Introducing the Diagnostic network sub community of practice (DNO Sub CoP)

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ASLM
• Links together country teams (18) from across Africa with global experts

• Fosters a south-south knowledge exchange and joint learning via sharing of knowledge and best practices of laboratory systems strengthening amongst ministries of health
DNO SubCoP: What?

- Collaboration between ASLM and FIND
- Dedicated segment of the ASLM LabCoP

“DNO sub-CoP gathers country teams (laboratorians, clinicians & representatives from ministries of health who support DNO activities in their country) and stakeholders (implementing partners, regulatory and technical agencies) to share challenges, solutions and best practices on optimizing their diagnostic network”
DNO SubCop: Why?

- Many tools, software and strategies for DNO
- Need to identify most suitable approaches & most critical use cases.
- Countries and experts rolling-out DNO tools can align their thinking and knowledge for increased effectiveness and impact of DNO.
- Improve the uptake and the quality of DNO processes in LabCoP countries to promote data driven investments for effective laboratory networks optimization
Key steps involved in DNO

- Definition of the scope and the alignment of stakeholders
- Collection, mapping, and spatial analysis of data
- Selection of scenarios to model and optimize the network
- Implementation of changes and monitoring of associated impact
Processes

Training for data collectors

Data collection

Data curation

Data Visualization

Data analysis and use

updates
Data use & analysis

Data registries & visualization

Triangulate layers of information
• GIS data (location)
• Population (coverage, demand)
• Road network (access)
• etc

ASLM/Public Portals

Resource Map

GIS laboratory capacity and functions data
Sections of the tool
• Laboratory profile
• Laboratory Staffing information
• Infrastructure
• Laboratory departments and testing menu
• Laboratory Quality Management System
• Laboratory Connectivity
• Linkages to laboratory networks
• Biosafety and Biosecurity
• Major Equipment
• Supply chain management

Data Collection

Data curation
ASLM support

- Designate a LabMap focal person(s)
- Data collection training
- Data collection (baseline/updates)

Country

- Data cleaning & re-sharing with countries
- Data analysis and utilization training
- Data registries in resource map
- Data migration to public portal
- Hosting of public portal and resource map
- Designate a data administrator
- Determine use cases for data (ie: export, linkage, analysis)
## Current status

<table>
<thead>
<tr>
<th>Country</th>
<th>Training of Collectors Done</th>
<th>Collection started</th>
<th>Curation done</th>
<th>Resource Map</th>
<th>Training on LabMap Data Analysis and Utilization</th>
<th>Laboratory Portal ready for data uploads</th>
<th>Data uploaded in the Laboratory Portal</th>
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Algorithm

\[\text{Topography, Road network} + \text{Population} + \text{Disease Prevalence} \times \text{Budget} \sum \text{Lab Capacity}\]

= Optimized network configuration for Universal health coverage and International health regulations

“What if?” scenario vs unmet needs

Data use and analysis
Key steps

- Definition of the scope and the alignment of stakeholders
- Collection, mapping, and spatial analysis of data
- Selection and development of scenarios to model and optimize the network
- Implementation of changes and monitoring of associated impact
Problem statement:

“Laboratory networks in Africa do not effectively deliver services for clinical (UHC) and public health (IHR) functions.

Diagnostic services in Africa are generally not equitably available or accessible to the population. Investments for optimizing laboratory networks in a context of limited resources are lacking or not driven by context relevant and geo-localized (GIS) data on laboratory capacity.”
“Strengthen the capacity of regional and national public health institutions by improving their leadership and management in... data collection and management, and laboratory systems.”

Identify gaps for evidence-led planning

“Gap identification will be conducted using ...relevant assessments...which will form the basis for planning”

“Routinely conduct integrated DNO/assessment exercises to increase efficiency and effectiveness of laboratory networks and systems & inform investments”
DNO Subcop Theory of action

Aim: To promote data driven investments for effective laboratory networks optimization

- Improved equitable access to diagnostics
- Increased laboratory networks efficiencies
- Improved patients and public health outcomes
The DNO ecosystem in Africa

High level AU endorsement
Nationally owned and collected data
Routinely updated

Use of analysis and modelling outputs to guide planning and decision making for lab networks and systems

LabMaP

PLANWISE

OptiDx

LabEQIP

Others

Etc...

Supply Chain Design & Planning
POWERED BY LLAMASOFT
The way forward:

Define required expertise within country teams:

- Data managers
- Modellers/analysts
- Health data and statistics division
- Others?
The way forward:
Leverage ongoing activities to strengthen lab networks & systems

1. Mapping
   LabMaP

2. Gap/maturation assessments
   2.1 Viral Load self assessment
   LabNet SCORECARD
   Etc..

3. Country level activities
   NEDL
   Viral load cascade
   TB Dx expansion
   AMR surveillance
   Etc..

4. Define use cases for DNO
   Access?
   Coverage?
   Integration?
   Sample referral
   Others?

5. Evidence based work plans for funding
   PLANWISE
   OptiDx
   LabEQIP
   Etc..

2022 Annual meeting
Thank you

ASLM LabMap team (Instedd, Resolve to Save lives)
ASLM LabCop Team
ASLM/ FIND DNO project teams
AU/Africa CDC

https://aslm.org/what-we-do/labcop/dno-sub-cop/