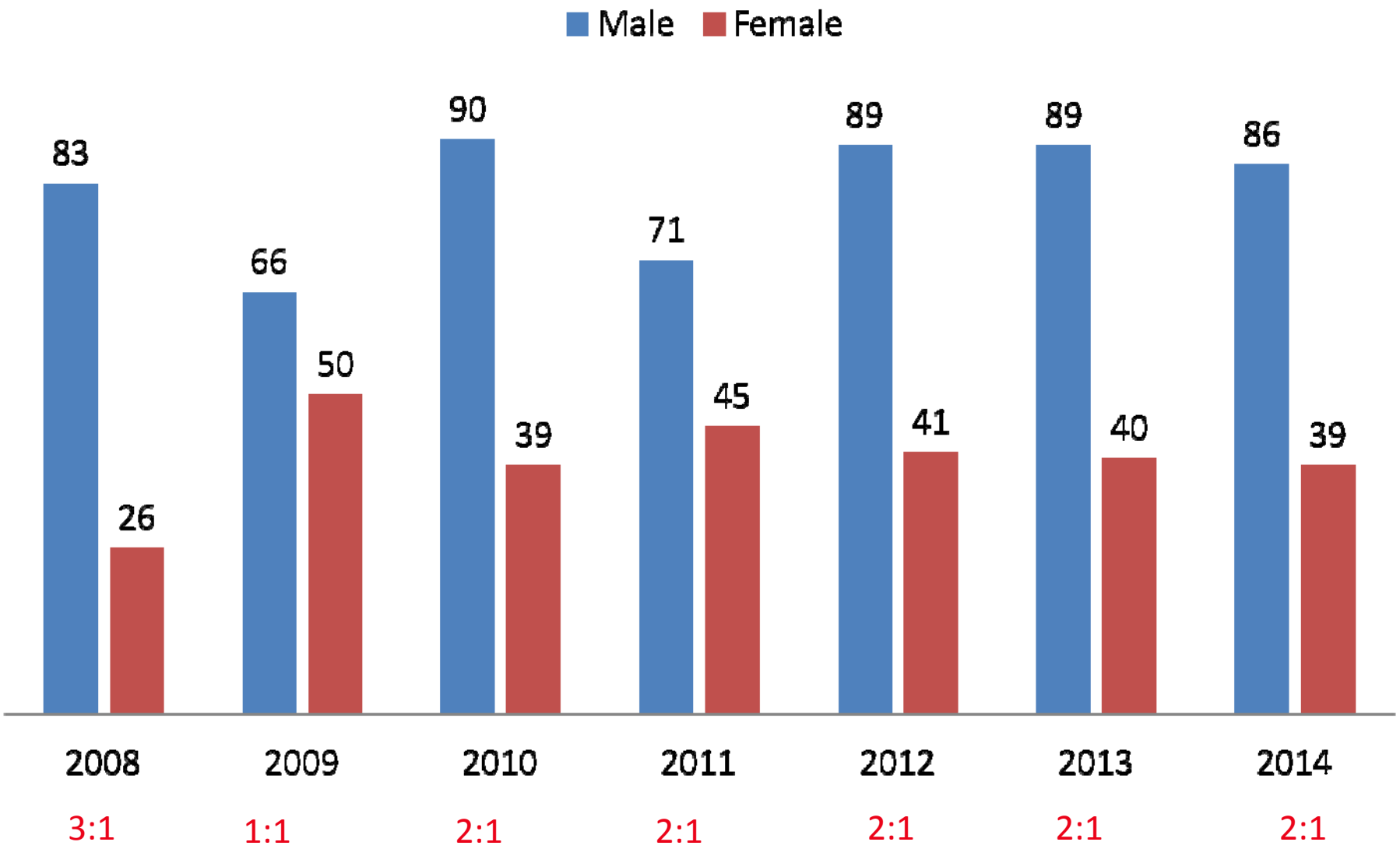
Trend in No. of TB/HIV cases



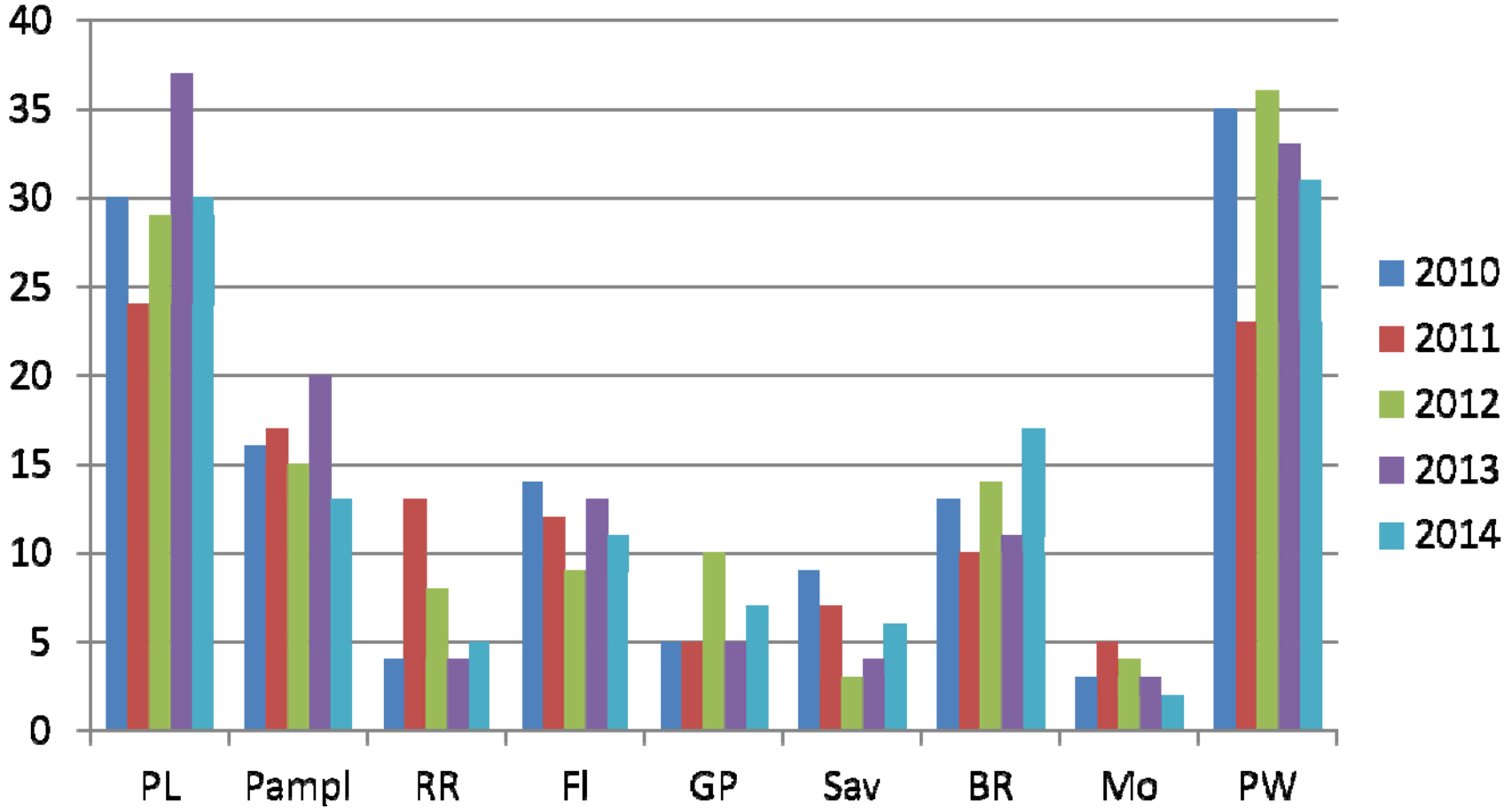
Age distribution of TB cases, 2008-2012



Sex distribution of TB Cases, 2008-2012



Distribution of TB cases District-wise (2010-2014)



