COVID-19

FEDERAL MINISTRY OF HEALTH

NIGERIA CENTRE FOR DISEASE CONTROL

Strategies to Improve Surveillance for COVID-19

GUIDANCE FOR STATES

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About NCDC

The Nigeria Centre for Disease Control (NCDC) is Nigeria's national public health institute with the mandate to protect Nigerians from the impact of communicable diseases of public health significance, amongst other responsibilities. It does this through evidence-based prevention, integrated disease surveillance and response activities, using a One Health approach, guided by research and led by a skilled workforce.

NCDC's operations and activities are guided by five key goals to:

- Accurately measure the burden of infectious diseases in Nigeria
- Ensure Nigeria is able to meet its international obligations as a member of the World Health Assembly
- Develop a Public Health laboratory service network to support the detection and prevention of, and response to critical infectious diseases
- Reduce the adverse impact of predictable and unpredicted public health emergencies
- Create an efficiently managed and evidence-based organisation with a clear focus of health promotion and disease prevention.

NCDC currently operates through five directorates: Surveillance and Epidemiology, Public Health Laboratory Services, Health Emergency Preparedness and Response, Prevention Programmes and Knowledge Management, Finance and Accounts and Administration and Human Resources.

1. Background

Since the declaration of the coronavirus disease (COVID-19) outbreak as a Public Health Emergency of International Concern (PHEIC), the Nigeria Centre for Disease Control (NCDC) has been working with states, and partners to develop guidance for Nigeria's public health response.

Ensuring access to testing is a major priority in Nigeria's "test-treat-trace" COVID-19 response strategy. The NCDC has led the rapid scale-up of laboratory testing facilities through multiple molecular platforms. The NCDC has also secured more testing kits and expanded human resource capacity to ensure the country is able to rapidly scale -up testing. **But, in addition to increasing the numbers of people tested, we have to ensure that testing serves the purpose for which it is done – identifying people to bring into care, initiate a public health response and reduce transmission.**

There is evidence of established community transmission in majority of the states in Nigeria[1] . In view of the increase in cases and possibility of local transmission in some locations, there is a need to expand testing to include more categories of people at risk and ensure that contact tracing is effective. This is expected to improve identification of cases and limit the spread of COVID-19. This will also help public health authorities at the national and state levels to understand the burden and patterns of spread.

Sample collection guidelines should be followed in the collection, packaging and testing of samples. Appropriated infection prevention and control measures should also be followed during the sample collection process. Samples should be collected immediately a suspected case is identified. Individuals in self- isolation /quarantine should have samples collected on day 14 except they develop symptoms while in self-isolation and require immediate sample collection.

This guidance outlines strategies for states to implement towards improving case identification, increasing sample collection and effective contact tracing activities.

1 *NCDC COIVD19 national Situation Report 3rd June 2020; 68% of cases have no travel history and no history with a confirmed case of COVID-19*

2. Categories for testing

The following people should be prioritised for testing.

1. All high-risk contacts of confirmed or probable cases[2]

    a. Determinants of 'high-risk contacts'

    It is important for contacts to be categorised, so that all high-risk contacts are identified, followed up and tested immediately.

    i. People with direct physical contact with a probable or confirmed case. These include:

    - Individuals living or sleeping in the same home
    - Individuals in shared accommodation sharing kitchen or bathroom facilities
    - Sexual partners
    - Anyone who cared for a probable or confirmed COVID-19 case without using proper personal protective equipment (PPE)

2. All persons of Interest and contacts as part of discharge criteria from quarantine and self-isolation[3]
3. Symptomatic contacts of known COVID-19 cases
4. Symptomatic healthcare workers
5. All persons who present with influenza-like symptoms: acute respiratory infection with a fever of ≥ 38 degrees Celsius and cough with onset within the last 10 days[4]
6. Persons with symptoms of Severe Acute Respiratory Infection (SARI) including pneumonia: Acute respiratory infection with a history of fever or measured fever

