TB-SPEED (Strengthening Paediatric TB services for Enhanced Early Detection)

Child and adolescent TB Working Group

9 October 2017

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Unitaid
Innovation in Global Health

université de BORDEAUX

INITIATIVE 5%
SIDA, TUBERCULOSE, PALUDISME

EXPERTISE FRANCE

Project rationale

- ➔ Pediatric TB can be cured
  - › 21.9% mortality in pre-treatment era vs 0.9% since 1980
  - › Improved treatment with child-friendly Fixed Dose Combinations (FDC)
  - › 96% of TB deaths in children occur in < 5 yo not treated
- ➔ Pediatric TB is under-diagnosed
  - › 359,000 notified in 2014 for 1 million estimated cases
  - › Main barrier to access TB treatment ➔ gap to reduce TB mortality
- ➔ Diagnostic challenges
  - › Xpert Ultra and GeneXpert Omni soon to be launched but…
  - › Capacity to collect and process samples for TB Dx lacking at PHC
  - › Quality X-ray is lacking or reading skills is limited
  - › No clear recommendation for decentralized TB diagnosis in IMCI

Jenkins, Lancet Infect Dis, 2017, Dodd, Lancet Global Health, 2017, WHO, 2015

The TB Speed project

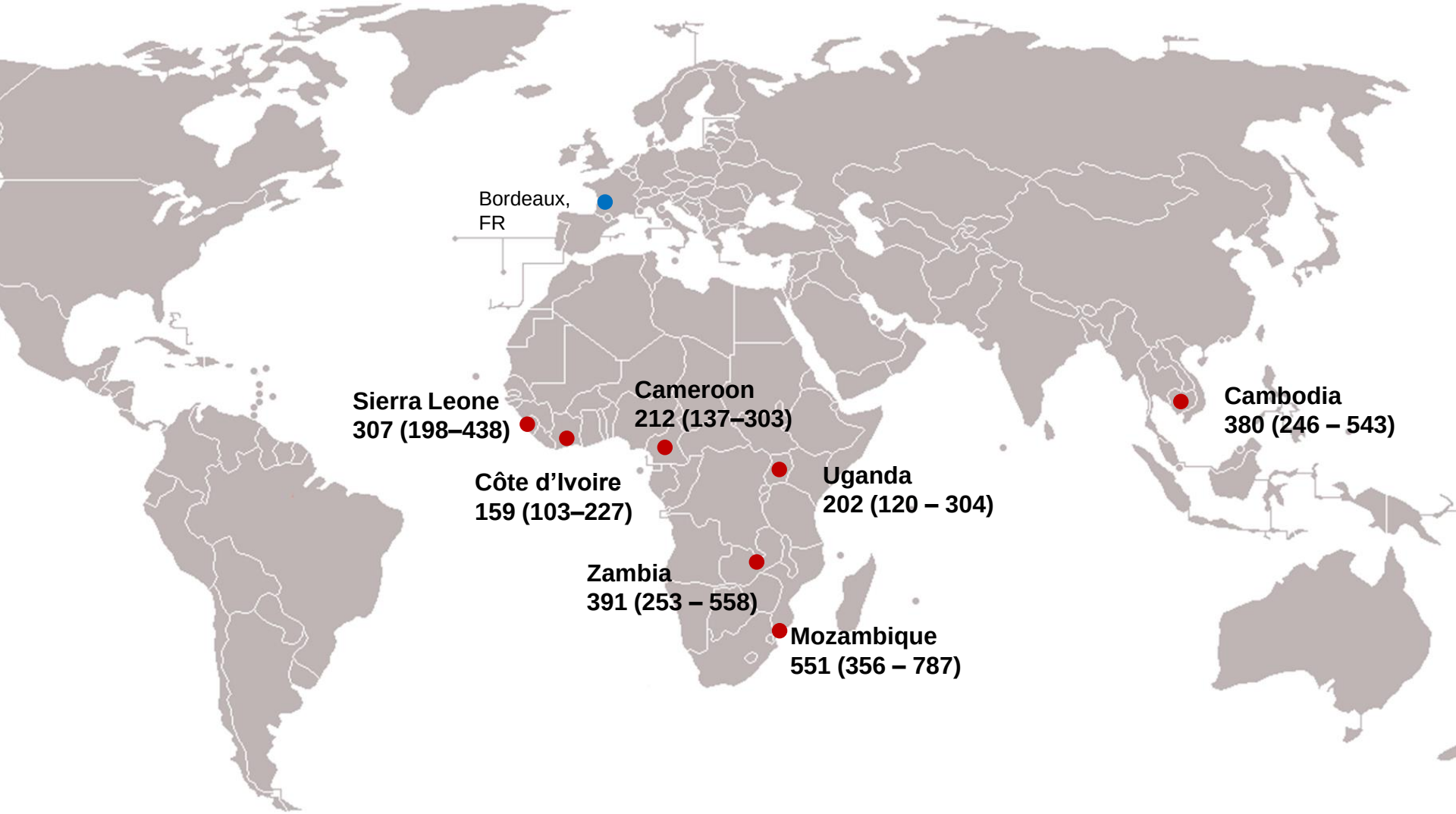
- **Goal (impact)**
  - Contribute to the reduction in childhood mortality from TB
- **Outcome**
  - Available, feasible, cost-effective, and decentralized childhood tuberculosis diagnostic approach to enhance case-finding and access to treatment
- **Outputs**
  1. Testing of new decentralized childhood TB Dx approaches at district health systems level
  2. Evaluation of early tuberculosis detection strategy in children with severe pneumonia
  3. Validation of adapated diagnostic tools and algorithms in HIV+ & malnourished children
  4. Identification of optimized and affordable specimen processing and collection methods for Dx of childhood TB in resource limited settings
  5. Evaluation of cost-effectiveness of the proposed diagnostic approaches
  6. Dissemination, communication and stakeholders' engagement

