Public private partnerships

Engaging the private research sector to scale up infectious diseases control in Gabon

Marguerite Massinga Loembe, M.Sc, Ph.D

Lambaréné, Gabon
The long and winding road from healthcare research and innovation to public health impact......
How to overcome the implementation gap?

Is there a role for (health) research institutions?
Research in Gabon

Academia (University of Health Sciences)

Healthcare sector (NPHL, University hospital centers...)

Environmental sciences
Research private sector

Centre de recherche médicales de Lambarene (CERMEL)
Clinical trials (drugs, vaccine, diagnostics), epidemiology studies (malaria, NTDs, TB..).

Centre de recherche médicales de Franceville (CIRMF)
WHO Collaborating Centre for Arboviruses and Viral Haemorrhagic Fevers
Public-private partnerships

Effective ways to capitalize on the relative strengths of the public and private sectors to address problems that neither could tackle adequately on its own, in particular in respect of diseases that particularly affect developing countries.
• We must **advance** the development of new medical products to detect, prevent and treat infectious diseases with epidemic potential

• Acting together based on a **coordinated plan**, we can **accelerate** the development of vaccines, drugs, diagnostics, vector control tools and delivery systems needed to control emerging health threats
Scenario 1: Drug resistant tuberculosis in Gabon
The context

• Worldwide: drug resistant tuberculosis (MDR-TB) is threatening to reverse progress made towards TB control

• Gabon:
  • high incidence tuberculosis country (485 per 100 000)
  • low population (2 million inhabitants)

• Until 2014, in Gabon:
  • Limited data on MDR TB prevalence
  • No MDR TB case management guidelines
  • No second line drugs available to treat MDR TB cases
Progress in global coverage of surveillance data on drug resistance, 1994–2014
TB services landscape

No local capacity for MDR-TB diagnosis

<table>
<thead>
<tr>
<th>Country</th>
<th>% tested with rapid diagnostics at time of diagnosis</th>
<th>% bacteriologically confirmed among pulmonary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Angola *</td>
<td>/</td>
<td>51</td>
</tr>
<tr>
<td>Burundi</td>
<td>8</td>
<td>88</td>
</tr>
<tr>
<td>Cameroon</td>
<td>2</td>
<td>74</td>
</tr>
<tr>
<td>Central African Republic *</td>
<td>1</td>
<td>61</td>
</tr>
<tr>
<td>Chad*</td>
<td>1</td>
<td>54</td>
</tr>
<tr>
<td>Congo Brazzaville *</td>
<td>3</td>
<td>51</td>
</tr>
<tr>
<td>DR Congo *</td>
<td>10</td>
<td>83</td>
</tr>
<tr>
<td>Gabon</td>
<td>/</td>
<td>54</td>
</tr>
<tr>
<td>Equatorial Guinea</td>
<td>17</td>
<td>72</td>
</tr>
<tr>
<td>Sao Tome</td>
<td>/</td>
<td>38</td>
</tr>
</tbody>
</table>

(WHO Global TB report, 2016)
Cartographie des départements impliqués dans la lutte contre la tuberculose en 2013 au Gabon
TB funding landscape

- Insufficient domestic funding for TB control
- Limited financial partners (WHO)
- High GDP, low population size/density:
  - no or limited eligibility to most externally funded TB control reinforcement programs (ie: Expand TB, TB reach etc..)
  - limited impact expected (at the global level)

(WHO TB country profile 2016)
Preparedness

BEFORE EPIDEMIC
Prepare for the inevitable

1. Governance & Coordination
2. Knowledge sharing
3. Assess threat & define priority pathogens
4. R&D Roadmap
5. Funding
6. Set regulatory pathway
7. Collaboration & Partnerships
8. Expand local capacity
9. Regulatory review & Policy development
• PANACEA consortium
  • Setting up a TB Lab (microscopy, culture and DST)
  • Reagents /equipment

• PANEPI study (2012-2014):
  • Setup a TB patient cohort in the Moyen Ogooué province
  • Determine the prevalence of drug resistant TB
  • Characterize circulating TB strains
Intervention domains for collaboration with NTP (2014)

Diagnostic services for TB and MDR TB;
Support for TB patients’ clinical management;
Public HR training and mentorship;
Technology transfer;
Fostering locally relevant clinical research
TB-MR

R/H resistance
Prevalence = 7.4 %
Participation to Gabon in country dialogue (novembre 2014)

Dissemination and contextualisation of research

Evidence for strategies and interventions included in Gabon TB funding request
Expert seminars, workshops