2 *See contact tracing guidelines in Appendix 1*

3 *See the guidelines on testing before discharge, Annex 1)*

4 *Technical Guidelines for Integrated Disease Surveillance and Response in Nigeria 2013*

of ≥ 38 degrees Celsius and cough with onset within the last 10 days and requires hospitalisation

7. Persons with symptoms suggestive of COVID-19 captured during active case search in affected communities
8. Asymptomatic close contacts of a confirmed case of COVID-19
9. Patients with acute or chronic shortness of breath due to other causes (chronic renal disease, chronic heart disease, chronic respiratory, disease etc.
10. Healthcare workers who have had direct contact with a confirmed case and have not worn appropriate PPE or had a breach in IPC procedures while in contact with confirmed case
    a. Healthcare workers including nurses, nursing aids, cleaners, morticians etc. who have not worn appropriate PPE
    b. Healthcare workers present in the same room when an aerosol generating procedure is undertaken on the case
    c. Healthcare workers involved in emergency/exposure prone procedures i.e. surgery/CPR/ intubation /suctioning on confirmed cases and without use of appropriate PPE
11. Laboratory personnel who have worked in laboratories where there has been a breach of laboratory containment with or without direct contact with specimen
    a. Laboratory workers who have conducted unprotected handling of clinical/ laboratory specimens
    b. Laboratory workers who have handled samples without the appropriate biocontainment facilities
    c. Laboratory workers working in laboratories where IPC measures have been breached
12. Infant of a positive COVID-19 caregiver or caregiver for a child confirmed to have COIVD-19

13. Anyone who has had at least 15 minutes face-to-face (<2 metres distance), contact with a probable or confirmed case, OR

    a. Commuters sitting within 5 feet (in any direction) of a COVID-19 confirmed case in a tricycle, vehicle, airplane, train, ship, including drivers and crew members.

Other contacts not in these categories above are low-risk and should therefore remain in self-isolation for 14 days and inform the State Response Team if they develop any symptoms prior to testing.

3. Standard Case Definition[5]

SUSPECTED CASE	*(Symptoms with international travel)* Any person with acute respiratory illness (fever and either cough, difficulty breathing or shortness of breath) or other symptoms such as recent loss of sense of taste or smell, body pain, headache, runny nose, fatigue, diarrhea/abdominal pain	New respiratory symptoms without fever (cough, difficulty breathing or shortness of breath) and no other explanation, or other symptoms such as recent loss of sense of taste or smell, body pain, headache, runny nose, fatigue, diarrhea/ abdominal pain; AND a history of travel to or residence in a country reporting COVID-19 within 14 days prior to symptom onset.	*(Symptoms with contact to confirmed case)* Any person with new respiratory symptoms (cough, difficulty breathing or shortness of breath, with or without fever), or other symptoms such as recent loss of sense of taste or smell, body pain, headache, runny nose, fatigue, diarrhea/ abdominal pain; AND had contact with a confirmed or probable COVID-19 case (see definition of contact) in the last 14 days prior to symptom onset.	*(Acute respiratory illness in an area of moderate or high COVID-19 prevalence with no other explanation)* Any patient with acute respiratory illness within the last 10 days (fever and either cough, difficulty breathing or shortness of breath) or other symptoms such as recent loss of sense of taste or smell, body pain, headache, runny nose, fatigue, diarrhea/ abdominal pain; AND in absence of an alternative diagnosis that explains the clinical presentation **OR** AND residing or working in the last 14 days in an area identified by NCDC as a moderate or high prevalence region.

5 *See NCDC COVID-19 Case definition guidelines*

PROBABLE CASE	Any suspected case for whom testing for COVID-19 is indeterminate test results	Any suspected case for whom testing was positive on a pan-coronavirus assay	Where samples were not collected before the demise of a suspect case	
CONFIRMED CASE	Any person with laboratory confirmation of SARS-CoV-2 infection with or without signs and symptoms.			

