African Union

AFRICA CDC
Centres for Disease Control and Prevention
Safeguarding Africa's Health

Interim Guidance on the Use of Rapid Antigen tests for COVID-19 Response

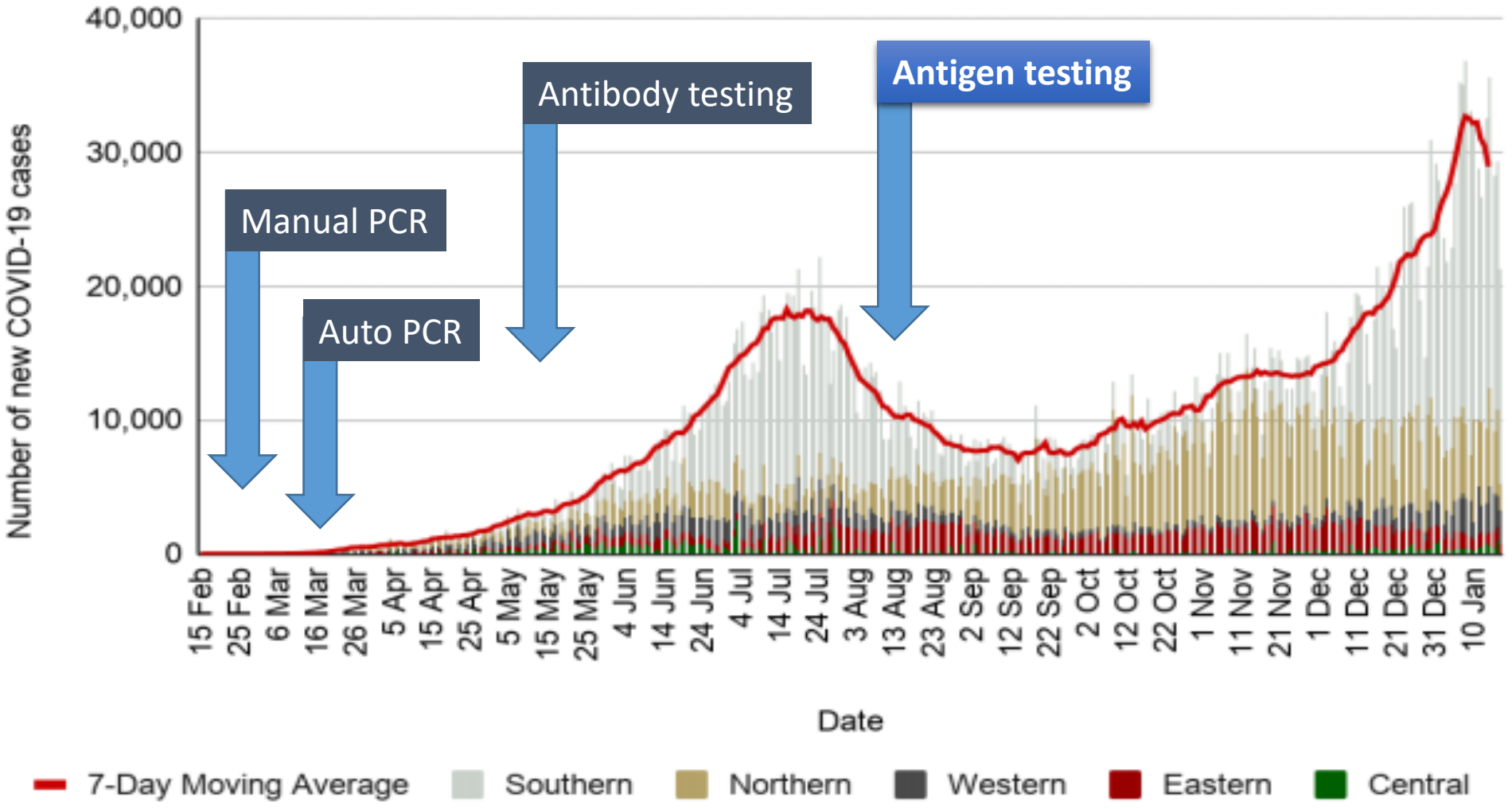
ASLM

AFRICAN SOCIETY FOR LABORATORY MEDICINE

ADVANCING THE LABORATORY PROFESSION AND NETWORKS IN AFRICA

COVID-19 rapid antigen testing

COVID-19: The pandemic



Africa CDC report: 19 January 2021

COVID-19: The testing need

- Diagnostic testing for SARS-CoV2 is vital for the control of COVID-19 pandemic in Africa
- Test all individuals with symptoms consistent with COVID-19 as quickly as possible.
- This is heavily dependent on easy and timely access to testing
- Diagnosis gap between the rRT-PCR testing capacity in laboratories and the number of suspected cases to be tested continues to be a major issue
- Access to these molecular tests and the provision of results in a clinically relevant timely manner remains a challenge
- COVID-19 rapid antigen tests (COVID-19 Ag-RDTs) are an easy-to-use alternative to NAAT, which can provide a result in 15-30 minutes and can be used at point-of-care

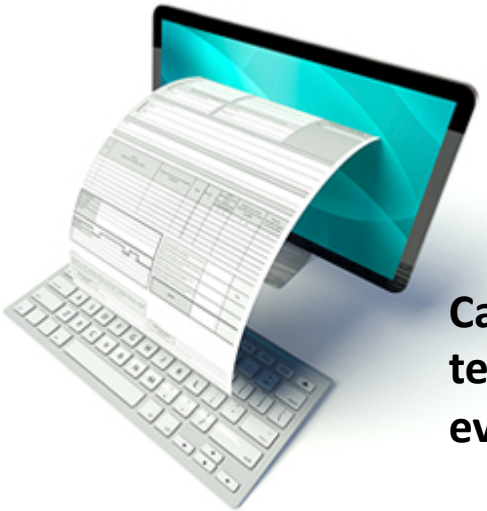
The testing menu has many options, Antigen tests are best suited for widely accessible, rapid screening at point of care

		PCR tests	Antigen tests	Impact of antigen tests
Availability of supply		• Limited supply of automated PCR tests available to African countries	• Available in large supplies, sufficient to fulfill the entire testing demand	• Increases supply in the market to meet demand for resource-light COVID-19 diagnostic tests in African countries
Cost		• Cost per test of ~$10-20 USD is a significant limitation given funding constraints in low-and-middle income countries	• ≤ $5 USD each, antigen tests are 3-4x cheaper than PCR tests, with additional savings on sample transport	• Allows countries to purchase more tests with limited funding available, leading to increased access to testing
Coverage		• Typically conducted in centralized laboratories, creating a **barrier to access outside of urban areas**	• As point-of-care tests, can be **flexibly deployed in all settings**	• Supports decentralization of testing to lower-level health facilities and remote regions, enabling increased testing coverage
Turnaround time		• **Average test result return of ~2-5 days** prevents effective and timely response[1,2]	• Tests results in **10-20 minutes**	• Enable immediate decisions to be taken for patient care, contact tracing, isolation and treatment

1. Mapping of TAT across 10 high volume Sub-Saharan African countries: CHAI analysis, August 2020.
2. TAT of >2 days has a little to no impact on reducing transmission: Ferretti et al., Science 368, eabb6936 (2020).

