Establishing a Public Health Laboratory System

The Namibian Experience
Background
Namibia

Population: 2,259,000

Size: 825,418 km²

Estimated prevalence of HIV+ adults: 13%

# Public Hospitals: 34

# Public Health Centers: 43

# Public Health Clinics: 260
BACKGROUND

• NIP established by Act of parliament in 2000 to provide and sustain quality medical laboratory services throughout Namibia.

• However no clear mandate on Public Health Lab functions

• Private Medical Labs and other non-medical labs exist with no clear PHL mandates

• WHO advocates for the strengthening of public health laboratories in the WHO African Region
BACKGROUND

• Request from the MoHSS to CDC/APHL for an assessment of the situation in the country in 2008

• Assessment conducted and completed by APHL in December 2008

• The GRN, through the MoHSS’ s National Health Policy framework 2010-2020 proposed the establishment of a National Public Health Laboratory
Why a National Public Health in Namibia?

• Various public health threats:
  • HIV AIDS
  • Polio
  • TB and Drug Resistance TB
  • Measles
  • Cholera
  • Anthrax
  • H1N1
  • Hemorrhagic fevers:
    • Rift valley fever
    • Crimean Congo
Why a National Public Health in Namibia?

• NIP limited mandate and resources
• Heavy reliance on South Africa to confirm PH related diagnostic
• Delay in getting confirmation of epidemic prone diseases
• National Security
• IHR
• IDSR
• Compliance with various resolutions (WHO, SADC,....)
Why a National Public Health in Namibia?

• Strong Public Health Lab System to support Public Health Programs
  • Disease control and prevention
  • Early identification of Public Health Threats
  • Prevention of Diseases spread
  • Providing timely information for clinical decision making
  • Providing data for programmatic and policy decision making
The Ministry of Health and Social Services (MoHSS) must devise an overall strategy for Public Health Laboratory services including surveillance and outbreak response testing, referral testing and coordination of all testing services that are relevant to the public health and managing disasters. The MoHSS must thus assess the need for a Public Health Laboratory.
Minister of Health of Namibia Calls for Strong Public Health Laboratory Systems

The Minister said that the system, once established, should be based on promoting awareness of the causes of diseases and the benefits of lifestyle changes. The system would also include improved surveillance, monitoring and evaluation mechanisms. “As Government, we are concerned that incidences of diabetes, hypertension, cancer and cardiovascular diseases are on the increase. Data on these diseases remain scanty at this stage and we have limited knowledge of their full socio-economic impact in the Namibian context, which is why it is imperative to establish such a system.”

“The Minister, A. Tjivika, announced that the institution had agreed to host the seminar in order to provide senior directors of Namibian public health laboratories with training and networking opportunities in order to improve public health laboratory systems in the country. The seminar is being attended by professionals from fourteen countries across the globe, including Ukraine, The Netherlands, the United States of America and African countries such as Sierra Leone, Kenya, Tanzania, Lesotho, Mozambique, Botswana and Zambia.

He emphasized that the Polytechnic places a high premium on public health, as can be seen in the qualifications it offers in medical technology, public health and emergency medical care, and its investment of N$160m in a new building for the School of Health and Applied Sciences.

Also speaking at the official opening of the seminar, Chief Executive Officer of the Namibia Institute of Pathology, Tongoel Angola, said that providing maintaining health standards should be every government’s concern as (good) health, at an individual level, can directly increase general output through reduced sickness and labour productivity,” Angola said.

The Dean of the School of Health and Applied Sciences at the Polytechnic, Professor Sylvester Mayo, thanked the Association of Public Health Laboratories (APHL) for its continued efforts in providing a focused resource of education and training to public health laboratory professionals in developing countries such as Namibia. He said APHL’s commitment will enable them to get the skills needed to train health professionals.
Enablers

- WHO Afro resolutions on NPHL
- Lab management and leadership trainings
- MoHSS/NIP leadership
- MOHSS Policy and Strategic Plan
- Restructuring of the MOHSS
- CDC financial and technical support
- APHL technical support
Situation Analysis
Assessment of Public Health Laboratory Services in Namibia

• Present information on the role and functions of public health laboratory networks
• Discuss with public health laboratory leadership
• Conduct a high level environmental scan of Namibia’s laboratory resources that are or could be of relevance to the public health system
• Provide recommendations to assist Namibia in strengthening the public health laboratory services
## Situational Analysis

### STRENGTH
- MOHSS Strategic Plan in development and process moving ahead expeditiously
- Visionary leadership at MOHSS and NIP
- Innovative organizational relationship of NIP
- Quality independent laboratory services for blood banking, water testing, veterinary testing
- Developing strong educational program for laboratory sciences
- Commitment of government to accessible, affordable services

### WEAKNESSES
- Strategic alliance between MOHSS and NIP not yet clearly defined and lacks driving force from MOHSS
- Problem solving of identified issues between MOHSS and NIP
- Incentives and employee activities are not aligned to the Performance Plan agreed to by MOHSS and NIP
- **Lack a national strategic laboratory plan, and thus lack a definition of the roles and functions of the National Public Health Laboratory for MOHSS, and a defined organizational structure**
- Disease reporting activities are not adequately staffed, monitored and enforced resulting in delayed reporting
- National pre-service training capacity cannot meet workforce needs