4. Methods for case identification

State Epidemiologists should ensure the use of both active and passive case search, in identifying suspected cases. This is to increase early case detection, prompt reporting, confirmation, and isolation of those who test positive to break the chain of transmission.

a. **Active case search (ACS):** This is the systematic identification of people with COVID-19 using the specified case definition. This should be done in health facilities or in communities. For example, community volunteers can be engaged to visit households and identify persons who may be high-risk or have symptoms associated with COVID-19 for testing.

b. **Passive Surveillance**: A passive surveillance system relies on the cooperation of health-care providers to report suspected cases of COVID-19. Clinicians should be informed to report any suspected case of COVID-19 immediately to the LGA DSNOS or through established channels such as the State hotline for COVID-19

5. Strategies to scale up case identification and sample collection

These are recommended approaches for states to introduce in order to increase surveillance and identify those who meet the national case definition or who are high-risk contacts.

1. Participatory Approach
    a. Self-reporting to public health facilities/authorities
        i. Self-administered symptoms checklist
        ii. Online assisted symptom screening e.g. self-assessment bots, SMS based self-assessment and online self-assessment.
    b. Toll free call centre where members of the public can call to report testing
2. Community based Approach
    a. House to House symptom screening for people with symptoms
    b. Community informant reporting
    c. Verbal autopsies
3. Hospital based Surveillance approach
    a. Patient symptom screening and triage of persons with influenza-like illness
    b. TB/COVID-19/Influenza co-infection screening
    c. Routine Health Care Worker screening and surveillance
4. Primary Health Care approach
    a. Patient symptom screening and triage
    b. Surveillance among all patients with fever and cough
    c. TB/COVID-19/Influenza Co-infection screening
    d. Routine Health Care Worker screening and surveillance
5. Point of Entry
    a. Person of interest (POI) screening at international borders (airports, land crossings and seaports)

6. Enhanced Surveillance for Residential Facilities and Vulnerable Groups
    a. Targeted screening of vulnerable groups including IDP camps and prisons
    b. Targeted screening of the elderly at the community level
7. Mortality Surveillance
    a. Identify high risk contacts of probable cases
    b. Monitoring of health care workers, close contacts, mortician, and cemetery workers who may have had close contact with the deceased and their family

6. Sample collection locations

These are the recommended sites for sample collection in the States.

1. Community -based sample collection
    a. Sample collection booths in PHCs
    b. Drive through sample collection centers
    c. Sample collection from homes
2. Health facility-based sample collection in secondary and tertiary health facilities Laboratory based sites
    a. Secondary and Tertiary level health facilities
        i. High Dependency Units (HDUs)/Intensive Care Units (ICUs)
        ii. Wards
        iii. Out-Patient Department (OPD)
3. Isolation centres
    a. Formally designated isolation centres

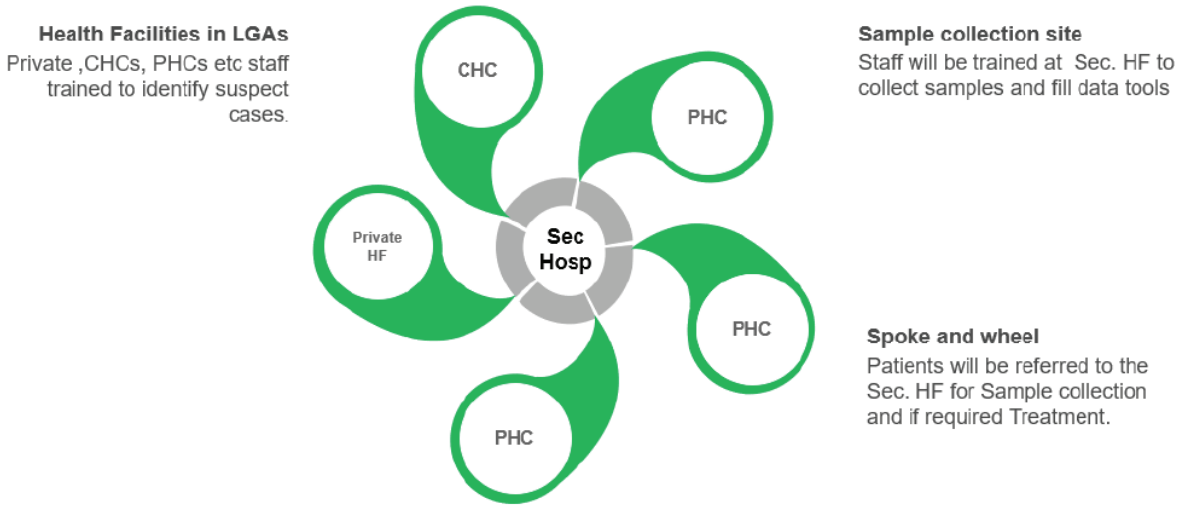

Figure 1: Spoke and wheel model for sample collection sites in secondary and tertiary health facilities

