Addressing the human resource crisis in TB laboratories – in fact in labs in general

Global Laboratories Initiative
Annecy, May 8th 2008
The HR crisis is a primary lever point for yielding improvements in the system

Questionnaire results in 2006 among regional advisors from 75 countries:
Major challenges are experienced in the area of….

- Funding: 36%
- Infrastructure: 32%
- Equip & Sup: 36%
- Human Resources: 77%
- EQA: 36%

Source: WHO
TB incidence remains far underdiagnosed – both in quality and quantity

Incidences and systematic identification

- **9.1 Mio** New cases in 2006
  - **5.1 Mio** Notified
  - **4.1 Mio** Sputum Smear +
  - **2.5 Mio** Identified
  - **700,000** New cases in 2006

- **46,000** MDR incidences

**More Labs**, **Better technology**, **Reliable Systems**, **Most of all: Local Leadership**


Annecy, May 8th 2008

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The situation for HR is bound to become even more critical

Expansion requirements of the global laboratory system for meeting MDG
In million tests per year to be performed in non-EME countries

At least:

- 2,000 new culture labs (or other)
- 23,000 new culture technicians
- 20,000 new microscopists

Source: WHO – GLI Business Plan

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Laboratories are technical operations, with each element to function flawlessly for reliable results.

Laboratory Path of Workflow

Pre-analytical
- Patient Assessment
- Test Request
- Specimen Collection
- Specimen Transport

Analytical
- Testing Review
- Laboratory Interpret.

Post-Analytical
- Results Report
- Post-test Spec Mngt

Info Mngt
- Laboratory System
- Interpretation Consulting

Respectively in the functions of:
- Organization
- Personnel
- Equipment
- Purchasing/Inventory
- Process Control
- Documents/Records
- Occurrence Management
- Internal Assessment
- Process Improvement
- Service and Satisfaction

Source: National Committee on Clinical Laboratory Standards

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Laboratories are also business operations, where managerial and leadership skills are key to success.

Value Chain instrument for analysing business organisations

<table>
<thead>
<tr>
<th>Laboratory Infrastructure</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Human Resource Management</td>
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<tr>
<td>Technology Development</td>
<td></td>
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<tr>
<td>Procurement</td>
<td></td>
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<tr>
<td>Inbound Logistics</td>
<td>Operations</td>
</tr>
</tbody>
</table>

Source: Michael Porter, Competitive Advantage
Laboratory Quality Management Initiative
2006 – 2008 by WHO, CDC, CLSI

**Laboratory Quality Management**

= Laboratory Management

- Harmonize / Develop instructional training package / toolkit on implementing a laboratory quality system
- Convene international conference on laboratory quality – April 2008, Lyon France
- Develop, publish, and disseminate recommendations to governments advocating for the need and allocation of resources to implement a quality system
Key shortages in the global HR situation in TB labs

- Not enough local managerial and technical talent decides to make a career out of laboratories
- Not enough follow-up implementation to the training interventions that are being conducted for those who do make that choice
- Not enough on-the-job knowledge sharing and coaching, because there is not enough of a global professional support community
- Not enough managerial skills in terms of HR and leadership, controlling and finance, production and logistics, strategy and innovation are being taught and/or coached

All of which leads to the symptoms of lack of consistent quality in the labs, lack of system functionality, frequent dynamic bottle necks, lack of technicians, etc >> which leads to poor support of the medical community to fight TB by the laboratories
What we have

Union Trainings
  APHL/GWU Trainings
  KIT Trainings
  JATA Trainings
  CDC Trainings
  WHO Trainings
  New South African Training Centre
  And many more....

• Are too often singular interventions
• Are usually not complementary to each other
• Do not create enough of a global career brand
• Do not confer certified degrees, and are therefore not career-enhancing
• Are too often not sustained
• Are heavily technical-focused, too little management-focused

• Most of all: do not develop into a global support community with possibility of local follow-up, local coaching and peer-to-peer support which will foster and encourage local leadership
What we suggest: „Creating the TB laboratory leaders of tomorrow“

Laboratory Master Management Program
Global Career Academy of Laboratory Management

Pillar 1: Managerial Skills
- Module A
- Module B
- Module C

Pillar 2: Public Health
- Module D by KIT
- Module E by JATA
- Module F by WHO

Pillar 3: Laboratory Practice
- Module G by Union
- Module H by APHL
- Module I by...
- Module K by...
- Module L by...
- Module M by...

Cooperation, Coordination and Synchronization with local institutions providing public health and technical education/training in terms of content, local practice case studies, teachers and participants

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Local Cooperation

• Attendance to all modules confers an internationally accredited Msc Degree
• Peer-to-peer community coaching is created, thus follow-up occurs
• Regular communication resources are being supported > knowledge sharing
• Spans over four years > accompanies on the job activity > creates local leadership
GLI as a knowledge and network infrastructure provider

GLI will be an active facilitator of communication and provide various global infrastructure services including guidance, assurance and interface connection activities – all of which synchronized such to be a coherent network service.

Exemplary activities of GLI

Guidance Activities:
- lab manuals
- 2nd line DST
- Creation of training materials
- Recommendations for funding strategy
- National Roadmap advice

Assurance activities:
- coordination of EQA
- specifications for equipment and machines
- Global accreditation system
- Monitoring/evaluation

Knowledge Sharing:
- Coordination of provision of TA and training
- organizing meetings
- Advanced communication technologies
- TB-Wiki; Knowledge Resource Network online

Interface Connection:
- Matchmaking of projects between countries and implementing partners
- manage stakeholders
- Advocacy for lab funding
- Other TB communities
- Other disease networks

70 GLI PC Members and SLRN’s

~100,000 smear lab centers
200,000-300,000 personnel

~8,000 advanced diagnostic centers
40,000 – 50,000 personnel

~150 National Reference Labs

GLI secretariat
At WHO

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