

Expansion of SARS CoV-2 testing: Role of rapid antigen test

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Importance of Expanding Testing for COVID-19 Response

- Access to vaccine and logistics associated to vaccination of large population is a big challenge in Africa
- The effect of new SARS CoV-2 variant on vaccine effectiveness is not known
- Vaccine coverage to achieve herd immunity and subsequently to have an impact on incidence of COVID-19 may take as long as three years

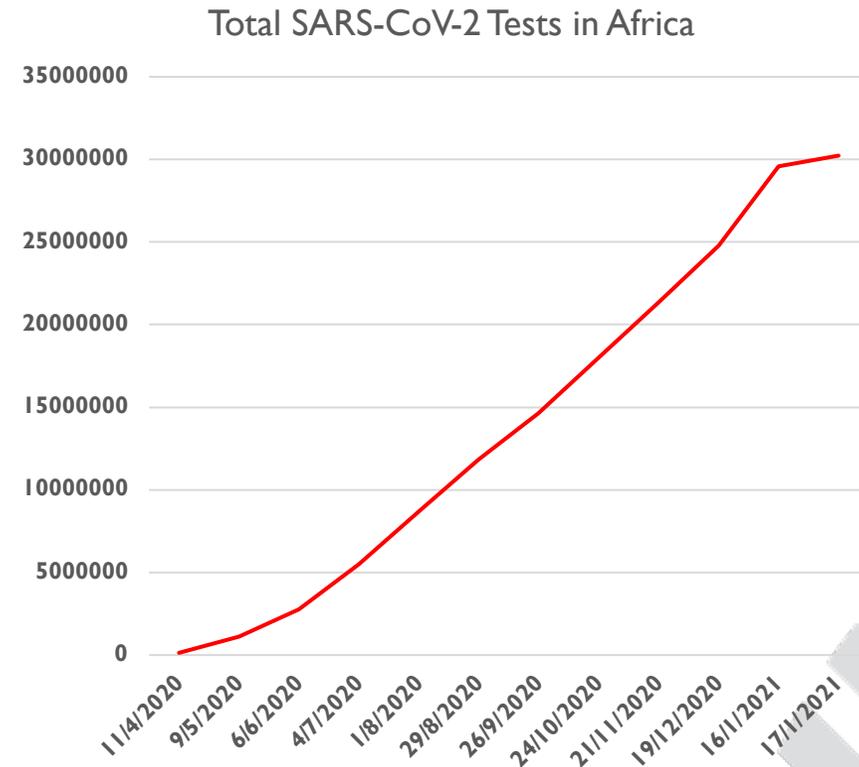
Importance of Test Expansion----

- **Immediate identification and isolation of cases, tracing and quarantining of contacts**
- **Even if contact tracing is not possible, testing will help to empower individuals to protect the people around them**
- **Wide spread testing to limit the impact of COVID-19 in Africa**



SARS-CoV-2 Tests in Africa

- Total of 30.2 million tests conducted
- 11% overall positivity rate
- 22,570 tests per million population
- 2.2% of the African population has been tested
- For every case 9 tests were conducted (optimal testing 10-30 tests per case)



SARS CoV-2 Testing ----

Table 1: Test per case ratio (target 10-30)

No. of Countries	Test per case ratio		
	<10	10-30	>30
	20 (36.4%)	26 (47.3%)	9 (16.3%)

Table 2: Positivity rate (target less than 5%)

