



Patients and TB: Improving treatment outcomes through a patient centred approach and access to new treatments

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Review of approaches to diabetes in MDR TB patients

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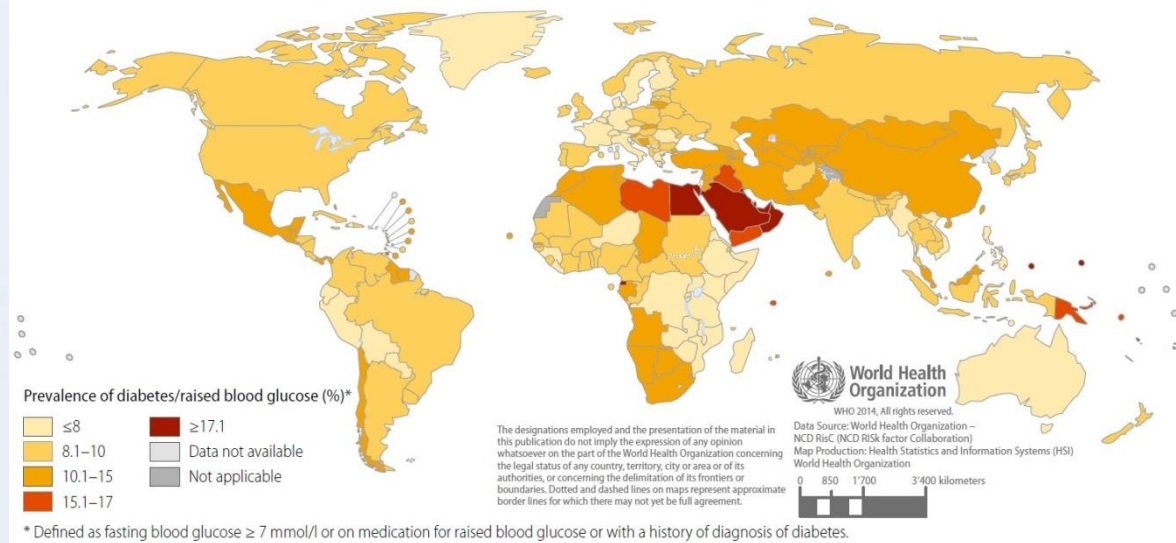
Diabetes and Tuberculosis

- The diabetes epidemic is rapidly increasing in many countries, with the documented increase most dramatic in low- and middle-income countries where the burden of TB is high.
- Diabetes triples the risk of developing tuberculosis (TB)
- TB can worsen glycaemic control in people with diabetes.

Incidence

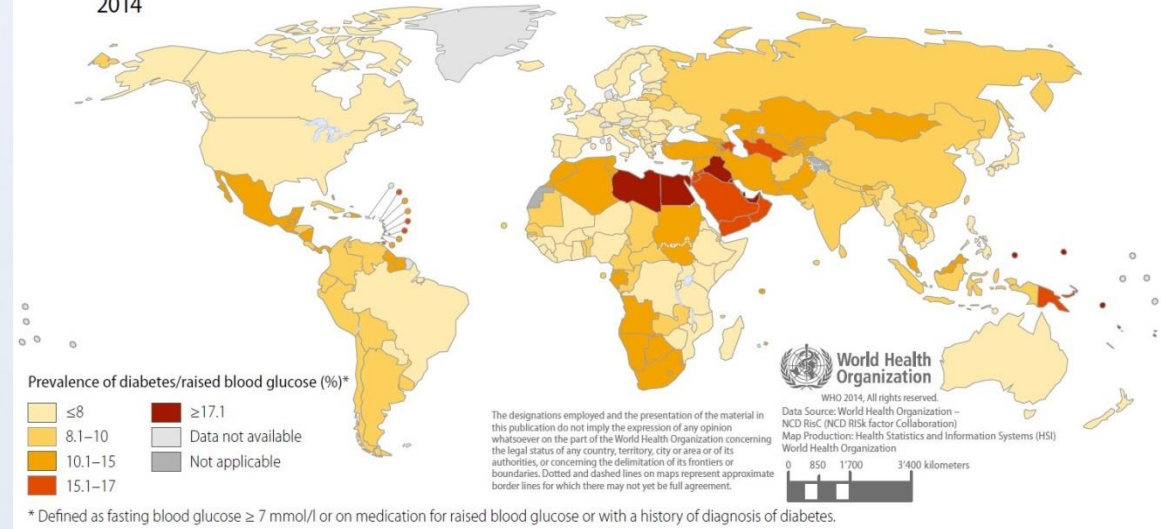
- Diabetes affected 382 million in 2013 and will increase to a projected 592 million by 2035. 7 million people developed the disease in 2010.
- One third of the world's population harbor the TB bacteria. Close to 9 million people fell ill with TB in 2014
- Tolerability of drugs
- Potential high relapse in patients with DM/TB co-morbidity
- Challenges in the management of DM/TB co-morbidity

