

Nigerian COVID-19 (Coronavirus) Patients Update, the Realities with Medical Laboratory Diagnostic Sites

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Abstract Coronavirus (COVID-19) pandemic has become a monster in various countries with developed technologies and those with little or no technology in medical diagnostics, Nigeria as an example. The quest to curb the pandemic is paramount and the inclusion of medical laboratory components is germane toward bringing COVID-19 to a halt. It is therefore imperative to expand the medical diagnostic sites in Nigeria to ensure wide spread testing and management of COVID-19.

Keywords: COVID-19, medical laboratory, diagnostic sites, Nigeria

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1. Introduction

Corona virus (COVID-19) is ravaging the countries of the world, Nigeria inclusive. The medical laboratory science component is very important in the diagnosis, management, care and treatment of COVID-19. COVID-19 started in China but it is having a decline in the report of new cases, but the speed at which Nigeria is having new cases is alarming after the index case of COVID-19 that took place on 27th February, 2020. [1] The COVID-19 (corona virus) was traced to Hunan Seafood Market of Wuhan city in the Hubei Province of China as declared by China CDC [2,3] The WHO officially renamed the corona virus disease, fondly called by many people as China disease to COVID-19 on 11th February, 2020. [4,5]

The index case of COVID-19 and second positive patient have been discharged while a death of one patient has been reported by Nigerian Center for Disease Control (NCDC) [6], following unrelenting efforts of the health professionals and Nigerian government. The effort of government have been commended but the lapses on the part of government is worrisome as this pandemic could have been curtailed if the ban of international travels and rampart medical laboratory testing is instituted early enough in the country.

2. Medical Laboratory Diagnostic Sites in Nigeria

The plan for Laboratory network by NCDC across the country is a target of 2021 (see Figure 1) but COVID-19 was not in the original plan. 2021 is around the corner but the laboratories in the plan is not yet commensurate with the time plan. The emergence of COVID-19 has made NCDC to announce 5-testing sites (see Figure 2) across the nation [7]. The sites are in Lagos, Edo, Osun States and the Federal Capital Territory (FCT). Lagos state has two sites.

Nigeria is a big country called giant of Africa with 6 geopolitical zones. It is instructive to note that the laboratory sites according to geopolitical zones are South West – 3 Laboratories (Lagos and Osun), South South – 1 Laboratory (Edo), South East – 0 Laboratory, North Central/ FCT – 1 Laboratory, North West – 0 Laboratory and North East – 0 Laboratory. It is therefore very urgent for the Nigerian government through NCDC to immediately put up COVID-19 laboratories in South East, North East and North West respectively for a good spread in the first instance and continue according to plans for every state.

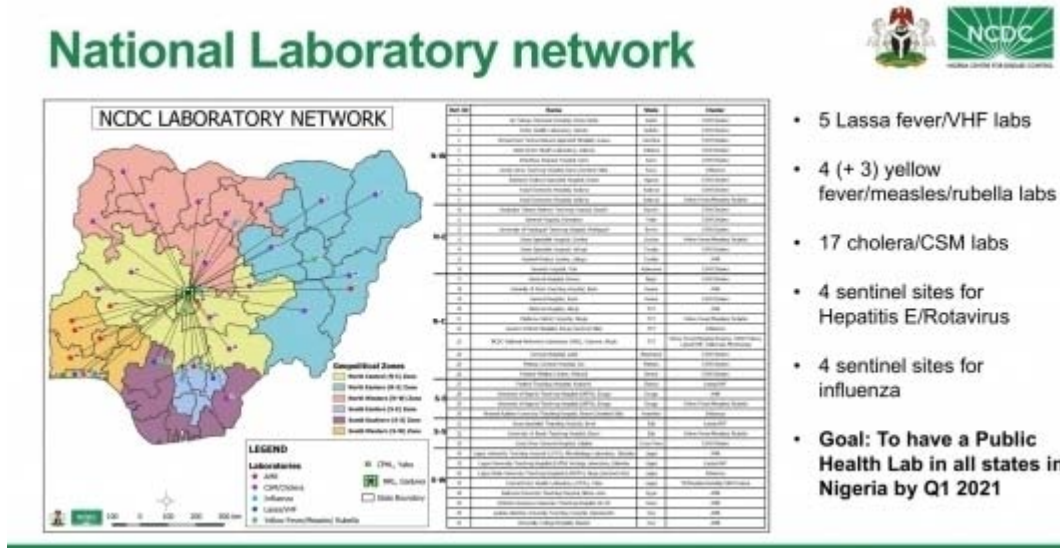


Figure 1. Plan for National Public Health Laboratories in all states in 2021 without corona virus in mind [17]



Figure 2. Map of Nigeria showing testing sites for COVID-19 [18]

The NCDC have developed a very good safety and diagnosis procedures [8] with little or no information on the laboratory staff with their qualification or license of practice to work in such public health laboratories. This calls for concern on the quality of test results expected in line with international best practices. There is a need to specify the role of Pathologists, Medical Laboratory Scientists, Public and Environmental Health professionals and logisticians in the scheme of planned public health laboratories.

Chollom [9,10] posits that results of COVID-19 so far released may be skewed to the proximity of testing centers and recommended upgrade of state epidemiological units to state centers for disease control. The COVID-19 samples on transit for a very far distances in search of testing centers may also pose another risk for Nigerian population.

The best testing methodology of COVID-19 is real time reverse transcription - polymerase chain reaction (rRT-PCR) as recommended by WHO [11,12] and implemented by NCDC [8]. This method could be well positioned at the geopolitical centers while lesser and cheaper methodologies could go on at the state public

health laboratories thereby bringing the test closer to the people. This could be achieved with Rapid Detection and Point-of-Care Diagnostics for COVID-19 [3,13]

Nigeria has prepared [14] for the pandemic and NCDC is up for the challenge [8], but the improvement on the aspect of medical laboratory services and public health diagnostics would go a long way to give the actual picture and provide adequate medical laboratory data for the COVID-19 cases in Nigeria.

Construction of modern laboratory facilities by Nigerian government could be a lesson that Nigeria would learn from China that transported sample to Beijing for testing before deploying mobile biosafety laboratory for testing and subsequently build some laboratories close to the people with BSL-2 systems. [15,16]

3. Conclusion

There is urgent need to re-strategize in the effort towards curbing COVID-19 especially with regards to medical laboratory diagnosis as a major component in infectious diseases control globally. Nigeria should rise to

the challenge towards constructing medical laboratories in all local government areas of Nigeria starting from 6 geopolitical zones, States and Local Governments respectively.

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Conflict of Interest

None.

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