Version: July 2019

[Country Name]
YELLOW FEVER DIAGNOSTICS REQUEST FORM

This template is for countries requesting Gavi support for procurement of yellow fever diagnostic reagents, supplies, and equipment under the Gavi Board-approved Yellow Fever Diagnostics initiative. The following are mandatory requirements to be submitted alongside this request form:

- Signatures required to endorse this request before submission to Gavi: i) Minister of Health, ii) Director of national yellow fever laboratory, and iii) Director of Finance for Ministry of Health. The signature of the Minister of Finance (or their delegated authorities) is recommended but not required.
- The Coordination Forum (ICC, HSCC or equivalent body) is required to endorse this request before submission to Gavi. This can be done also through the ICC/HSCC endorsement of the Joint Appraisal (JA) and should be reflected in ICC/HSCC minutes.

Yellow fever diagnostic procurement support is provided to allow more timely, reliable identification and laboratory confirmation of yellow fever cases for more rapid containment of outbreaks and better prioritisation of preventive yellow fever vaccination efforts. Specifically, this support is intended to assist countries' efforts to follow World Health Organization (WHO) recommendations when conducting yellow fever diagnostic tests on all samples received from suspected yellow fever cases. The support is only available to Gavi-eligible countries in Africa that are classified as "high-risk" for yellow fever by WHO under the Eliminate Yellow Fever Epidemics (EYE) strategy[1]. The countries that currently meet those criteria are listed in the **Yellow Fever Diagnostics Support Guidelines**.

The request will be reviewed by members of the Independent Review Committee (IRC) who will make a recommendation to Gavi[2]. Following the independent review there will be a clarification period (30 working days) for countries to respond to any 'issues to be addressed' ahead of final Gavi approval and disbursement.

Submit this request form and the aforementioned requirements to: proposals@gavi.org

Countries requesting Gavi support for the introduction of yellow fever vaccine into the routine immunisation schedule or yellow fever preventive mass campaigns should consult the Application guidelines (section 5.3.8) for more information on the process and requirements. Countries requesting Gavi support for rapid outbreak response for yellow fever (via the International Coordinating Group (ICG)), should consult the yellow fever Application guidelines in the ICG site.

[1] *The list of Gavi-eligible countries is provided in **Annex 1 Yellow Fever Diagnostics Guidelines**. For the full list of WHO classification, see 'World Health Organization. Eliminate Yellow Fever Epidemics (EYE): A Global Strategy, 2017-2026. Wkly Epidemiol Rec 2017;92:193-204."*

[2] *The requests for consumable reagents and supplies will be reviewed separately from requests for equipment, so support for requested consumables may be recommended even if support for requested equipment is not recommended.*

Gavi Grant Terms and Conditions

Gavi terms and conditions

The terms and conditions of the Partnership Framework Agreement (PFA) between Gavi and the Country, including those provisions regarding anti-corruption and anti-terrorism and money laundering, remain in full effect and shall apply to any and all Gavi support made pursuant to this application. The terms and conditions below do not supersede those of the PFA. In the event the Country has not yet executed a PFA, the terms and conditions of this application shall apply to any and all Gavi support made pursuant to this application.

GAVI GRANT APPLICATION TERMS AND CONDITIONS

SUPPLIES AND EQUIPMENT USED SOLELY FOR APPROVED PROGRAMMES

The applicant country ("Country") confirms that all material provided by Gavi will be used and applied for the sole purpose of fulfilling the programme(s) described in the Country's application. Any significant change from the approved programme(s) must be reviewed and approved in advance by Gavi. All decisions for the supply application are made at the discretion of Gavi and are subject to IRC processes and the availability of funds.

AMENDMENT TO THE APPLICATION

The Country will notify Gavi in its Joint Appraisal, or in any other agreed annual reporting mechanism, if it wishes to propose any change to the programme(s) description in its application. Gavi will document any change approved by Gavi according with its guidelines, and the Country's application will be amended.