7. Strategies for demand creation for sample collection

The strategies currently used to identify clients should be reviewed to ensure that people who are at high risk, are captured and resources are effectively used. The following strategies should be adopted by states:

1. Scale-up risk communication through channels such as social media and mass media for awareness creation on who exactly is being targeted for testing and community mobilisation activities to inform the public about these new categories. This should be done alongside plans at the states to increase case detection and put a system in place to capture information into the surveillance system.
2. Advocacy, training and sensitisation of public and private health facilities management and health workers to encourage them to identify cases in these categories and report to LGA DSNOs. Triage of patients and referral to health facilities where samples can be collected should be instituted.
3. Implement a well-coordinated active case search in communities with established local transmission to identify suspected cases
4. Maintain a database of contacts and follow up with contacts and POIs who are on self-isolation or quarantine to ensure they are tracked and have samples collected for testing

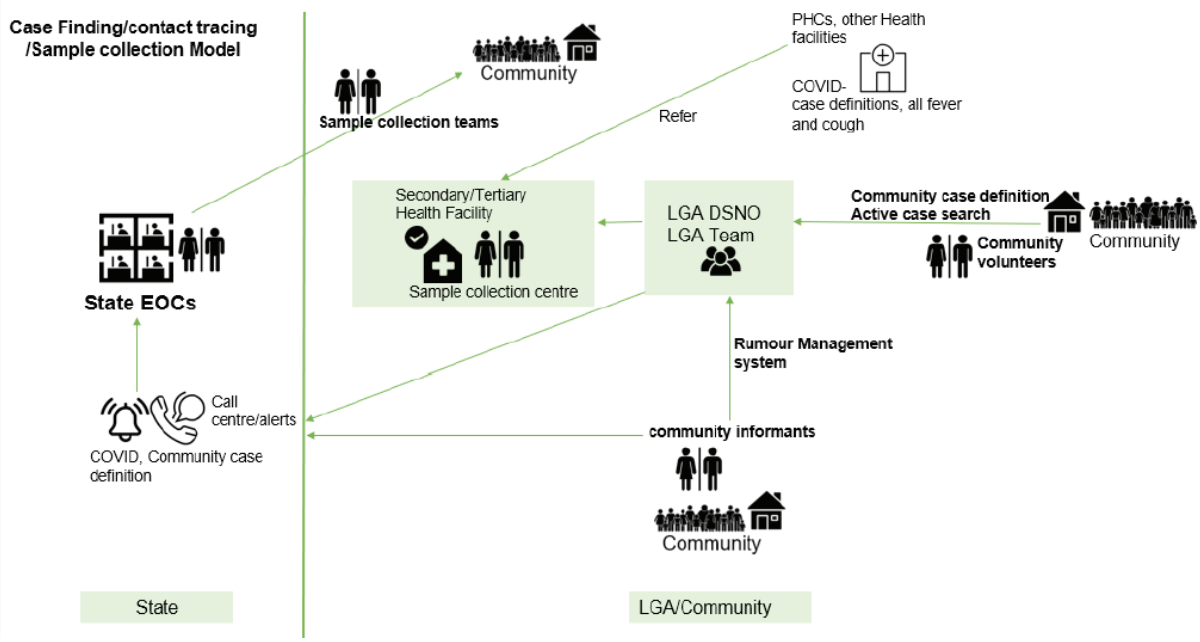

Figure 2: Surveillance strategy-LGA/State case detection model

5. Encourage self-reporting of high-risk contacts of every suspected case and have samples collected for testing
6. Engage community volunteers to identify cases in communities through rumor investigation and house to house case search and escalate to LGA DSNO
7. Establish and strengthen toll-free call centres in order to provide capacity to respond to alerts and calls from the public. Arrangements should be put in place to increase the number of persons who receive calls, dedicate lines for health workers/health facilities to report to state EOCs, etc.