COVID-19 antigen testing: Support systems

Comprehensive training and supervision



Capturing and integrating testing data to inform evidence-based decisions

Engagement in quality assurance activities

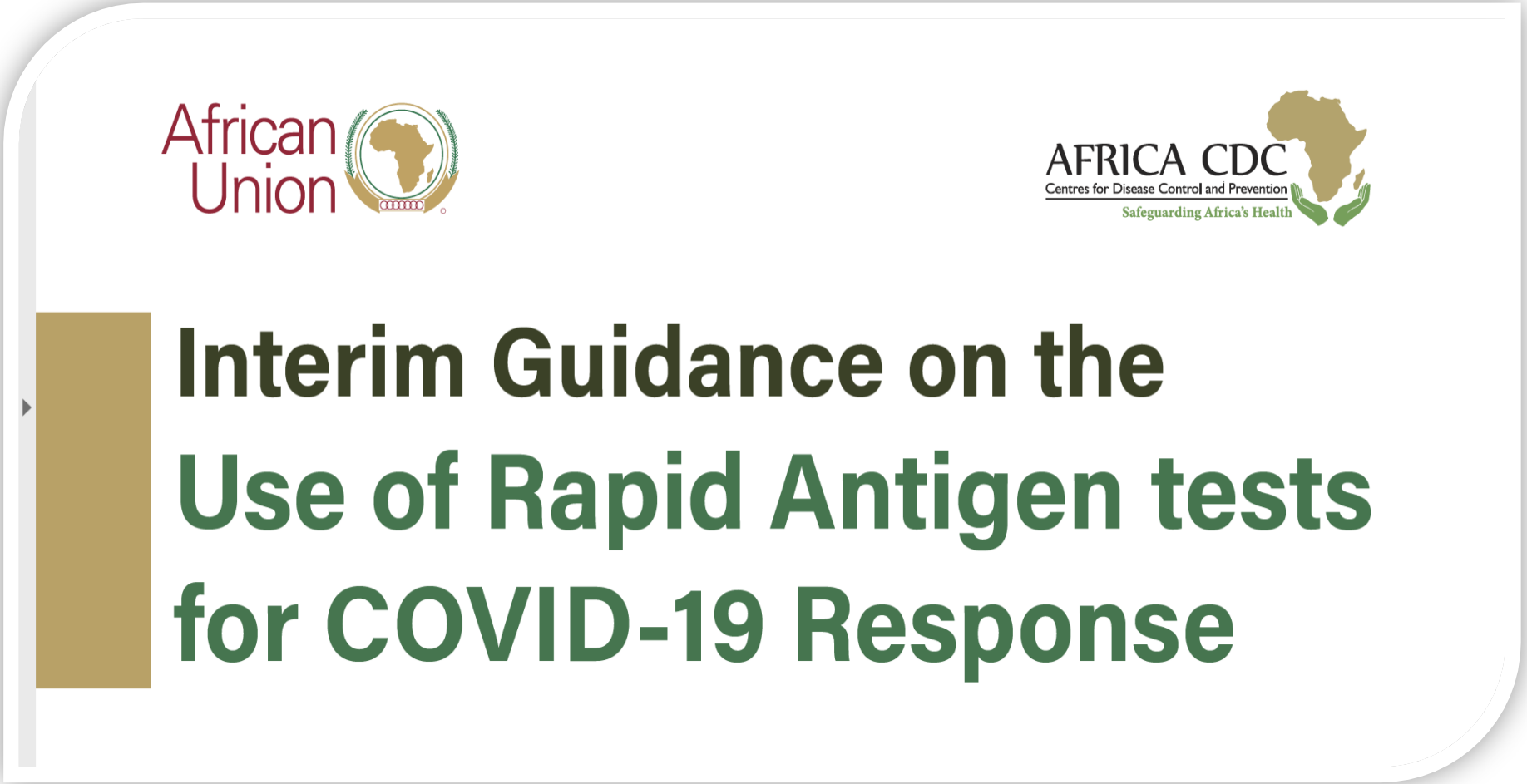
Continuously learning and updating testing strategies

Establishing clear roles for both COVID-19 Ag RDTs and RT-PCR within the new testing strategy

COVID-19 antigen testing

- Antigen testing would reduce testing cost and could double the testing program within existing budgets
- Antigen-based screening programs would allow for greater movement of goods and people by identify infectious asymptomatic cases
- Achieving true herd immunity with vaccinations may take >2 years and thus diagnostics and particularly antigen testing would be needed for managing of the epidemic

COVID-19: Guidance on antigen testing



Use case scenarios for COVID-19 antigen tests.

Associated testing algorithms for COVID-19 antigen tests.