in brief

- **Notifiable Disease**

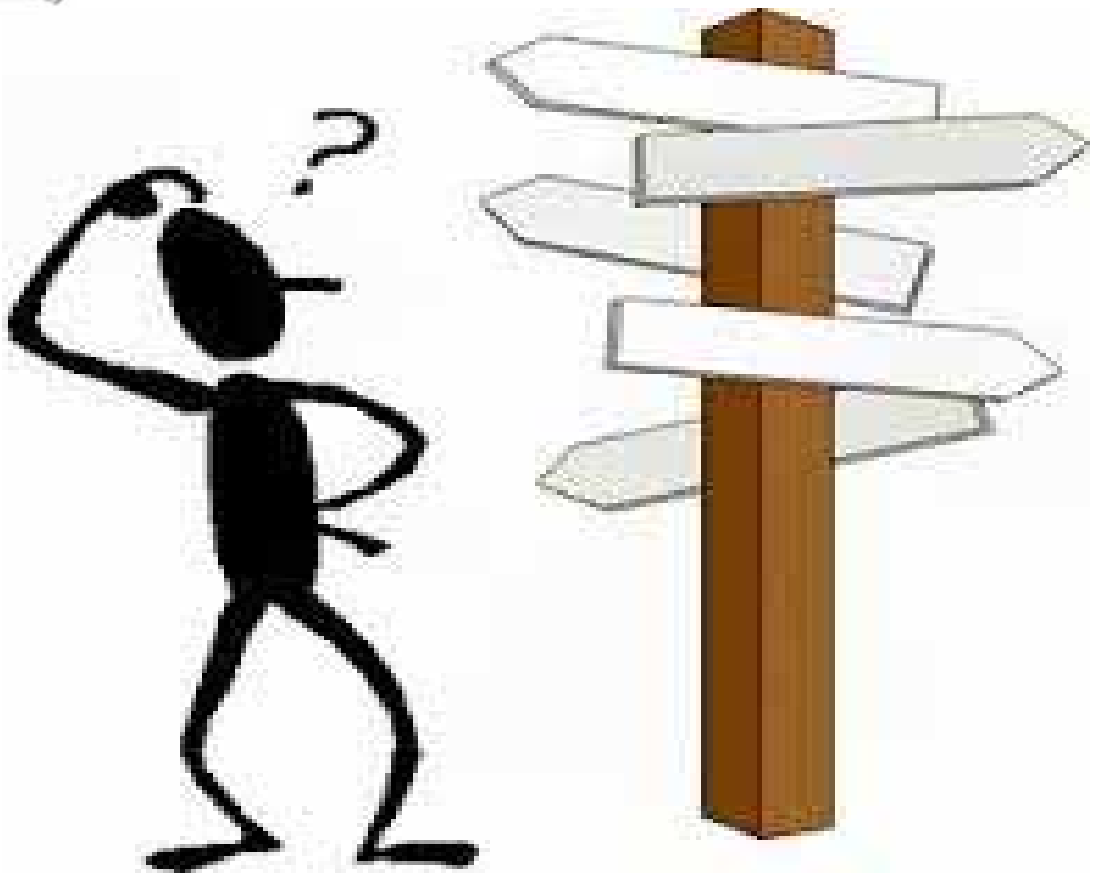
- **Sputum +ve =** Admission at Poudre D'or Chest Hosp
  Strict DOTS until sputum conversion

- **Treatment =** Standard WHO treatment regimens

Intensive phase: 2HRZE*
Continuation phase: 4HR* } New case

*H-Isoniazid, R-Rifampicin, Z-Pyrazinamide, E-Ethambutol

Can be Challenging



Clinical presentation 1

- 56 years old man with prod. cough
- Fever and chills ass. with night sweats

× 2 weeks

- ↓ appetite
- No history of contact with TB
- DM (OHA's), HBP > 15 yrs
- Ex-smoker & consumes alcohol occ.

Case 1 – Sputum -ve PTB

Case 1

- Investigation
  - FBC: WCC ↑ 14,000
  - ESR ↑20
  - U and E normal
  -LFT: normal
  -Sputum for AFB: smear negative
  - Mantoux test: 13 mm
  - Bronchoscopy: interrupted d/t patient's uncooperativeness

Case 1

- Progress
- Clinical diagnosis of TB
- Treatment: (2HRZE/4HR)
- Clinical improvement (wt ↑ by 6kgs), constitutional symptoms ↓
- TB culture: Negative
- Cured after standard 6 months therapy