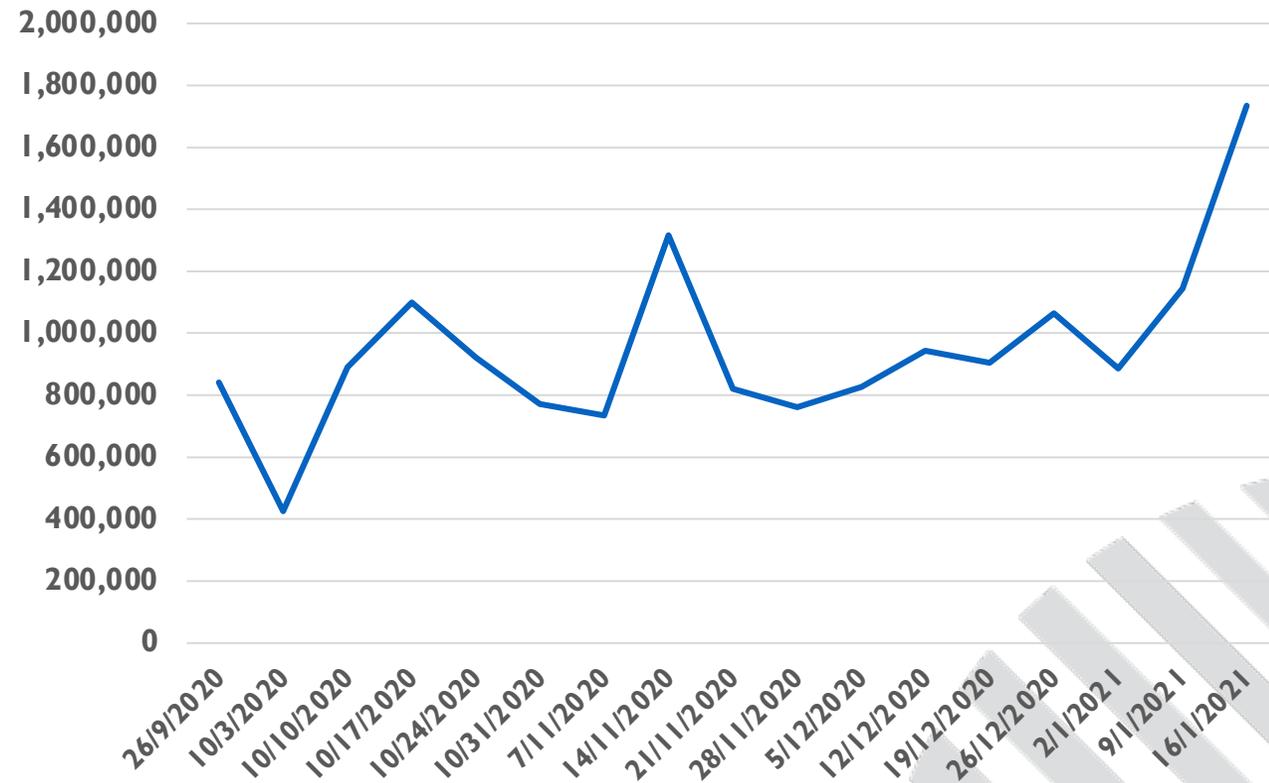
No. of Countries	Positivity rate	
	<5	≥5
	16 (29.1%)	39 (70.9%)



Weekly Increase in Testing Numbers

- The weekly increase in testing number is showed significant increase recently
- Average increase=946,130 tests
- Introduction of antigen test