CONFIRMATION OF LEGAL VALIDITY

The Country and the signatories for the Country confirm that its application, or any other agreed annual reporting mechanism, is accurate and correct and forms legally binding obligations on the Country, under the Country's law, to perform the programme(s) described in its application, as amended, if applicable.

COMPLIANCE WITH GAVI POLICIES

The Country confirms that it is familiar with all Gavi policies, guidelines and processes relevant to the programme(s), including without limitation the Transparency and Accountability Policy (TAP) and complies with the requirements therein. All programme related policies, guidelines and processes are available on Gavi’s official website and/or sent to the Country.

ARBITRATION

Any dispute between the Country and Gavi arising out of or relating to its application that is not settled amicably within a reasonable period of time, will be submitted to arbitration at the request of either Gavi or the Country. The arbitration will be conducted in accordance with the then-current UNCITRAL Arbitration Rules. The parties agree to be bound by the arbitration award, as the final adjudication of any such dispute. The place of arbitration will be Geneva, Switzerland. The languages of the arbitration will be English or French.

For any dispute for which the amount at issue is US$ 100,000 or less, there will be one arbitrator appointed by Gavi. For any dispute for which the amount at issue is greater than US $100,000 there will be three arbitrators appointed as follows: Gavi and the Country will each appoint one arbitrator, and the two arbitrators so appointed will jointly appoint a third arbitrator who shall be the chairperson.

Gavi will not be liable to the country for any claim or loss relating to the programme(s) described in the application, including without limitation, any financial loss, reliance claims, any harm to property, or personal injury or death. The Country is solely responsible for all aspects of managing and implementing the programme(s) described in its application.

REPORTING

The Country's national yellow fever laboratory will report information on yellow fever testing activity and performance as requested by the WHO yellow fever laboratory network in a timely and accurate manner, including on the number of samples received and tested, the results of that testing, the timeliness of the overall testing process and the different steps of that process, and problems encountered with performing yellow fever testing. To simplify reporting and avoid duplication, Gavi will be relying on information provided to WHO to inform future decisions on whether to renew support for procurement of yellow fever reagents, supplies, and equipment to individual countries. Gavi should also be copied on reports on yellow fever testing activity and performance to the WHO yellow fever laboratory network.

1. Review and update country information

1.1. Country profile

1.1.1. Country profile

Eligibility for Gavi support

Yes, Nigeria is eligible for this support as indicated in the list of eligible countries (Annex 1 of application guidelines)

Date of Partnership Framework Agreement with Gavi

March 11, 2013

1.1.2. National customs regulations

Please describe local customs regulations that are instrumental for the delivery of imported laboratory supplies and equipment.

Supplies such as laboratory reagents and equipment need to be certified true and original by the National Agency for Food and Drugs Administration and Control (NAFDAC), while the Nigeria Customs has the responsibility to collect import duties on all such reagents and equipment that come into the country.

Please describe requirements for pre-delivery inspection of imported goods that are instrumental for the delivery of laboratory supplies and equipment.

The shipment airway bill, the packing list (with item description, specification and quantity), information on manufacturer/supplier

Please describe any special documentation requirements that are instrumental for the delivery of imported laboratory supplies and equipment.

Import permits need to be prepared and sent ahead of the delivery of the items. This can be prepared by NCDC and/or UNICEF. Prior notice needs to be given before shipment so that such import permits can be prepared and sent beforehand to the appropriate regulatory authorities.

NCDC will also check with UNICEF to see if UNICEF IDEC list already covers these items and if not, will be included in the 2020 IDEC list for waivers.

1.1.3. National Regulatory Agency

Please provide information on the National Regulatory Agency in the country, including status (e.g., whether it is WHO-certified).

The Nigeria Customs Service is responsible for collecting import duties and levies, on behalf of the government on all imported goods into the country.

