Laboratory diagnosis of childhood TB remains challenging due to the paucibacillary nature of the disease and the difficulties in obtaining good quality respiratory samples. Optimisation of sampling methods and sample processing represent a critical aspect to address in order to improve current practice for childhood TB diagnosis. This workshop will address practical aspects of microbiological diagnostic evaluation for TB in children at different levels of health care. It will provide participants with state of the art knowledge on methodological approaches and offer a forum for sharing lessons learnt.

Target audience: NTP personnel, paediatric care providers including maternal and child health, researchers, lab personnel

Objectives:
1. Provide practical knowledge on sample collection for children, sample storage and processing methods
2. Review critical aspects of the operational implementation of diagnostic approaches for childhood TB
3. Discuss most advanced technologies in the TB diagnostic pipeline and their application to children
4. Review critical aspects of the design and implementation of clinical research on diagnostic tools in children

Expected outcome: A formal workshop report will be generated, with the view of future publication. If sufficient interest is generated, it is anticipated that a formal childhood TB diagnostics working group will be established in the future.

Keywords: Tuberculosis; children; diagnosis; laboratory; sample collection; sample processing

Coordinator(s): Olivier Marcy (Cambodia), Martina Casenghi (Switzerland)

Chair(s): Anneke Hesseling (South Africa), Luis Cuevas (UK)

Presentations:
- Field perspectives - implementation challenges at the programme level: what specimen collection methods can be implemented and where? Fajardo (South Africa)
- Field perspective - implementation challenges at the nurse level: tolerability, acceptability and feasibility of sample collection methods Bunnet Dim (Cambodia)
- Laboratory perspective to optimise specimen yield: sample processing, lab optimisation methods, transport and storage Andrew Whitelaw (South Africa)
- Update on novel tools, platforms and strategies and their application to children: improving use of Xpert MTB/RIF for paediatric TB diagnosis Mark Nicol (South Africa)
- Diagnostics pipeline and application to children: next generation NAAT-based test and urinary LAM Luis Cuevas (UK)
- Critical aspects of study design and implementation for diagnostic studies Anneke Hesseling (South Africa), Patrick Jean-philippe (USA)