

Why Antigen Test for COVID-19 Response In Africa?

Yenew Kebede (MD, MSc, MPH)

Head, Division of Laboratory Systems, Africa CDC

Africa Union Commission



Importance of Expanding Testing for COVID-19 Response

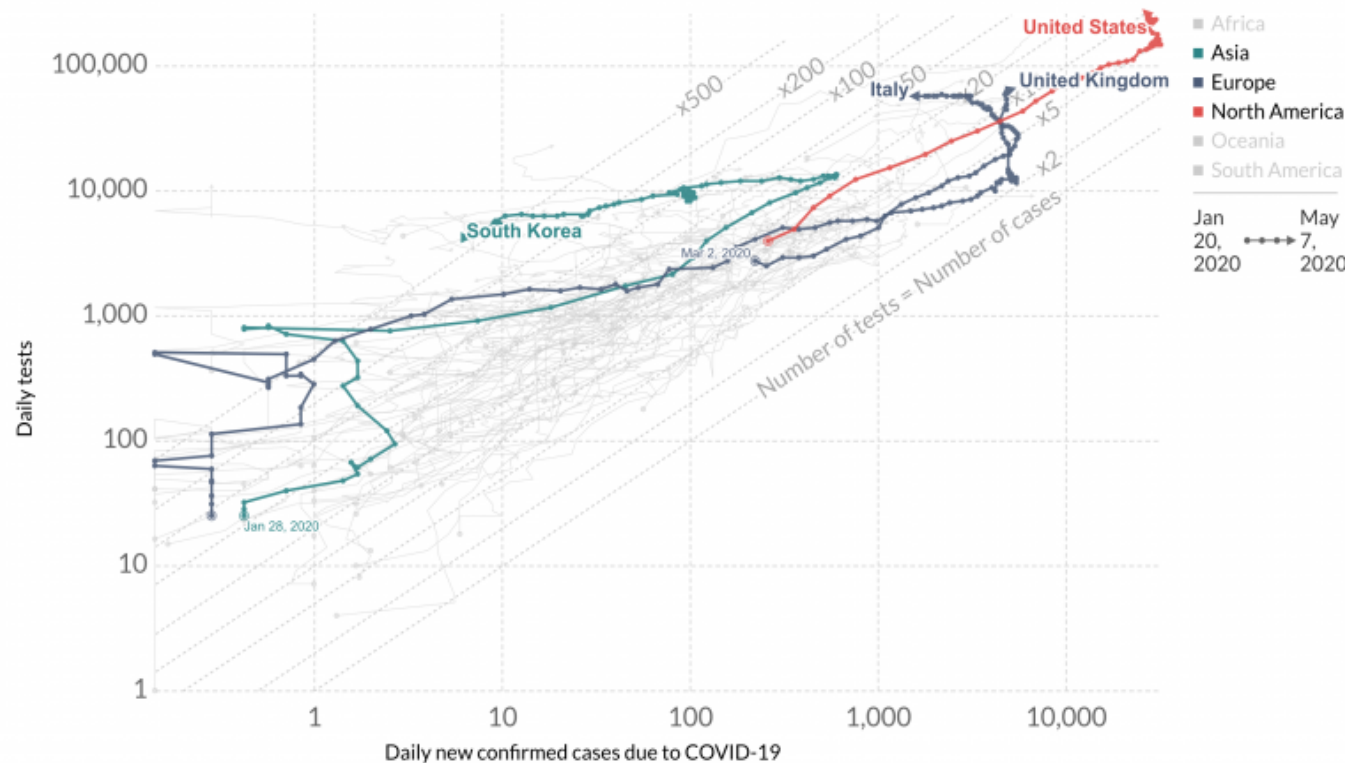
- In the absence of vaccine and specific treatment, immediate identification and isolation of cases, tracing and quarantining of contacts **(contain or slow progression of pandemic)**
- Wide spread but informed testing strategy specially at the early phase of the pandemic is key

Importance of Early expansion of testing

COVID-19: Daily tests vs. Daily new confirmed cases

The figures are shown as a rolling 7-day average.