The Nigeria Agency for Food and Drugs Administration and Control (NAFDAC) is responsible for maintaining standards on food and drug items, including laboratory reagents and consumables that are either manufactured in-country or overseas but intended for use in-country.

Please identify at least one point of contact with phone number and e-mail address at the National Regulatory Agency. UNICEF will help work with regulatory processes where relevant and may need to communicate licensing requirements to laboratory supply manufacturers.

Customs:Dr A.S. Aku, amwe.aku@customs.gov.ng, +2349032190556

UNICEF: Mr James Bature, meetbature@yahoo.com, +2347036574927

2. Yellow fever laboratory supplies and equipment

2.1. Number of samples from suspected yellow fever cases expected to be tested for which supplies will be needed

Number of samples received for testing in 2016	880
- Yellow fever outbreak in 2016?	Yes ☐ No ☒
Number of samples received for testing in 2017	1,528
- Yellow fever outbreak in 2017?	Yes ☒ No ☐
Number of samples received for testing in 2018	2,643. In 2018, a total of 1144, 500 and 999 samples were received by the Central Public Health (Lagos), Yusuf Dansoho Memorial Hospital (Kaduna) and Maitama District Hospital (FCT) laboratories respectively.
- Yellow fever outbreak in 2018?	Yes ☒ No ☐
Number of samples expected to undergo ELISA testing over a 12-month period[3]	4,572 samples; Since 2016, there has been an almost constant 73% increase in the number of samples received for testing in all Nigeria laboratories from one year to the other. In 2018, 2,643 samples were tested nationally by ELISA. Projecting by a 73% increase for 2019, a total of 4,572 samples are expected for testing in Nigeria in 2019. As NCDC continues to work to improve surveillance and given the continued detection of pockets of outbreaks across different states and Local Government Areas in Nigeria, that have ensued as a result of this increased surveillance since 2017, it is plausible to expect that such outbreaks will continue to be detected until the

[3] *Number of samples expected to undergo ELISA testing over a 12-month period may be estimated to be equivalent to the largest number of samples received for testing in a single year over the last three years, excluding years with yellow fever outbreaks. For example, if no outbreaks occurred in 2016, 2017, and 2018 and more samples were received for testing in 2017 than in 2016 or 2018, the number of samples expected to be tested over a 12-month period can be estimated to be the same as the number of samples received for testing in 2017. If an outbreak occurred in 2017 and more samples were received for testing in 2018 than 2016, then the number of samples expected to be tested over a 12-month period can be estimated to be the same as the number of samples received for testing in 2018. Alternative approaches can be used if justification is provided.*

	Preventive Mass Vaccination campaigns are concluded nationally, for all states in Nigeria. Presently, 33% (12 out of 37) states have concluded the Prevented Mass Vaccination Campaigns (PMVCs), with another 4 to be completed by tehe end of 2020. Borno state continues to be included in every schedule as more LGAs are liberated from insurgency. It is expected that as more states are covered, fewer outbreaks will be recorded and until then, the laboratory has to be fully equipped and ready to detect cases as quickly and as effectively as possible to direct response activities.
Number of samples received for testing in 2016 that were collected ≤10 days after onset of illness	616
Number of samples received for testing in 2017 that were collected ≤10 days after onset of illness	1087
Number of samples received for testing in 2018 that were collected ≤10 days after onset of illness	1908
Currently testing for yellow fever with polymerase chain reaction (PCR)?	Yes ☒ No ☐
- If yes, what type of PCR machine is used?	ABI 7500 FAST, ABI 7300, Quantstudio 5, Quantstudio 12K Flex, MIC thermocyclers
- If no, please describe any plans for starting testing for yellow with PCR in the next 12 months, including description of PCR testing already being done for other viruses	
Number of samples expected to undergo PCR testing over a 12-month period[4]	Approximatey 4,765 samples are expected to be tested by PCR in Nigeria.