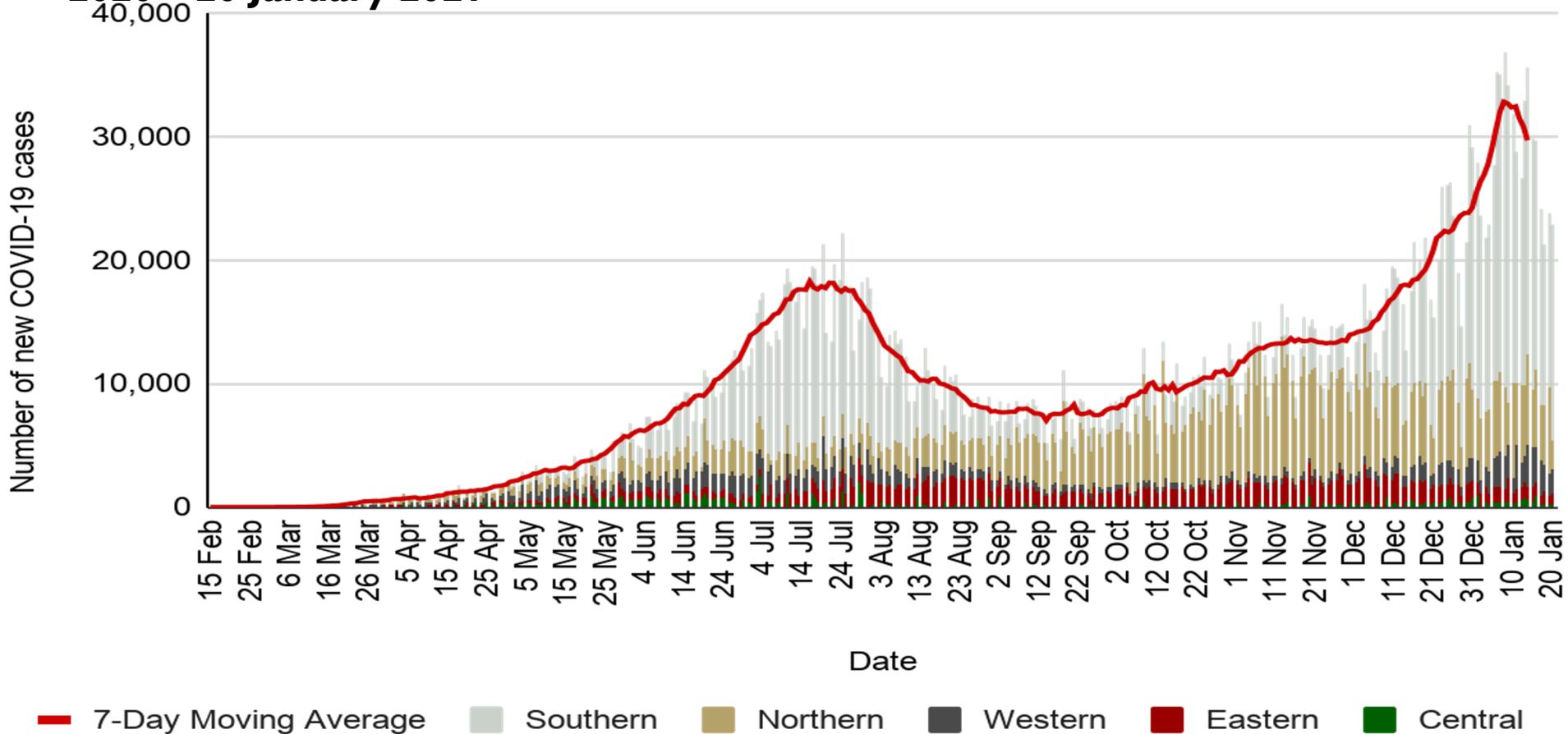
Weekly testing increase



COVID-19 Situation in Africa

as of 21 January 2021, 9am EAT

New COVID-19 cases* reported in Africa daily by AU Region from 15 February 2020 – 20 January 2021



>3.3M

cases

>80K

deaths

CFR: 2.4%

>2.7M

recoveries

(83%)



AFRICA CDC

*Africa numbers are taken from official RCC and Member State reports.

Testing targets

- **Number of cases reported=3,337,079**
- **Optimal testing (10-30 tests per case ratio)=33.4 -100 million tests**
- **Actual testing number= 30.2million (on the lower side of the target)**

Challenges with PCR based testing strategy

- **More centralized, low throughput testing and manual RNA extraction techniques**
- **Specimen transportation**
- **Test kits and supply shortages**
- **Trained human resources**
- **Equipment maintenance**



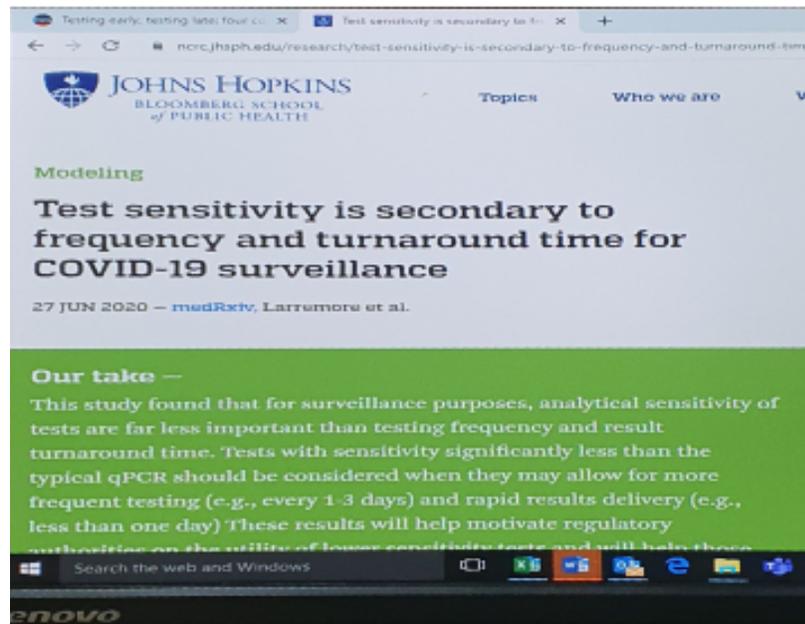
Antigen tests for COVID-19

- **Immunoassays that detect specific viral protein=current viral infection**
- **Relatively inexpensive, can be used at point-of-care**
- **Results in 15-30 minutes**
- **Perform best in the early stage of the infection**
- **Generally less sensitive than PCR tests**



Frequency of Testing vs Sensitivity

There are some modeling studies that indicated testing frequency and turnaround time to have high significance as compared to sensitivity of test to reduce transmission of SARS-CoV-2



Interim Guidance on Antigen Testing

- Africa CDC in collaboration with partners released interim guidance on antigen testing (<https://africacdc.org/download/interim-guidance-on-the-use-of-rapid-antigen-tests-for-covid-19-response/>)
- Similar to WHO guidance with slight modification to address Africa specific needs
- Comprehensive training package developed to support the implementation
- TOT training provided
- Many countries have started rolling out the training





THANK YOU