Key considerations for Expanding COVID-19 Capacity to the subnational level

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COVID-19 in Africa

Cases: 99,062
Deaths: 3,082
Recoveries: 39,085

Map of Cumulative Cases

https://resolvetosavelives.org/timeline/box-it-in
Total estimated testing capacity

45 M

PACT Initiative

Partnership for Accelerated COVID-19 Testing

Test 10 M people in the next 6 months

Total SARS-CoV-2 tests in Africa
Need to scale up diagnostic capacity

Regional scale up

National scale up

Supply chain & stockpiles
1.5M laboratory tests and IPC supplies from Jack Ma foundation distributed to African countries

Jan 2020

April 2020

Healthcare pyramid
Governance and coordination

- Multi-sectoral approach
- Include all stakeholders
- Leverage existing capacity and lab strengthening efforts
- Scale up roadmap

MoH, Laboratory TWG or focal person within the COVID-19 response team

Private sector & academia

Partners and donors

Disease control programs (TB, HIV, etc)

Animal Health

Military sector
Existing capacity

- Infrastructure

- Equipment footprint
  (conventional RT-CR, high-throughput and/or automated plate-forms)

- Specimen transport networks

Needs

- Geographic coverage
  (everyone, everywhere in the country)

- Testing volume

- Testing algorithms
  (what test? where? for whom?)
COVID-19 testing scale up strategy (1): expand laboratories

<table>
<thead>
<tr>
<th></th>
<th>CONTAINMENT</th>
<th>TRANSITION</th>
<th>LOCALISED</th>
<th>WIDESPREAD</th>
<th>WANEING</th>
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</thead>
<tbody>
<tr>
<td>Expand existing NCDC laboratory network for molecular RT PCR</td>
<td>✓</td>
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<tr>
<td>Expand from 9 to 15 laboratories in a 30-day period.</td>
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<td>✓</td>
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<td>Increase national capacity to 1500 tests/day nationally</td>
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<td>✓</td>
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<td>Leverage capacity within high-throughput HIV molecular testing laboratories</td>
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<td>Expand from 0 to 6 Mega-PCR laboratories in Lagos, FCT, Benue, Akwa Ibom, and Anambra states, in a 30-day period:</td>
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<td>Increase combined national capacity to a minimum of 5,000 tests per day across the country</td>
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<tr>
<td>Utilise point of care tuberculosis testing GeneXpert machines for COVID-19 testing</td>
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<td>✓</td>
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<td>Add 41 new processing sites in 30 days</td>
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<td>✓</td>
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<tr>
<td>Increase combined national capacity to a minimum of 7,000 tests per day across the county</td>
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</tbody>
</table>
COVID 19 testing scale up strategy (2): expand referral

Reference: Fonjungo et al, CID, 2017:64
Assess and select sites

- Proximity to treatment centers / transmission hotspots
- Infrastructure and equipment
- Human resources
- Biosafety
  - RT-PCR : BSL-2 (biosafety cabinet)
  - POC or near POC : BSL-1
- Free testing capacity (TB and HIV equipment)

Ensure maintenance of essential testing service for non COVID-19 diseases
Prepare sites for routine operations

• Provide guidance (testing algorithm and protocols)

• Provide documentation (SOP, registers..)

• Upgrade equipment (ie: software upgrade)

• Train staff and assess competency

• Forecast supply chain (reagents and consumables)
Follow and monitor new testing sites

- Define KPI (nb tests, nb of positive results, etc)
  - Inform supply chain forecasting and procurement

- Organize supervision (onsite or remotely):
  - early identification of possible issues and corrective actions
  - Inform further expansion

- Ensure participation in national EQA program
  - simplified options: retesting, rechecking

Quality assured testing
Summary

**What?**
- Extension planning
  - Governance framework
  - Extension roadmap
  - Supply chain forecasting

**How?**
- Testing sites selection
  - Facility assessment checklist
  - Documentation (SOP, registers etc.)

- Testing sites installation
  - Equipment installation
  - Staff training
  - Competency assessment

- Routine testing operations
  - Routine testing
  - Supervision
  - EQA
  - Corrective actions/re-training

**Whom?**
- Laboratory TWG
- Central lab & partners
- Central lab & partners
- Central lab & partners
Thank you