[4] *If capacity to test for yellow fever with PCR is available, the number of samples expected to undergo PCR testing over a 12-month period may be estimated to be equivalent to the largest number of samples collected ≤10 days after onset of illness and received for testing in a single year over the last three years, excluding years with yellow fever outbreaks. For example, if no outbreaks occurred in 2016, 2017, and 2018 and more samples collected ≤10 days after onset of illness were received for testing in 2017 than in 2016 or 2018, the number of tests expected to be run over a 12-month period can be estimated to be the same as the number of samples collected ≤10 days after onset of illness and received for testing in 2017. If an outbreak occurred in 2017 and more samples collected ≤10 days after onset of illness were received for testing in 2018 than 2016, then the number of samples expected to be tested over a 12 month period can be estimated to be the same as the number of samples collected ≤10 days after onset of illness and received for testing in 2018. Alternative approaches can be used if justification is provided.*

From the Yellow Fever network, at least 1900 samples are expected to undergo PCR within a 12- month period. However, a lot more (approximately 2,865) are expected to be tested as differential diagnosis from the Lassa negative samples tested in-country:

In 2018, 3,498 Lassa samples were received for testing in 5 Viral Haemorrhagic Fevers (VHF) laboratories in Nigeria. Of these, 18%(633) were positive for Lassa.

The Lassa negatives, with strong suspicion of a VHF will be tested at the NCDC National Reference Laboratory, Gaduwa, which is also one of the National testing labs for Lassa Fever and other VHFs.

The negative Lassa samples are currently being enrolled in a pilot study on a retrospective analysis through multiplex testing to determine other possible aetiologic agents for patient symptoms and to aid improvement of differential diagnosis for better patient care, surveillance and response activities.

While that is ongoing, the National Lassa Fever testing algorithm has ben modified to include differential diagnosis for other VHF such that Lassa negative samples are tested for Yellow Fever, Dengue etc.

This is important for Nigeria because the last 3 outbreaks in Nigeria (Edo; 2018, Ebony;2019, Bauchi;2019) have been detected by PCR testing from differential diagnosis of samples that were negative for Lassa fever.

2.2. Equipment

Does your laboratory receive at least 50 samples a year for yellow fever testing and need an enzyme-linked immunosorbent assay (**ELISA**) **reader** for yellow fever testing?

Yes ☒ No ☐

If yes:

- Please provide justification, including referring to the findings from 2018 Gavi-funded yellow fever laboratory capacity assessment report or World Health Organization yellow fever laboratory capacity assessments.

All 6 laboratories in Nigeria need at least 1 ELISA reader.

Each of the laboratories receive more than 50 samples a year (from the WHO accreditation assessments carried out in 2018).

The older laboratories:

1) Kaduna lab (Yusuf Dansoho Memeorial Hospital) – 500 samples in 2018

2) Maitama lab (Maitama District Hospital) – 999 samples in 2018
3) Lagos lab (central Public Health Laboratory) – 1,144 samples in 2018

The new laboratories are in the final stages of operationalisation and are expected to begin testing before the end of 2019. So, no information is currently available on number of samples processes in these laboratories annually:

4) Gaduwa lab (NCDC National Reference Laboratory)
5) Benin lab (University of Benin Teaching Hospital)
6) Enugu lab (University of Nigeria Teaching Hospital)

Of the 1,144 samples received in the Lagos laboratory in 2018, 517 and 388 samples were from the South-East and South- South regions respectively, which would have been expected to be tested in the Enugu and Benin laboratories respectively, if those laboratories had been operational in 2018. So, it is within reason to conclude that each of these new laboratories will also receive more than 50 samples annually.

Each of the existing laboratories (Lagos, Maitama, Kaduna) have at leat 1 set of functioning ELISA readers which were supplied by WHO almost five years ago. These ELISA readers are in varying degrees of wear, woing both from huge daily demand on usage as well as a lack of periodic maintenance, before 2018, when NCDC took over and began scheduled equipment maintenance to these laboratories.