Our World in Data



Source: Official data collated by Our World in Data, European CDC - Situation Update Worldwide [OurWorldInData.org/coronavirus](https://www.ourworldindata.org/coronavirus) • CC BY
Note: Comparisons of testing data across countries are affected by differences in the way the data are reported. Daily data is interpolated for countries not reporting testing data on a daily basis. Details can be found at our [Testing Dataset page](#)

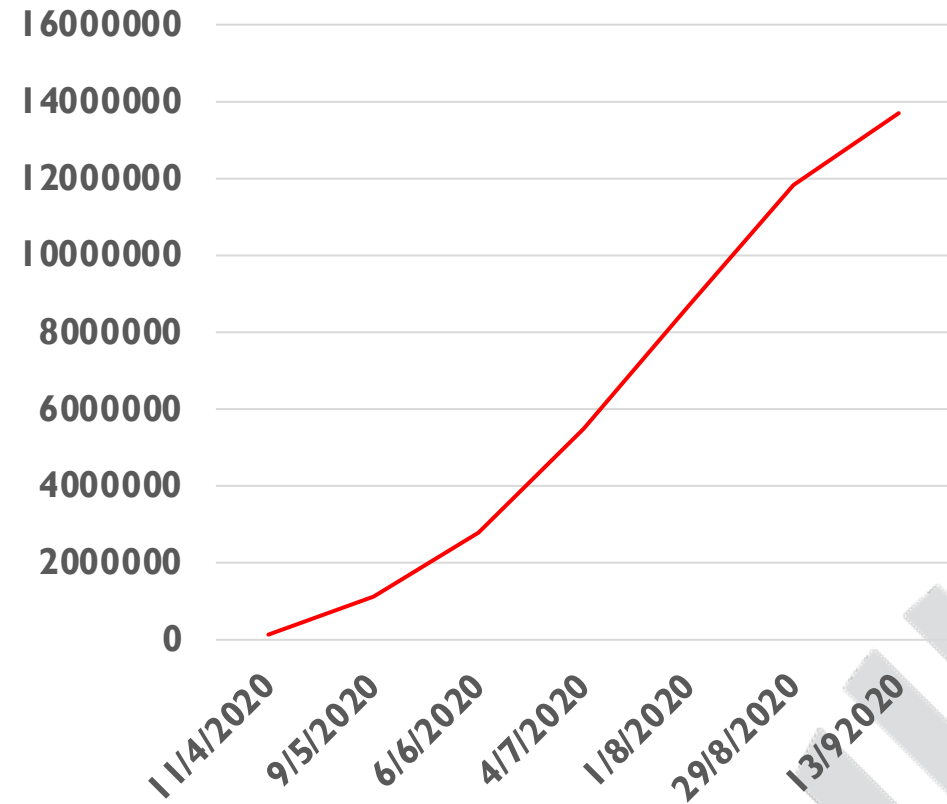
Can Africa Still Benefit from Massive expansion of Testing?

- More than 8 months since the first case was reported in Africa
- Only two countries have registered cases more than 100,000
- 38/55 countries reported less than 10,000 cases
- 25/55 countries reported less than 5,000 cases
- Therefore; most of the countries can benefit from expansion of tests

SARS-CoV-2 Tests in Africa

- Total of 13.8 million tests conducted
- 10% overall positivity rate
- 10,305 per million population
- 1% of the African population has been tested
- For every case 10 tests were conducted