### OPPORTUNITIES
- **The strategic alliance that was created by legislative act to form NIP can be an engine for creating value and quality laboratory services for Namibia**
- Educational capabilities exist to develop adequate capacity to meet the national needs for laboratory services workforce

### THREATS
- Private laboratory sector competition with NIP
- **NIP capacity doesn’t develop sustainability and growth to meet MOHSS needs**
Disease Prevention, Control and Surveillance

**Situation**
- Limited in country Lab capacity
- No systematic Lab surveillance
- Limited local expertise
- Heavy reliance on NICD

**Recommendation**
- Build in country Lab capacity
- Collection of basic Lab info
- Strengthen specimens logistics
Integrated data management

**Situation**
- >80% Medical Lab data in NIP LIS
- All Vet diagnostic data at CVL
- Data on water and food testing available at Namwater and City of WDH
- Private Labs hosting Lab data
- NIP LIS not linked to MoHSS

**Recommendation**
- Strengthen LIS in all NPHLS Labs
- Link all Lab databases to NIP DR
- Link NIP DR to MoHSS
Reference and specialized testing

Situation
• Engage all other Labs in country

Recommendation
• Conduct thorough assessment
• Build capacity as necessary
Environmental Health, Protection and Food Safety

Situation
• Local capacity at NAMWATER, City of Windhoek, Breweries, Dairies Labs
• Existing Units within MoHSS

Recommendation
• Engage NAMWATER and City of Windhoek Labs
• Engage MoHSS Units
Public Health Laboratory Systems Strengthening Project

• Strengthen the Lab committee chaired by MOHSS
• Development of a National Lab policy
• Development of a National Lab Strategic Plan
• Coordination of fragmented Lab testing services
• Provide minimum standard of practice for all medical Labs
• Legislate and regulate medical Lab services
• Establish an effective Disease Surveillance System
• Development of a Laboratory workforce
Integrated Public Health Laboratory Committee (IPHLC)

- **Membership:**
  - Namibia Blood Transfusion Services (NAMBTS)
  - NAMWATER
  - Ministry of Fisheries
  - Veterinary Laboratory
  - The Army Laboratory
  - PATHCARE
  - CPC Laboratory
  - CLINPATH Laboratory
  - MAXI Laboratory
  - OSHANA Laboratory
  - UNAM
  - SCMS
  - CDC
  - Polytechnic of Namibia
  - NIP
Policy and Strategic Plan development
Development of NPHL policy and Strategic Plan

- Consultation by APHL
- Quarterly review meetings
- Presentations at MoHSS management meetings
- Cabinet approval
- Policy and SP launch
- Motivation for inclusion in the MoHSS capital budget
- Building NPHL
- Human Capacity Development
Namibian NPHL System
Model A: NPHL housed within NIP

Advantages
• Existing NIP infrastructure, HR and testing capacity
• Low initial cost
• Existing SLA with NIP

Risks
• PHL function competing with NIP core clinical Lab function
• Perceived challenges with some stakeholders (private labs)
Model B: new entity within the MoHSS

<table>
<thead>
<tr>
<th>Advantages</th>
<th>Risks</th>
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<tr>
<td>• Own organizational and management structure</td>
<td>• Heavy initial investment</td>
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<td>• National Asset</td>
<td>• Loosing existing NIP expertise</td>
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<tr>
<td>• Coordinate all the Laboratories</td>
<td>• HR</td>
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<td>• No perceived conflict by private Labs</td>
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Implementation
Secret

Cabinet Action Letter for Verification

SUBJECT: THE NATIONAL PUBLIC HEALTH LABORATORY POLICY DOCUMENT

Sponsoring Ministry: Health and Social Services

Cabinet Resolutions:

1. That Cabinet authorize the Ministry of Health and Social Services to establish a National Public Health Laboratory Policy System; and

2. That Cabinet authorize the gazetting of the said Policy.

Draft Cabinet Action Letter Verified by: .................. Date: ............
Official Launch of the NPHL Policy
National Public Health Laboratory System

Implementation Plan

2013-2018
Service Level Agreements (SLA)

• Amendment of the existing SLA with NIP

• Service Level Agreements with non-MOHSS Laboratories
  • Central Veterinary Laboratory
  • City of Windhoek Laboratory
  • Forensic and Toxicology Laboratory
  • Polytechnic of Namibia
  • University of Namibia
  • Namwater Laboratory

• SLA with private medical Laboratories
Memorandum of Understanding with

• CDC
• NICD/NHLS
• SADC Reference Laboratories
• WHO collaborating Centers
• National and International Public Health Laboratories
Proposed NPHL FUNCTIONAL STRUCTURE

NPHL

- Regulations, Licensing and Quality Assurance
- Integrated Disease Surveillance
- Environmental pollution (water, Food, Toxicology)
- Infectious Disease Research and Reference testing
- Training, coordination and support services

- Serology
- Molecular Biology
- Virology
- Microbiology
- Myco-bacteriology
- Parasitology
- New born screening