The new laboratories (Gaduwa, Benin and Enugu) currently have different models of much older ELISA readers and will need at least 1 set of ThermoFischer ELISA readers so as to have uniformity of equipment in the network.

In addition, due to the enormous workload that each of the laboratories have to go through, plus testing for measles and rubella also, it is highly recommended that each of the laboratories have at leat 2 sets of ELIsa wahers and readers i.e. an additional 1 set added to the existing set in the laboratories.

	The 2018 Gavi-funded yellow fever laboratory capacity assessment was not carried out in Nigeria.
- Please provide a description of the capacity for installing, operating, and maintaining the ELISA reader that will be available to your laboratory.	There is a Biomedical Engineering unit in NCDC amd the Biomedical Engineers maintains a schedule of biomedical engineering support to the laboratories in the network. This visits are scheduled quarterly as well as on special requests from the laboratories. Since 2016, this unit has been responsible for the installation and routine maintenance of equipment within NCDC network of laboratories.

Does your laboratory receive at least 50 samples a year for yellow fever testing and need an **ELISA washer** for yellow fever testing?	Yes ☒ No ☐

If yes:

- Please provide justification, including referring to the findings from 2018 Gavi-funded yellow fever laboratory capacity assessment report or World Health Organization yellow fever laboratory capacity assessments.	All 6 laboratories in Nigeria need at least 1 ELISA washer. Each of the labortaories receive more than 50 samples a year (from the WHO accreditation assessments carried out in 2018). The older laboratories: 1) Kaduna lab (Yusuf Dansoho Memeorial Hospital) – 500 samples in 2018 2) Maitama lab (Maitama District Hospital) – 999 samples in 2018 3) Lagos lab (central Public Health Laboratory) – 1,144 samples in 2018 The new laboratories are in the final stages of operationalisation and are expected to begin testing before the end of 2019. So, no information is currently available on number of samples processes in these laboratories annually: 4) Gaduwa lab (NCDC National Reference Laboratory) 5) Benin lab (University of Benin Teaching Hospital) 6) Enugu lab (University of Nigeria Teaching Hospital) Of the 1,144 samples received in the Lagos laboratory in 2018, 517 and 388 samples were from the South-East and South- South regions

respectively, which would have been expected to be tested in the Enugu and Benin laboratories respectively, if those laboratories had been operational in 2018. So, it is reasonable to conclude that each of these new laboratories will also receive more than 50 samples annually.

Each of the existing laboratories (Lagos, Maitama, Kaduna) have at leat 1 functioning ELISA washers which were supplied by WHO almost five years ago.

These ELISA washers are in varying degrees of wear, largely as a result of huge daily demand on usage as well as a lack of periodic maintenance, before 2018, when NCDC took over and began scheduled equipment maintenance to these laboratories.

The new laboratories (Gaduwa, Benin and Enugu) currently have different models of much older ELISA washers and will need at least 1 set of ThermoFischer ELISA washers in order to have uniformity of equipment in the network.

The 2018 Gavi-funded yellow fever laboratory capacity assessment was not carried out in Nigeria.

- Please provide a description of the capacity for installing, operating, and maintaining the ELISA reader that will be available to your laboratory.

There is a Biomedical Engineering unit in NCDC amd the Biomedical Engineers maintains a schedule of biomedical engineering support to the laboratories in the network. This visits are scheduled quarterly as well as on special requests from the laboratories.

Since 2016, this unit has been responsible for the installation and routine maintenance of equipment within NCDC network of laboratories.

Does your laboratory receive at least 50 samples a year for yellow fever testing collected no more than 10 days after patients' onset of illness and need a **PCR machine** for yellow fever testing?

