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

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

New WHO guidelines on X-ray screening and AI/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 ultraportable 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

• 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

• 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