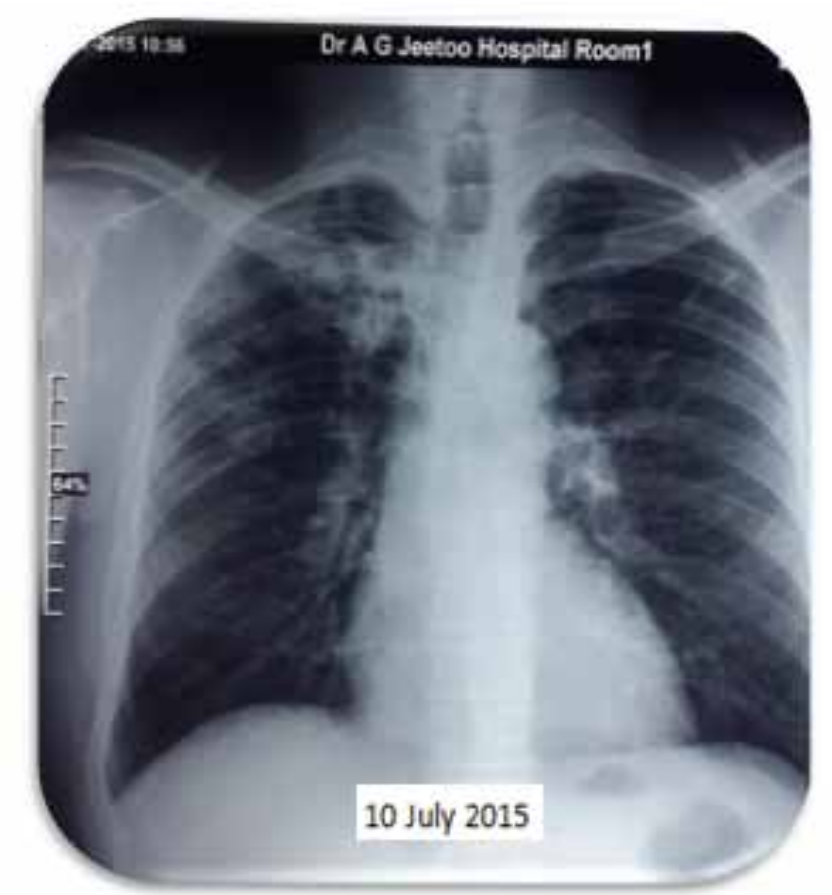
Clinical presentation 2

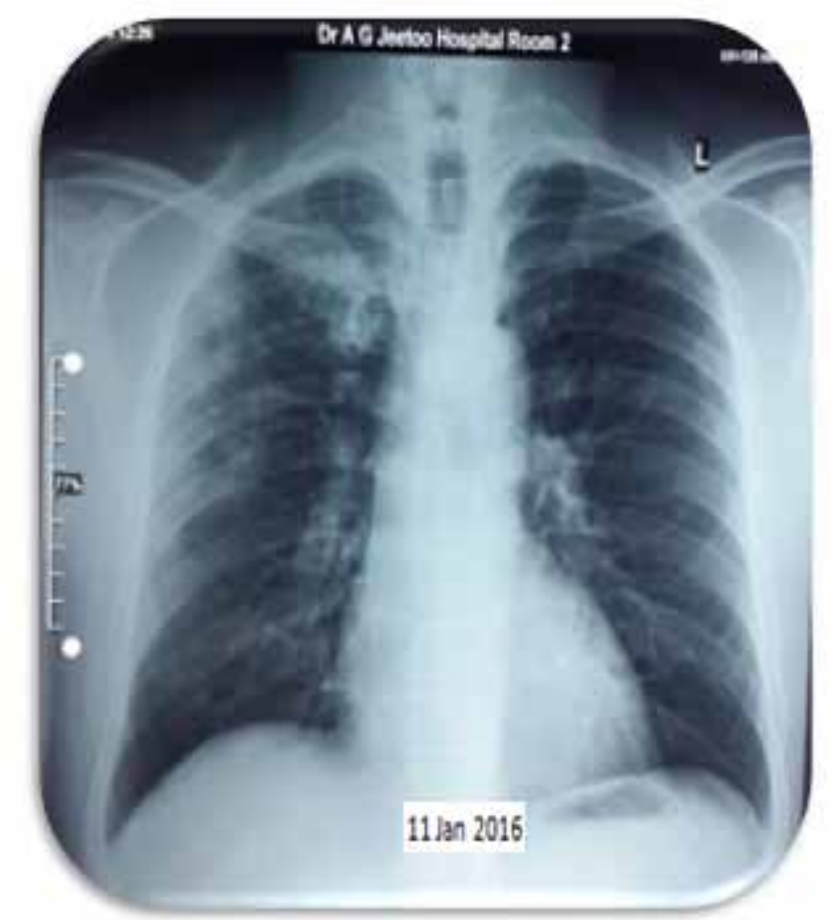
- 41 years old man with prod. Cough
- Night sweats on & off
- Coughing-up of blood +-

