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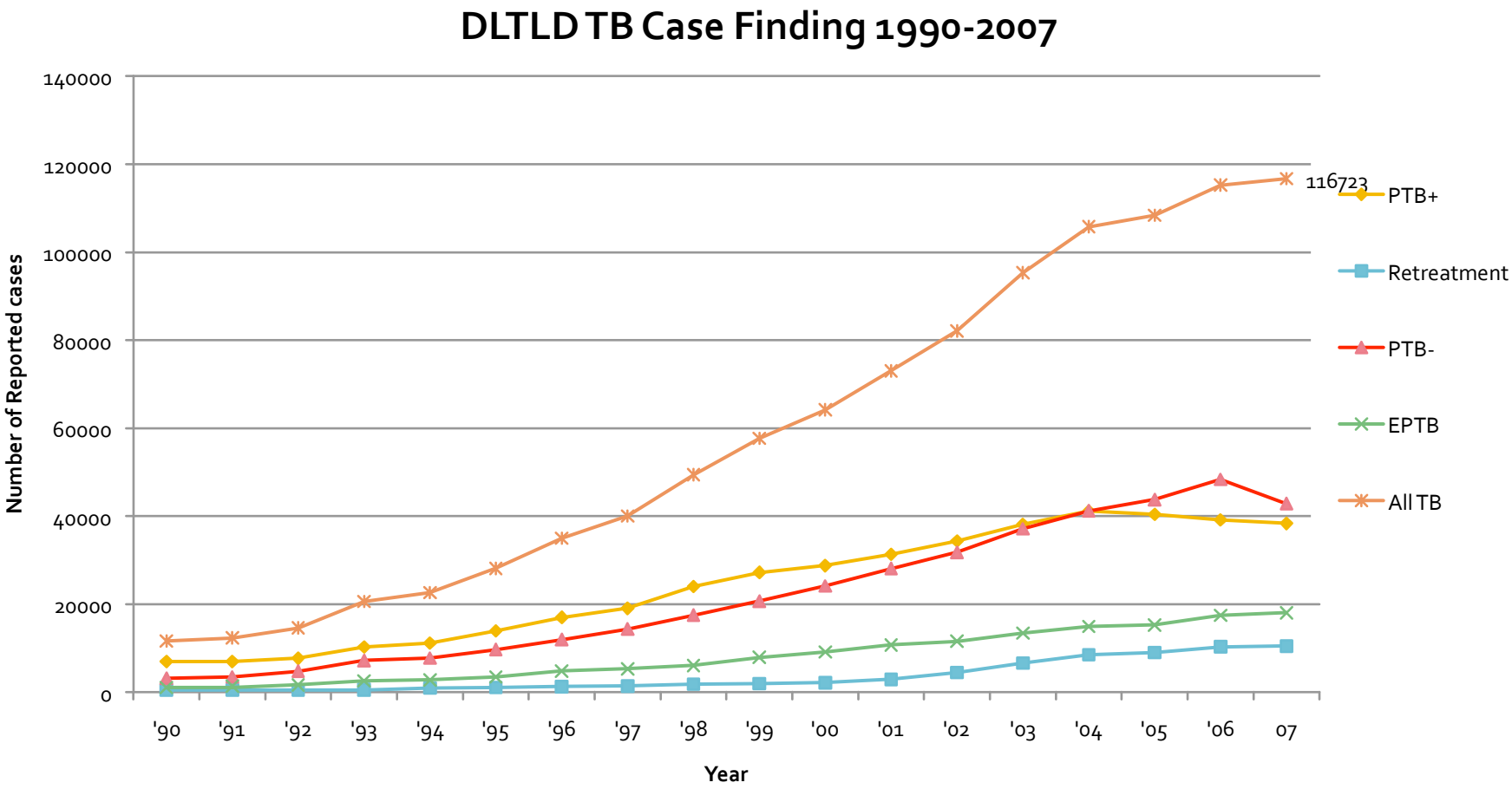
Research and Re-tooling: Experiences from Kenya

Outline of presentation

- Why the need for new tools
- Experience with new tools
- Introducing new tools
- Research needs

Why new tools -TB burden



Why new tools
TB burden – still high, huge demands

- TBHIV burden
  - 338/100,000
  - Rate of increase mostly among
    - NSN, EPTB and re-treatment cases
- Large caseload of TBHIV patients
  - TBHIV co-infection of 48%
  - Rate of TBHIV 127/100,000
- Large population of PLWHAs
  - HIV prevalence still high 7.4%
  - Regular screening for TB

Why new tools
Challenge of current TB tools

- Sputum smear test
  - Low sensitivity, Long turn over time (24 hours),
  - Children- Poor sputum production, Invasive procedures
  - PLWHAs – low bacillary load
  - Depends on the skills of the technician
- Chest –x-ray
  - Expensive , Labor intensive, Not widely available in peripheral TB centers, Not specific and needs trained personnel
- Treatment challenges
  - Duration -still too long, frequency, implementation of DOT challenging, Difficulties with RH and ARVs
- No effective vaccine
  - BCG - Is it still effective? Useful?
  - For prevention an effective vaccine is required

Experiences with new tests
Liquid culture – BACTEC MGIT

- Why BACTEC MGIT
  - High sensitivity, specificity, Low contamination, Available locally, costs
- Infrastructure
  - Renovation, Machines -2001
  - Training of personnel – 1 (2001) to only 7 (2008)
  - Turn over time of results – shorter (4-5 weeks)
  - Scale up from – now at 40% (4,355) retreatment cases
- Challenges
  - Centralized
    - Transport of specimens - Terrain, distance and communication
    - Quality of specimen delivered – primary culture yield- 38.4%
  - Costs – limits decentralization
  - QA/QC issues
  - No SNL in the region

Experiences with new tests

- HAIN test
  - Very new area but promising
  - Improves turn over time for results (24 hrs)
- Challenges of introducing such tests
  - Transfer of technology
  - Costs
    - Patent issues
  - Personnel required

Retooling

- Program preparedness
  - Capacity building
    - Decision to retool
    - Policy, guidelines, manuals development (stakeholder involvement)
    - Staffs: Training – TOTs - at all levels
    - QA /QC – SOPs, M&E, supervision and regular feedback
  - Infrastructure
    - Equipment , Facilities & Information technology
    - Back up-
- Funding

Research needs

- Discovery of new tools
  - New diagnostic tools and therapeutic agents
    - Easy to use
    - Producing rapid results
    - Cost effective
    - High sensitivity and specificity
- Operations research
  - Provide evidence for current interventions
  - Improvement of the use of existing tools
  - Development of new more effective interventions

Conclusion

- Need for new tools (better, effective & sensitive) to help NTPs pick cases early and reduce transmission
- New interventions to stem down the epidemic and to address any operational gaps
- Shorter treatment regimes to improve treatment outcomes
- Programs need to keep themselves ready, to retool new interventions
- Huge need to address human resource capacity issues

Thank you