Innovative approach for microbiological Dx

- Xpert testing of 1 nasopharyngeal aspirate and 1 stool
  - Samples easy to collect with expected good acceptability
  - As effective as Xpert on 2 gastric aspirates or 2 induced sputa
  - New version of Xpert ULTRA with enhanced sensitivity
  - GeneXpert Omni platform
- Expected increase of case finding through
  - Decentralisation of TB diagnosis
  - Diagnosis of TB in HIV infected children and in severely malnourished children
  - Systematic TB detection of young children admitted with severe pneumonia

Marcy, et al. Clinical Infectious Diseases 2016; Rinn S et al.Union Conference, Cape Town 2015

TB Speed countries



TB incidence / 100,000 population (Confidence interval), WHO 2016

TB Speed Consortium

➔ Consortium members

- University of Bordeaux, France
- Institut de Recherche pour le Développement (Cameroon)
- MU-JHU, Kampala (Uganda)
- Solthis, Paris, France (Sierra Leone)
- PACCI (Cote d'Ivoire)
- National Health Institute (Mozambique)
- Institut Pasteur (Cambodia)
- University of Zambia (Zambia)

➔ Technical partners

- Sheffield University, UK
- MSF Logistique
- Epicentre Mbarara (Uganda)
- ADERA
- Team/SPI, France
- CAMTech Mbarara, Uganda

➔ Implementing partners

Co-PIs

- Yopougon teaching hospital, Abidjan
- Fondation Chantal Biya, Yaounde
- CENAT, Cambodia (NTP)
- Ola During Children's Hospital

Others

- NTPs of other countries
- Hospitals from participating countries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thank you
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спасибо
murakoze

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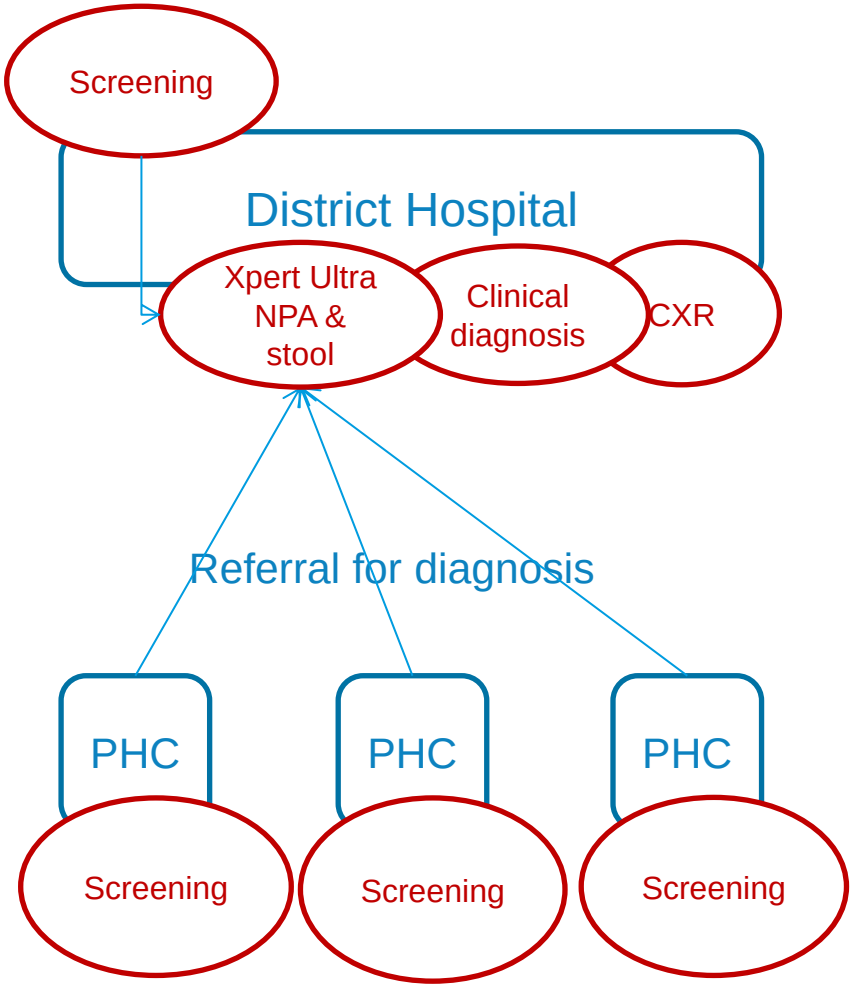
Intervention (Output 1) = decentralization

District Hospital level decentralization



Primary Health Center level decentralization