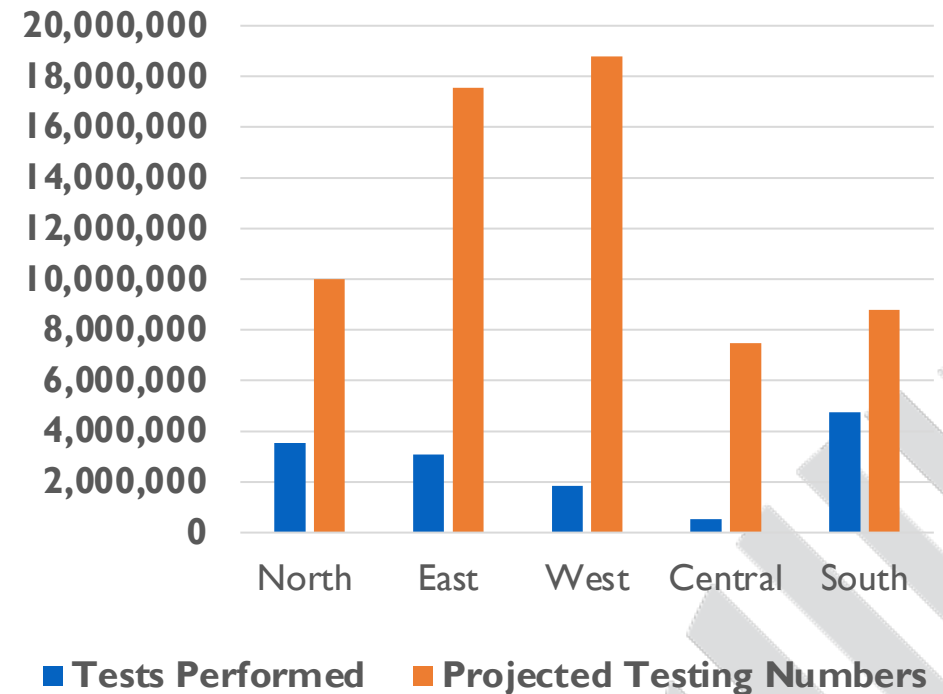
Total SARS-CoV-2 Tests in Africa



Tests Performed vs Projected Testing Numbers

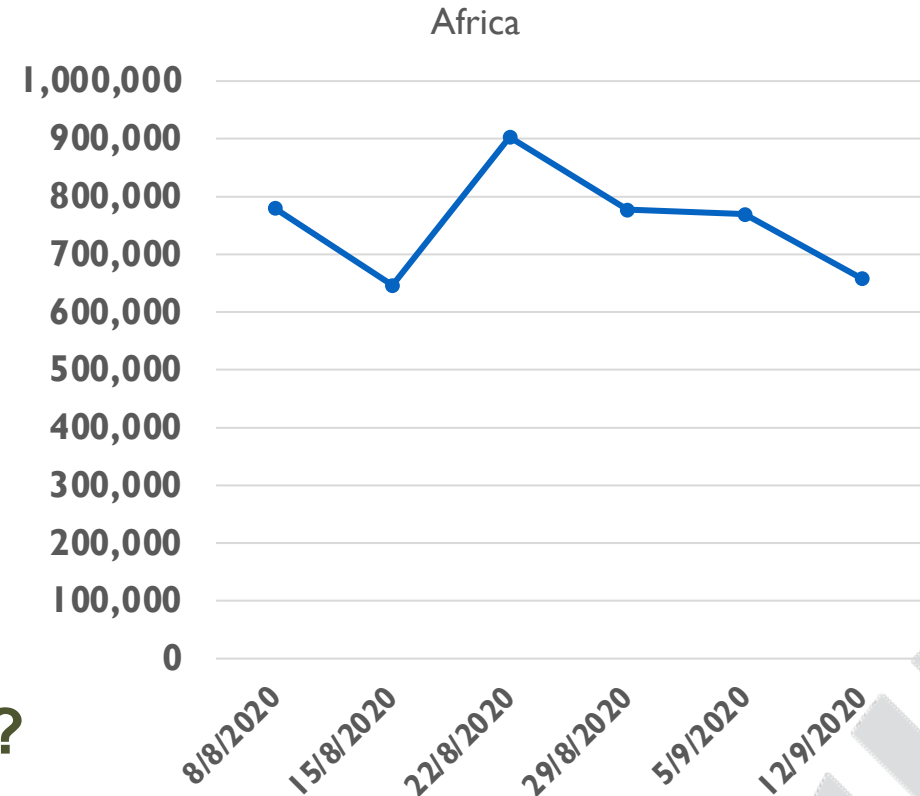
- Projected Tests =63 million
- Conducted tests =13.8 million (21.9%)
- There is significant regional difference (South; 54.3%, North;35.6%, East; 17.6% West; 9.9%, and Central 7.0%)