Fig. 7.7 Age-standardized prevalence of diabetes, (Fasting glucose ≥ 7.0 mmol/L, or on medication for raised blood glucose or with a history of diagnosis of diabetes), in men aged 18 years and over, comparable estimates, 2014



Prevalence of diabetes: Men

Fig. 7.8 Age-standardized prevalence of diabetes (Fasting glucose ≥ 7.0 mmol/L, or on medication for raised blood glucose or with a history of diagnosis of diabetes), in women aged 18 years and over, comparable estimates, 2014



Prevalence of diabetes: Women

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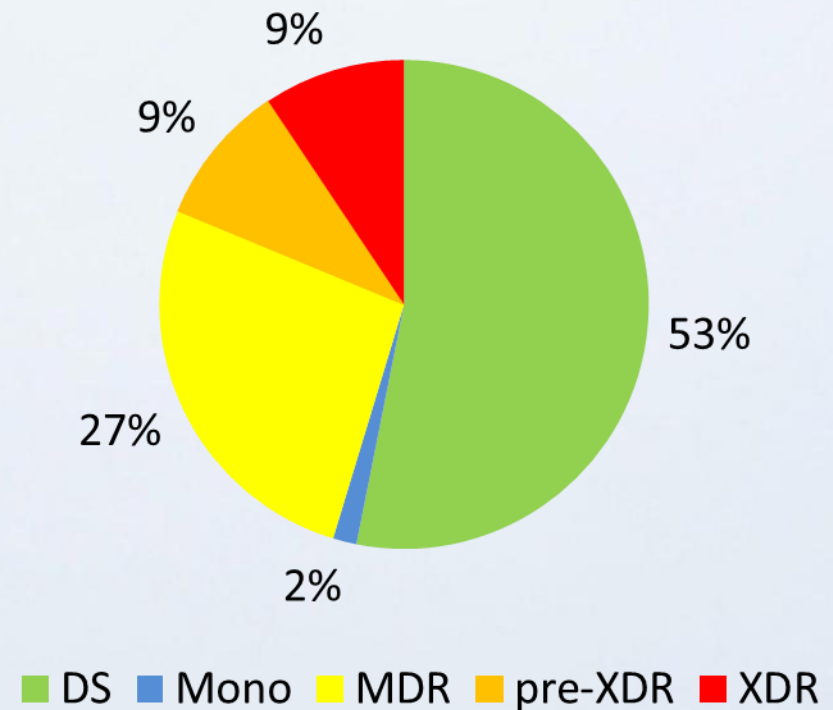
Bi-directional approach

- Surveillance of TB should be initiated among diabetes patients in settings with medium to high burdens of TB.
- Surveillance of diabetes should be initiated among TB patients in all countries.

Incidence in Chechnya

- Incidence of TB: 642
- Incidence of DM among TB: 64
- Incidence of DM/TB comorbidity: 10%

DST of TB in patients with diabetes



Program activities

- Development of a protocol for TB-DM co-morbidity management
- Monitoring and controlling blood glucose during TB treatment and for 2 years after completion of TB treatment.
- Self monitoring of blood glucose
- Health education “Diabetes school”
- Development of electronic database.

Observations

- Median fasting B.G. at admission: 11 (IQR: 8-13)
- Median HbA1c at admission: 7.8 (IQR: 7-10.2)
- Median BMI at admission: 23.1 (IQR: 22-27.5)
- Type of Hypoglycemic therapy at admission:
 - 31% on OHA only
 - 12% on OHA + Insulin
 - 57% on Insulin only

Challenges

- Use of nephrotoxic injectable agents in patients with diabetic nephropathy
- Lack of studies on Rifampicin concentration in diabetes patients
- Lack of data on use of new drugs (Bdq and Dlm) in patients with diabetes