Yes ☒ No ☐

If yes:

- Please provide justification, including referring to the findings from 2018 Gavi-funded yellow fever laboratory capacity assessment report or World

The NCDC NRL needs at least 1 PCR machine for Yellow Fever testing

In 2016, 2017 and 2018, 616, 1087 and 1908 samples were collected within 10 days of onset

Health Organization yellow fever laboratory capacity assessments.	respectively from ALL Nigeria labortaories testing for Yellow Fever (which are eligible for testing by PCR). This excludes the number of samples collected from the suspected cases of Lassa Fever (annual average of 2,900 negative which need to be tested for Yellow Fever as a differential test). All theVHF laboratories currently have MIC thermocylers which have been optimised for use with Altona diagnostics testing kits (for Lassa, Yellow Fever and other VHFs). In addition to these, The NCDC NRL has ABI 7500 and quantstudio systems that have been optimised for various rt-PCR assays.
- Please provide a description of the capacity for installing, operating, and maintaining the ELISA reader that will be available to your laboratory.	There is a Biomedical Engineering unit in NCDC amd the Biomedical Engineers maintains a schedule of biomedical engineering support to the laboratories in the network. This visits are scheduled quarterly as well as on special requests from the laboratories. Since 2016, this unit has been responsible for the installation and routine maintenance of equipment within NCDC network of laboratories.

Does your laboratory need a **biosafety cabinet**? Yes ☒ No ☐

If yes:

- Please provide justification, including referring to the findings from 2018 Gavi-funded yellow fever laboratory capacity assessment report or World Health Organization yellow fever laboratory capacity assessments.	ALL 6 laboratories need a Biosafety cabinet each. The 3 older laboratories do not have biosafety cabinets in their laboratories while the biosafety cabinets in the 3 new laboratories are either too small (NRL, Gaduwa) or failed certification (Enugu) or very old (Benin). In addition, ALL the National Lassa testing laboratories (the NCDC National Reference Laboratory inclusive) have glove boxes and biosafety cabinets but these are completely absent in the Yellow Fever laboartories and recommendations have been made in the reports of national supervisory support that biosafety cabinets and water baths be provided for the laboratories to improve safety for handlers, the environment and reduce sample contamination. The Lagos virology laboratory has an old Biosafety cabinet, which recently failed

	certification in 2019, with receommendations from the Biomedical Engineering consultant to have it replaced. In the Kaduna and Maitama laboratories, Biosafety cabinets are completely absent. In the Enugu laboratory, the existing biosafety cabinet is also old and has been recommended for replacement. The Benin laboratory has an old biosafety cabinet that is due for re-certification in early 2020, while the Biosafety cabinet in the Gaduwa laboratory is too small and has been recommended for upgrade.
- Please provide a description of the capacity for installing, operating, and maintaining the ELISA reader that will be available to your laboratory.	There is a Biomedical Engineering unit in NCDC amd the Biomedical Engineers maintains a schedule of biomedical engineering support to the laboratories in the network. This visits are scheduled quarterly as well as on special requests from the laboratories. Since 2016, this unit has been responsible for the installation and routine maintenance of equipment within NCDC network of laboratories. In addition, NCDC maintains a contract with one of the few biosafety cabinets certifiers in Nigeria, for biosafety cabinet installation and certification in all her network of laboratories.

2.3. Logistics

2.3.1. Supply delivery

What is the address and, if available, geocoordinates of the national public health yellow fever reference laboratory that is the ultimate destination for yellow fever laboratory supplies and equipment?

NCDC National Reference Laboratory, Gaduwa (behind NPI Quarters), Abuja, FCT

What is the Port of Entry closest to the national public health yellow fever reference laboratory?

Abuja International Airport, Federal Capital Territory

How many shipments should the needed supplies be spread across and why?[5]

Bi- annual shipments; for better monitoring and coordination as well as space management within the laboratories. An additional shipment may be planned for as Nigeria has been experiencing Yellow Fever outbreaks in the past 2 years, which may necessitate additional reagents be supplied to the laboratories in real time.

