Test, Trace and Treat: Partnership to Accelerate COVID-19 Testing (PACT) in Africa

To help increase continental testing efforts and reduce COVID-19 transmission in Africa, Africa CDC has launched the Partnership to Accelerate COVID-19 Testing (PACT): Test, Trace, Treat. PACT will mobilize experts, community workers, supplies and other resources to TEST, TRACE and TREAT COVID-19 cases in a timely manner to minimize the impact of the pandemic on the Africa continent. Anchored on the African Union Joint Continental Strategy for COVID-19 Outbreak\(^1\), PACT will ultimately help prevent transmission and deaths, and minimize the social and economic harm associated with COVID-19.

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\(^1\) Africa Joint Continental Strategy for COVID-19 Outbreak

All stakeholders are being called on to coordinate, communicate, collaborate, and cooperate to support the PACT Initiative to control COVID-19 in Africa.
This component is aimed at supporting Member States to significantly increase the current testing volume and use targeted testing to identify more cases. In line with the launching of this important initiative, implementing comprehensive strategies to increase testing capacity is very critical. To increase targeted testing, actions should be focused on:

1. **UNINTERRUPTED SUPPLY CHAIN**
   
   Africa CDC, Partners and Member States have to work to establish an uninterrupted supply chain system for test kits and all necessary supplies for the scale-up of COVID-19 testing. Member States should do quantification and forecasting for all necessary supplies and communicate to partners. Africa CDC will provide a platform to help Member States quickly access companies with appropriate quality products, mobilize resources and facilitate supply of donated test kits and reagents.

2. **DECENTRALIZED TESTING**
   
   Molecular diagnosis of COVID-19 has to be decentralized to many laboratories in the same institution, to sub-national, veterinary, private, research and university laboratories across the countries. This required strategic planning involving key stakeholders and considering all the necessary elements for optimal functioning of new testing laboratories. While decentralizing PCR testing, quality of testing and biosafety have to be maintained.

3. **LABORATORY AUTOMATION**
   
   Automation of the extraction phase of PCR testing will allow high volume testing. This can be achieved through the use of automated RNA extractors, negotiating with companies with closed systems to unlock the HIV viral load platform to do testing using test kits and reagents from other companies. In addition, high volume testing can be achieved by using the automated platforms such as GeneXpert from Cepheid, Abbott, Roche and others. Countries should negotiate to get more test kits from these companies.

4. **POOLED TESTING**
   
   Pooling of specimens can be used to increase testing volumes, provided a protocol is validated in each laboratory specifying how many specimens can be pooled without affecting quality and negatively impacting testing outcome.
5 WORKFORCE READINESS

An increase in workforce would allow laboratories to implement special working arrangements such as shifts to maximize utilization of equipment and increase throughput. Member States can assign additional laboratory scientists to PCR laboratories and organize in-country training quickly acquaint them with RT-PCR COVID-19 test protocols to increasing the testing volume.

6 RAPID SPECIMEN TRANSPORT

Establishing and strengthening robust and dedicated specimen transportation is key to increase testing volume and quick return of results for decision making.

7 EFFICIENT AND UNINTERRUPTED WORKFLOW

Streamlined and technology supported laboratory workflow will allow more testing and will also minimize errors in recording and reporting of results. Further, strengthening the equipment maintenance systems and having functional and responsive equipment maintenance arrangement will allow an uninterrupted testing. Maintenance agreement should include calibration of ancillary equipment and certification of safety cabinets.

Infection prevention and control (IPC) considerations

- Infection prevention and control practices\(^2\), and physical distancing measures\(^3\) for COVID-19 should be implemented throughout all response efforts.

- Laboratory workers, specifically, must adopt both standard and transmission-based precautions for COVID-19.

- When collecting laboratory and diagnostic samples (e.g. nasopharyngeal swab), laboratory technicians should wear a medical mask, gown, gloves, and eye protection.\(^4\)

- In addition to using the appropriate PPE, frequent hand and respiratory hygiene should always be performed.

- Appropriate biosafety measures should be observed in each work station of the laboratory.

In support of the PACT TEST component, Africa aims to conduct 10 million COVID-19 tests and establish a continent-wide procurement platform for laboratory and medical supplies.

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\(^2\) Africa CDC: 2019 Novel Coronavirus Disease Outbreak: What Health Care Workers Should Know

\(^3\) Africa CDC: Guidance on Community Physical Distancing During COVID-19 Pandemic

\(^4\) Africa CDC: COVID-19 Guidance on Use of Personal Protective Equipment for Different Clinical Settings and Activities