SARS-CoV-2 tests performed compared to Projected Testing Numbers

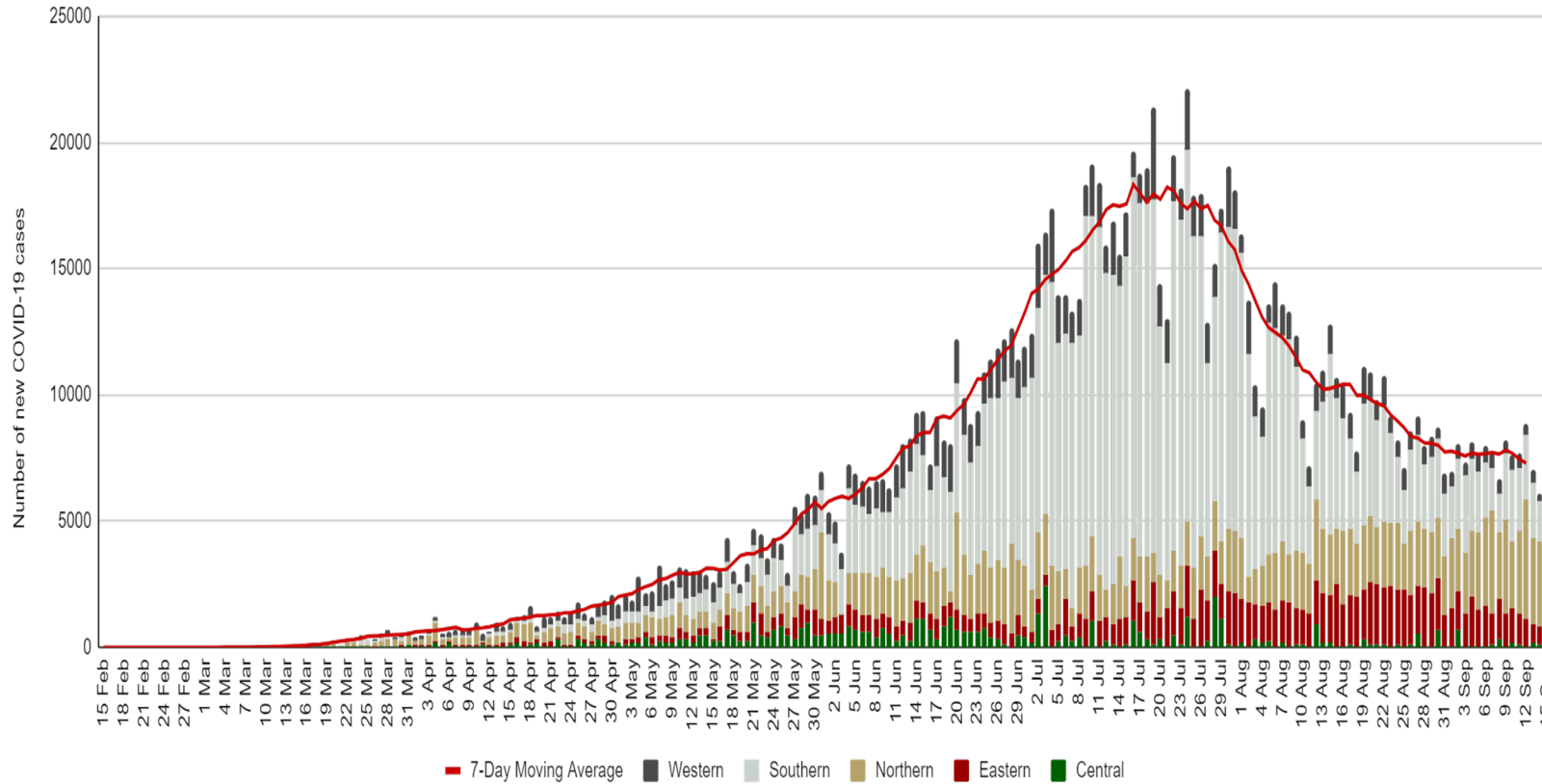


Weekly Increase in Testing Numbers

- The weekly increase in testing number is decreasing on average
- This coincided with a recent decrease in cases reported
- Artificial bending of epidemic curve??



Epidemic Situation of COVID-19 in Africa



Antigen tests for COVID-19

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

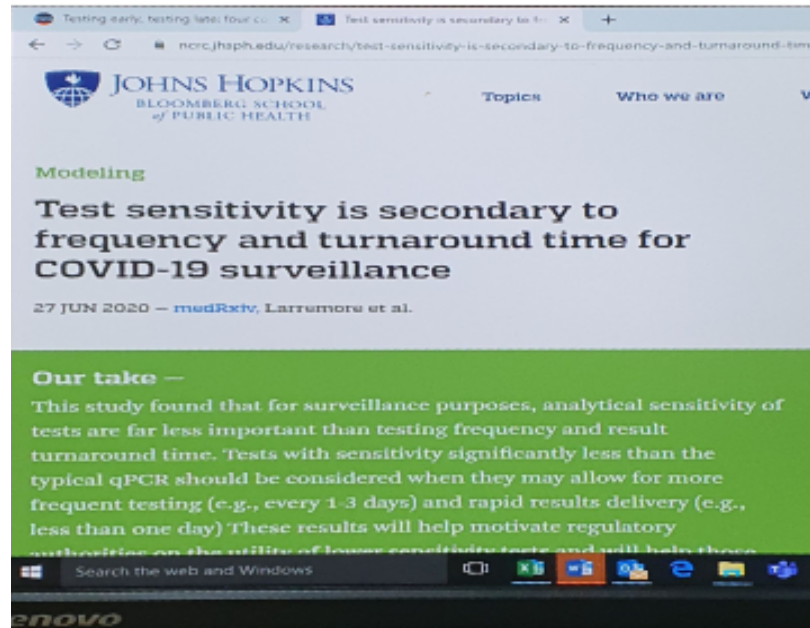


Introduction of Antigen Tests

- Antigen tests can be used in variety of testing strategies (diagnosis, screening, surveillance)
- Diagnostic Testing is intended to identify current infection (**signs and symptoms, asymptomatic but has known or suspected exposure**)
- Testing for Screening=Testing asymptomatic people with no known or suspected exposure specially in high-risk congregate settings

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





THANK YOU