Are high-burden countries ready for molecular tests?

Panel Discussion

Day 3

Your Panel

Name	Country	Category
Vithal P Myneedu	India	NRL
Sabira Tahseen	Pakistan	National Reference Lab
Baba Kamaldeen	Saudi Arabia	NRL
Toyun Togun	Gambia	NRL
Reena Kingsbury	India	NRL
Nyinda Ntingiya	Tanzania	Lab Coordinator
Andy Ramsay	Switzerland	International PH Official

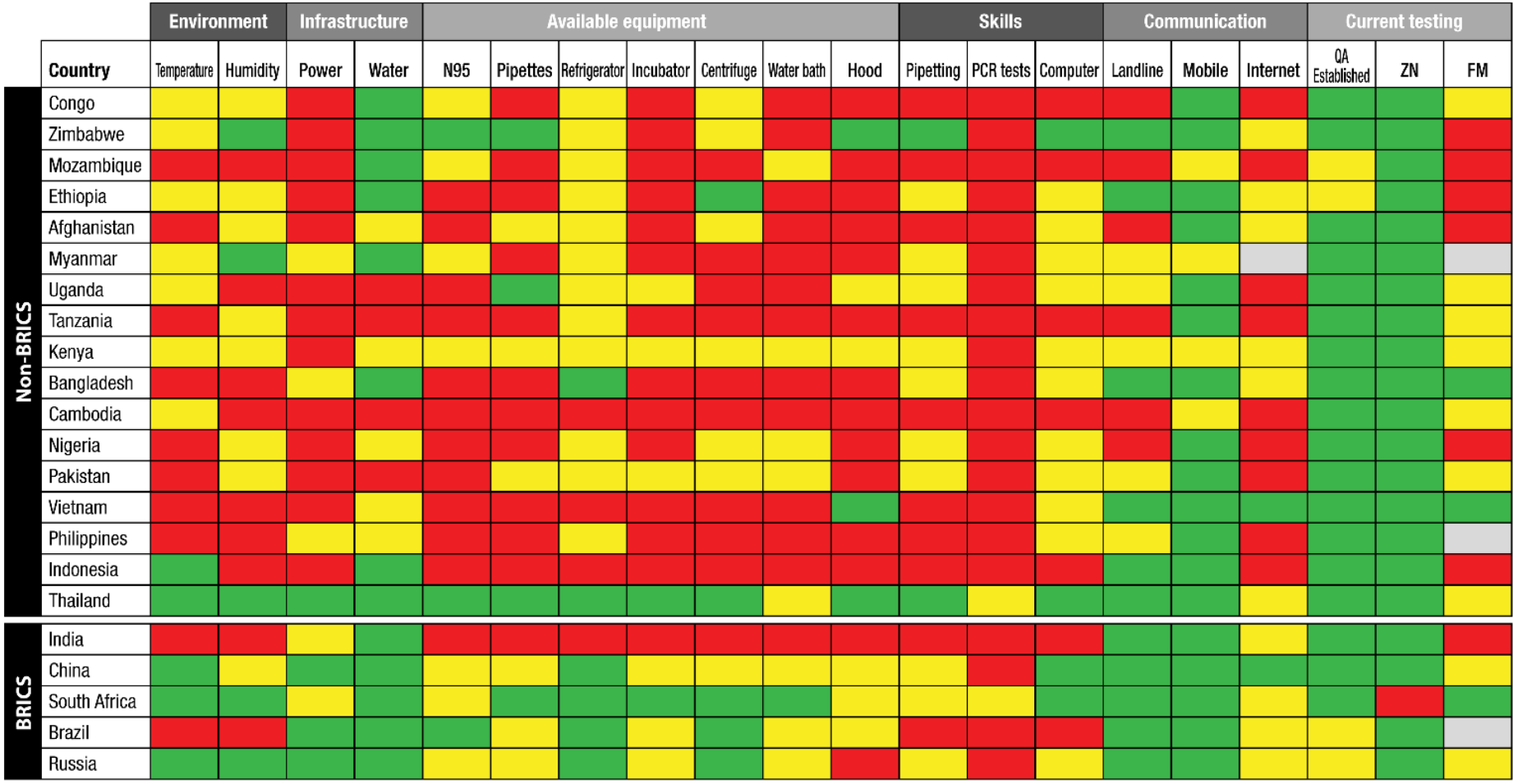
Panel **Discussion**

- 1 hour
- Very brief presentation
- Are peripheral microscopy centres ready for next-generation molecular tuberculosis diagnostics? C Denkinger, et al. ERJ 2013
- Discussion – think wide
- Molecular candidates from Pitch the Tech session
- Not just labs
- Not just problems

Are peripheral microscopy centres ready for next-generation molecular tuberculosis diagnostics? C Denkinger, et al. ERJ 2013

12-question survey. Experts in 21 of 22 HBCs

status of microscopy centers in 22 high burden countries



Denkinger et al. ERJ 2013.

Our survey revealed that high indoor temperatures and/or high humidity were perceived as a problem in nearly all countries (17 out of 22; 77%).

Only four out of the 22 high-burden countries (18%) reported access to uninterrupted power supply, while a supply of running water was more common (13; 59%).

Equipment for personal protection (i.e. N95 respirator) was not available in 12 countries and inconsistently available in seven countries. In contrast, surgical gloves were always available in most countries (18; 82%).

Microscopy centres in six countries had refrigerators (27%), and only in five countries (23%) was a centrifuge consistently available.

Expertise with non-automated molecular tests was not consistently reported from any country and expertise in using micropipettes was reported in only two countries (10%).

Skills in using in a computer were only acknowledged to be always present in four countries (18%).

Interestingly, mobile phones for communication were available in a majority of the centres (82%), with much poorer landline or internet connectivity (only consistently reported for 11 and two countries, respectively). In almost half (45%) of countries, stock-outs of testing supplies were a concern.

When asked about the biggest challenges for implementing molecular assays in these peripheral microscopy centres, the most commonly stated responses were "lack of stable power supply", "harsh weather conditions" and "lack of skilled labour".

Overall, the conditions were much better in BRICS countries compared to the other countries. However, even within the BRICS countries, large variability, in particular in the availability of equipment, was reported, with Indian peripheral microscopy centres being the least equipped.

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Questions

- **In-lab infrastructure** – utilities, communications, environmental conditions, skills, training needs, storage needs (refrigeration/space?)
- **Lab system infrastructure** – supervision, training needs, maintenance/recalibration of equipment, disposal of tests, links with NRL if additional confirmatory or drug resistance testing needed,
- **Overall Management** - procurement, prices, mark-ups, customs clearance (shelf-life), supply chain for tests (cold), transport, registers, reporting, training needs.
- **Clinical link** - decision-making/algorithms, clinical diagnosis, empirical treatment, training needs.
- **M&E** - Recording and reporting, registers, categories, training needs.