- Technology transfer and training on advanced TB diagnostics

- Training local healthcare staff on ie: TB management and diagnosis
DURING EPIDEMIC
Fast access to interventions

1. Foster coordination

2. Facilitate studies

3. Share results & lessons learned

4. Regulatory evaluation & policy making

Response Plan
Gabon Global Fund TB Grant (2016-2017)

- Chair of the technical TB Global Fund Concept Note writing committee
- Co chair of the expert TB Global Fund Concept Note writing committee
- CERMEL TB lab designated as interim National Reference Lab for Gabon
Evaluation of the shorter term MDR-TB treatment regimen (2014-2016)

- Mobilize funding (drugs, tests)
- Procure the 2d line drugs
- Ethical clearance from NEC
- Setup MDR TB treatment sites
THE SHORTER MDR-TB REGIMEN

May, 2016
Evidence based roll out of the shorter term MDR TB regimen in Gabon

Surveillance of XDR TB

DST profiles

<table>
<thead>
<tr>
<th>H</th>
<th>S</th>
<th>E</th>
<th>R</th>
<th>Z</th>
<th>Amk</th>
<th>Cm</th>
<th>Ofx</th>
</tr>
</thead>
<tbody>
<tr>
<td>R</td>
<td>R</td>
<td>R</td>
<td>R</td>
<td>R</td>
<td>S</td>
<td>R</td>
<td>S</td>
</tr>
</tbody>
</table>
• National TB Laboratory Network Strategic Plan

• National MDR TB Management Guidelines

• Specimen Referral and Transport Guidelines

• International technical notes and guidelines

• Member of Gabon National MDR TB Committee
Gabon Global Fund TB Grant (2018)

• CERMEL appointed as main recipient (transition):
  • Technical know how (lab systems, patient management and care)

• Project management and coordination unit:
  • MoU with MoH signed in dec 2017
  • Offices in Libreville provided by MoH
  • MoH pharmacist for Procurement and Supplies
Overall

- Capacity setup for diagnosis and followup of MDR TB cases
- Fast track adoption of new treatment recommendations

But

- Diagnostic capacity must be further expanded to the public sector
- Gap between diagnostic and care (limited space for hospitalization)
Collaborative framework

Clinical research
- Evidence and expertise
- Capacity building

Validation and contextualization of research
- Awareness and use
- Operational research

Policy update
- Improved service delivery
- Implementation and intervention
- New Funding/research questions

Research Institutions
- Accelerated dissemination

Collaborative interface
- Accelerated implementation

Partners/Policy makers

CERMEL
- TB/MDR TB Epidemiology data
- Capacity building (TB/MDR-TB diagnostics)
- Funds mobilization for 2d line drugs

Global Fund Concept Note
- Evaluation of short term MDR TB regimen

MoH/National TB control program
- MDR TB management research informed national guidelines and best practices (diagnostic and care)
- TB Global Fund Implementation

Improved disease control

Adapted from Phibbs Co-produced Pathway to Impact framework
JCES Vol. 9 No. 1, 2016
Scenario 2: Surveillance of viral diseases responsible for febrile illnesses in Gabon
➢ Establish a laboratory surveillance system for viral diseases of public health concern (2017-2021)

➢ BSL3 virology laboratory in CERMEL (PCR, sequencing, virus culture and ELISA)

➢ Enhance local human capacity

➢ Develop a multiplex RDT for prevalent viral diseases
BEFORE EPIDEMIC
Prepare for the inevitable

1. Governance & Coordination
   - Knowledge sharing

2. Assess threat & define priority pathogens

3. Set regulatory pathway
   - Ethical review
   - Regulatory review & Policy development

4. R&D Roadmap

5. Funding

6. Expand local capacity

7. Collaboration & Partnerships

8. SUDESA (DSS capacity)

9. SECC: Train lab staff for biosafety and handling of BSL3 level pathogen

Contributing to African CDC activities in Central Africa

VSV EBOV vaccine evaluation

Phase 1 Trials of rVSV Ebola Vaccine in Africa and Europe — Preliminary Report
Lessons learnt

Good and sustained communication is essential

Define well responsibilities

Commitment and efforts

Adjust different paces for optimal efficiency
Factors that contribute to successful PPPs

• Government's capacity to manage public-private relationships
  • Effective regulations, quality and standards
  • Stewardship and oversight

• Choosing public-private interactions that are strategically important to national goals

• Moving from pilots to large scale initiatives

• Enable innovation and experimentation

Kula N, Fryatt RJ, Health Policy Plan. 2014
Acknowledgements:
Thank you