Uptake of new tools

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Innovations in TB prevention and care must reach everyone in need

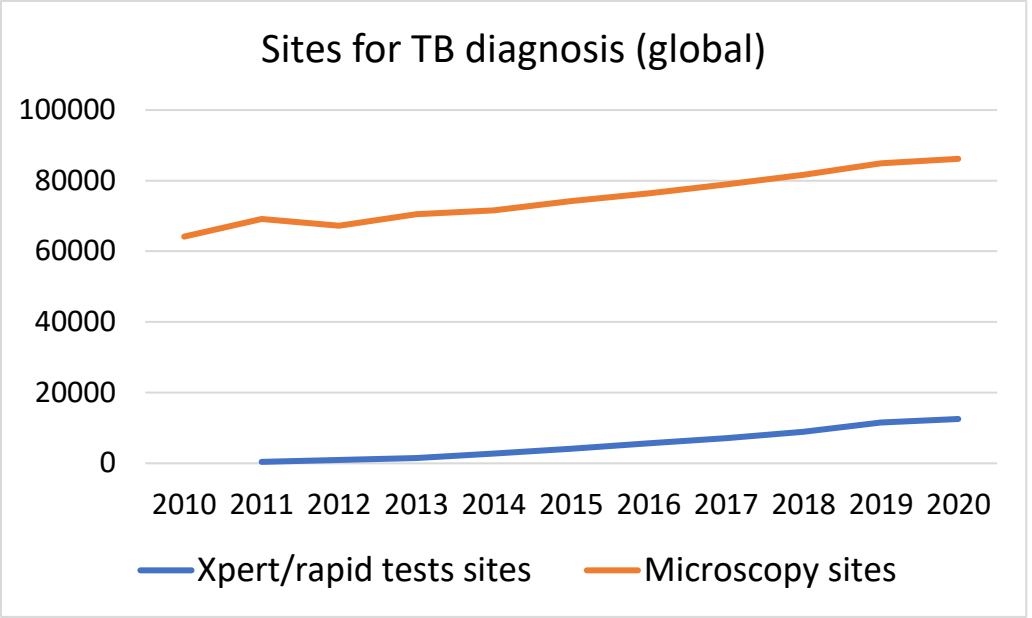
- Latest science/tools must be made available to people in need.
- Not a choice or a bonus, but it is a right to health for people affected by TB.
- TB responses in the past worked with only limited tools
- But now several new tools are available for:
  - Diagnosis, Treatment, Prevention and Digital Health
- Introduction and uptake has been slow
- To speed up Stop TB has been working with partners on introduction and scale up of new tools