× 2 months

- H/o Rt Pneumothorax in 2009
- No history of contact with TB
- DM on OHA's > 10 yrs
- Smoker: 5 pack years
- Alcohol intake: occasional

Case 2 – Sputum -ve PTB





Case 2

- Investigation
  - FBC: normal
  - ESR normal
  - U and E normal
  - LFT: normal
  -Sputum for AFB: smear negative
  - Mantoux test: 20mm
  - Bronchoscopy: patient unwilling

Case 2

- Progress
  - Clinical diagnosis of TB
  - Treatment: (2HRZE/4HR)
  - Clinical improvement (wt ↑ by 9 kgs), constitutional symptoms ↓

- Cured after standard 6 months therapy

PubMed.gov
US National Library of Medicine
National Institutes of Health

Semin Respir Infect. 1994 Jun;9(2):113-9.

Smear-negative pulmonary tuberculosis.

Dutt AK[1], Stead WW.

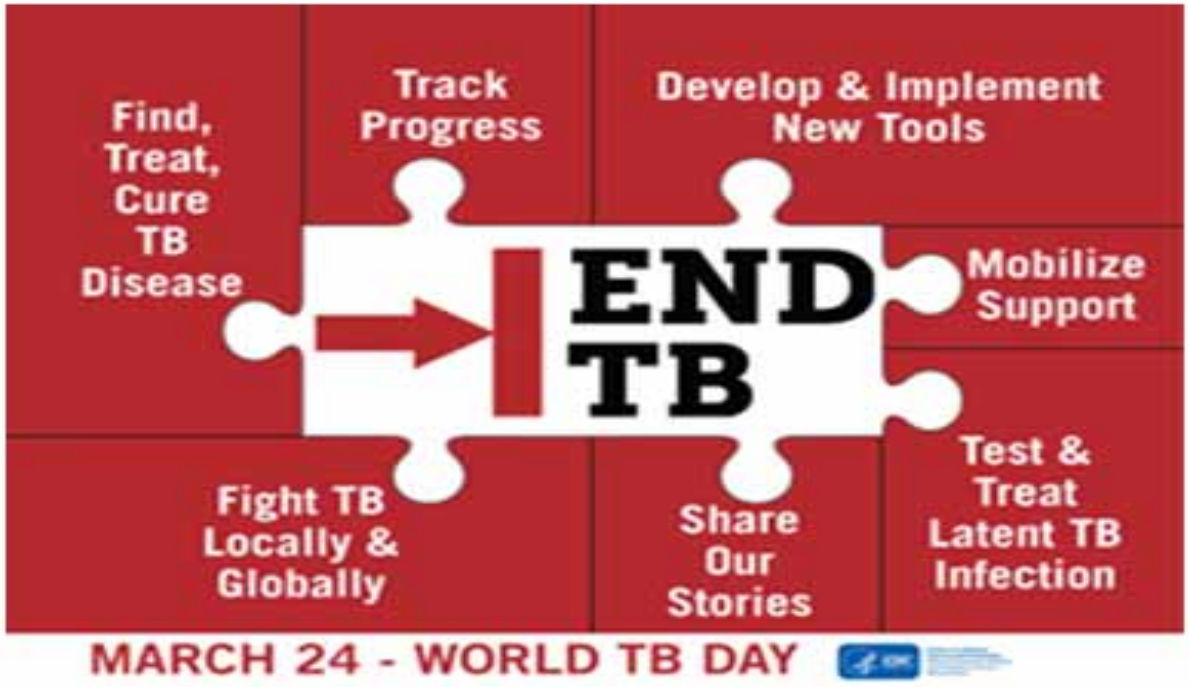
- Diagnostic difficulties arise when sputum smears are negative for acid-fast bacilli in tuberculin-positive patients with compatible symptoms and chest radiographs for tuberculosis

- Many of these smear-negative patients yield positive cultures for M tuberculosis, whereas others remain culturally negative

- Several studies have shown that many smear-negative/culture-negative patients will develop bacteriologically positive disease later

- Often, physicians are unable to decide whether to initiate chemotherapy or to wait for the culture results

Thank you


Find, Treat, Cure TB Disease
Track Progress
Develop & Implement New Tools
END TB
Mobilize Support
Test & Treat Latent TB Infection
Share Our Stories
Fight TB Locally & Globally
MARCH 24 - WORLD TB DAY