8. Other logistic considerations in improving sample collection

In addition to considering the strategies as outlined, states should expand their capacity to manage the anticipated increase in samples to be collected.

1. Ensure availability of adequate numbers of trained persons who can collect and manage samples

2. Strengthen supply and distribution of sample collection kits, virus transport medium and transport accessories
3. Strengthen the sample transportation system from collection site to accredited laboratory
4. Increase availability of data collection tools
5. Ensure provision of adequate PPEs for sample collection teams
6. Redesign service to reduce risk e.g. consider staggered appointments at collection points (with IPC guidelines followed) to reduce transmission risk as has been implemented by some states.
7. Provide security and travel logistics for movement of teams' collecting samples from homes and the community
8. Ensure environmental cleaning and waste management at sample collection sites

9. Data Management

Data collection should be done in line with the principles of confidentiality and using the appropriate case investigation forms on the electronic reporting platform SORMAS (or paper-based systems where there is no electronic system in place).

Attention should be paid to ensuring that the case investigation forms are properly filled (especially for all critical variables) prior to sample collection and have data entered onto SORMAS platform. State Teams should keep track of samples collected in their states on daily basis and ensure that every unique sample has a case investigation form filled and entered onto SORMAS to remove disparities.

In order that all confirmed cases can be followed up to ensure they are isolated, and their contacts identified, it is essential to verify and confirm the entry of correct patient contact information[6].

Surveillance/data officers should verify and confirm the entry of correct patient contact information[6] to ensure that confirmed cases can be followed up, isolated, and contact tracing is done effectively.

6 *See guidelines for contact management*

10. Improving Contact Management

Contact tracing is a critical containment strategy for COVID-19. Contact tracing should commence as soon as a suspected case is identified, and adequate counselling should be provided to all suspected cases and their contacts.[7] All contacts for each case should be added to the line-list, advised to self-isolate for 14 days and followed up by the State Response Team. However, it is important to prioritise testing for high-risk contacts while low-risk (casual) contacts should be followed up and tested if they develop any COVID-19 related symptom.

To improve contact management, coordination should be decentralised to the LGA level with reports provided daily to the State Response Team. States should increase human resource available for contact tracing and management by engaging community volunteers to work with the LGA DSNO to follow up contacts. Existing community resources should be prioritised including Voluntary Community Mobilisers (VCMs). Adequate training on contact management should be conducted including categorisation of contacts, prevention of infection and filling of contact management forms.

All high-risk (close) contacts of confirmed cases should be prioritised for testing and followed up for a total of 14 days. Low risk (casual) contacts should be followed up and tested if they develop symptoms.

To ensure success, the process of contact management must include adequate community engagement. State Response Teams should work with the state and local government health educators, partners, religious leaders and other stakeholders to adequately engage communities to decrease resistance and stigma.

11. Key steps for contact tracing

Adequate community engagement should be prioritised by states as part of efforts to improve performance and encourage compliance.

- Identify and notify suspected cases of their status

7 *Operational Guidance for Case Finding, Tracing, Categorisation and Management of Contacts of COVID-19 Cases in Nigeria*

- Provide counselling to all suspected cases. Provide information on isolation, treatment, and prognosis.
- Interview suspected case, line list all their contacts and categorise based on risk
- Once a case is confirmed, locate, and notify contacts of their potential exposure, offer testing to all close contacts, provide instructions on self-isolation or institutional isolation in community
- Arrange tests for casual contacts care if they are ill (develop symptoms). Provide instructions on self-isolation if they do not have symptoms, follow them up for 14 days and discharge
- Monitor contacts and report daily on each person's symptoms and temperature for 14 days after the person's last contact with the patient while they were infectious
- Arrange for home care or evacuation to treatment or isolation centre for all contacts who become positive in line with the national guidelines

12. References

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