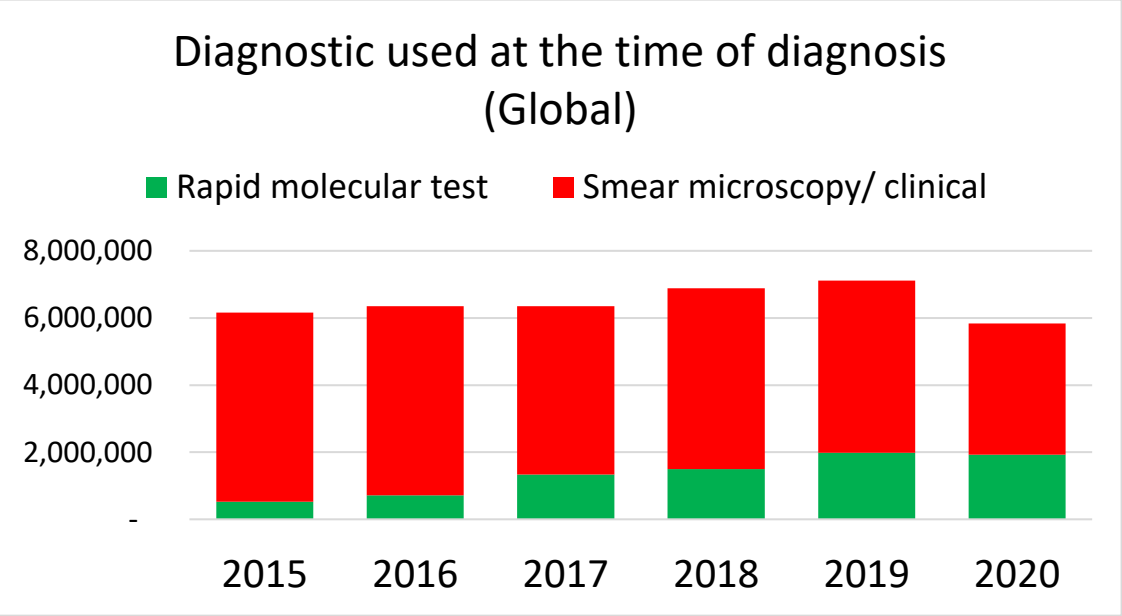
New tools/innovations in Diagnosis

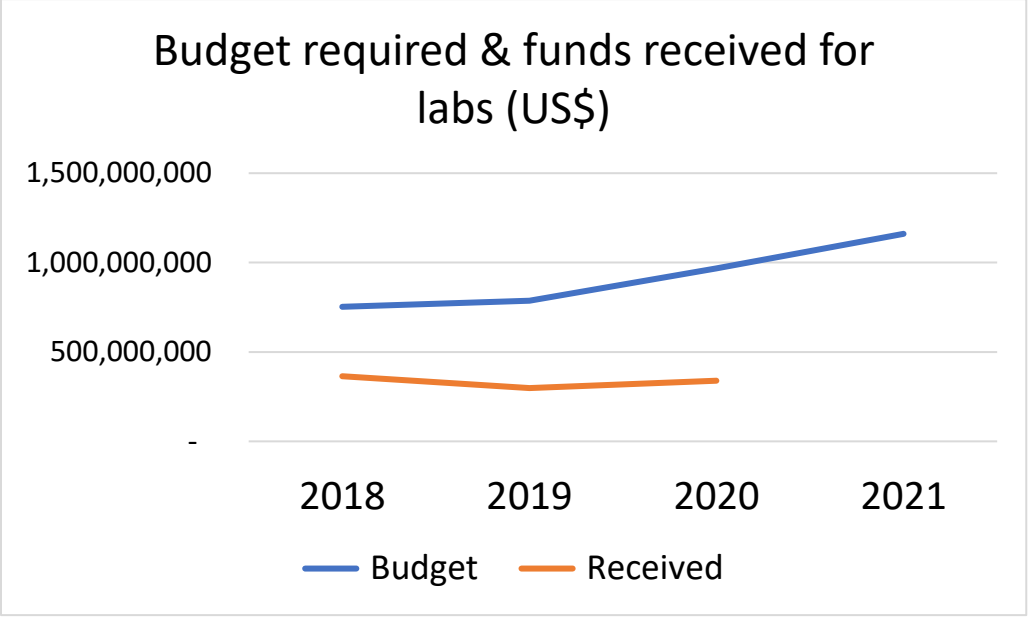
Tools	Status of uptake
Ultra-portable digital X-ray with a.i./CAD	Used in projects and in limited scale so far.
Rapid molecular tests – Xpert, Truenat.	Access is limited (1 in 3 TB gets access).
Other moderately complex molecular tests	Limited pilot use
Genetic sequencing	Used in surveillance, awaiting guidelines on use in routine TB care.
Urinary LAM test	Simple test but not a policy in most (2/3) HBC (ref:SUFT 2020)
TB-LAMP test	Very limited use in a few projects
Multi-disease molecular diagnostics	Covid/HIV and TB diagnostics used by countries. More in pipeline.
Non-sputum specimens – e.g. Stool testing In pipeline tongue swab, A/I cough sensors	Limited use of stool testing.

Example: Rapid molecular test uptake

- Only 1 in 3 get rapid tests
- 2/3 get microscopy/clinical
  - >40% missed, DR-TB missed, inaccurate
- Sites with Xpert is inadequate even after a decade
- Reason: countries getting 1/3rd of budget for labs







X-ray with a.i. Reading/CAD – Example of Stop TB role

TB REACH investments:

- X-ray screening,
- Use of ultra-portable X-rays
- Reading by AI/CAD
- TB REACH data and publications

New WHO guidelines on X-ray screening and A.I/CAD use

Products available to buy from GDF

Initial scale up via iNTP

Support to countries to scale up

- Advocacy
- Practical guides, training material
- Super-user focus group
- TA

Positive response from product developers:

1. In 2000s only 1 CAD available. In 2021 there are 39 CAD developers and 17 TB-specific CAD products
2. X-ray equipment manufacturers miniaturised digital X-ray into ultraportableble handheld device

Prevention

- TB infection testing
  - IGRA tests
  - IGRA(POC) test (QIAreach)
  - New generation skin tests
    - C-Tb, C-TST and Diaskin
  - Uptake: zero or very poor in high burden countries

QUANTIFERON-TB G

T-SPOT.TB test kit

- Shorter TPT regimen
  - 3HP/1HP/3HR/4R
    - Poor progress towards UNHLM target for TPT for contacts

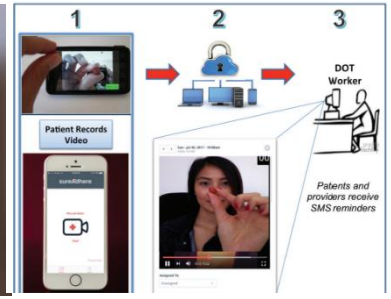
Digital health tools

- A.i. Based X-ray reading / CAD
- Connectivity solutions for diagnostics
  - Over 31 countries implementing but many of them with limited coverage

DataToCare Product Profile

GxAlert/Aspect Product Profile

- Digital Adherence Technology (DAT)
  - Implemented in India and in smaller projects in a few other countries



- App for community-led monitoring

- Apps and tools for real-time information systems

Treatment

- Shorter and better regimens
  - 4-month TB treatment regimen*

- 6-12 months all oral regimen for DR-TB
  - BPaLM and BPAL regimen (6-9 months)
  - Regimen for Hr-TB (6 months)
  - Other shorter regimen under research and coming soon

- Child friendly formulations

*4-month regimen containing rifapentine, isoniazid, pyrazinamide, moxifloxacin

Thank you