[5] *Gavi will fund a maximum of three shipments for supplies used in routine yellow fever testing over a 12-month period (additional shipments are possible in response to outbreaks, if feasible). Exact shipment dates, times, and other details to be confirmed with UNICEF Supply Division.*

To facilitate timely delivery of supplies, laboratory staff will be responsible providing proof of customs clearance and other import authorizations prior to scheduling a shipment with UNICEF Supply Division. What is the laboratory's plan for securing the necessary customs clearance and any other import authorizations?

The NCDC maintains an annual IDEC list with the Ministry of Health that gives necessary waivers on imports for laboratory equipment, consumables and reagents. Once it is clear what equipment and other items will be supplied by UNICEF SD, they will be added on to the IDEC list and resubmitted to the Ministry and all other necessary documentation that follows.

UNICEF SD may also directly obtain such waivers from the ministry and NCDC may intervene where necessary.

2.3.2. Logistical technical assistance

Does the laboratory staff need stock management training? If yes, please provide details

Yes, the laboratory staff need stock management training. Over the years, much emphasis for training as been laid mostly on bench diagnostics only. Reports from country assessments have shown that other aspects of the routine functions carried out by the laboratory staff also need to be prioritized such as stock and inventory management, data and sample management. Training in these areas will also increase the capacity of the laboratory staff to carry out all routine activities and increase the overall capacity of the laboratory to respond to Yellow Fever outbreaks and in routine surveillance.

2.4. Strategic considerations

2.4.1. Rationale for the request

Briefly describe how yellow fever diagnostic capacity fits into your country's plan for eliminating yellow fever epidemics.

According to the global risk assessment for Yellow Fever, Nigeria is one of the high risk countries and this has been proven true by the number of outbreaks recorded in Nigeria since 2017, when Yellow Fever resurfaced in Nigeria, after almost a decade of no reported cases.

As NCDC and Nigeria continue to improve surveillance activities, it is likely that more cases will be found and the laboratory is central to the confirmation of these cases.

Drawing from the global EYE startaegy, a national strategy for adopting and implementing the global strategy was developed in 2018. In 2019, a consultant was hired by NCDC to finalise the revision of the Nigeria Yellow Fever response guidelines and present a workplan for National Yellow Fever Preparedness and Response. The laboratory component of the workplan specifically highlights activities for improving laboratory capacity through trainings, competency assessments, supportive supervision, provision of reagents and commodities as well as support for infrastructure development within the laboratories.

2.4.2. Financial sustainability and budgeting of yellow fever laboratory

A cost sharing requirement will eventually be introduced for **yellow fever materials. This cost-sharing will not come into effect through at least the end of 2020. More information will be provided by your Gavi Senior Country Manager (SCM) as it becomes available. **

What is the current year's and, if available, the next year's domestic budget for yellow fever laboratory capacity needs, including yellow fever laboratory supplies and equipment?

In the national budget of 2019, 40 million naira was budgeted and approved for procurement of reagents and 23.6 million nairafor equipment support for ALL tests carried out within the network of public health labortaories in Nigeria (Yellow Fever inclusive).

For the 2020 budget, budget analysis are currently ongoing to determine the gaps and how much will be budgeted for such support.

2.4.3. Anticipated future changes in yellow fever laboratory capacity

Aside from access to yellow fever diagnostic reagents, supplies, and equipment, does the laboratory expect its capacity to test for yellow fever to change over the next 2 years, e.g., new staff, training, new facility, etc.? If so, how?

There is always a possibility of new staff in some of the laboratories. However, strategies have been developed to minimize the risk of such immediate staff turnovers and effectively manage communications with the leaderships of the institutions overseeing the laboratories so the system is adequately prepared for such changes.

Transportation of all priority disease samples in Nigeria, from the point of collection to state capital or state ministries of health is currently borne by the individual states through various funding mechanisms while NCDC is responsible for the transportation of samples form the state capitals or state ministries of health, through a private courier (TRANEX).

There is currently no specific funding available for the transportation of Yellow fever samples form point of collection to National Laboratories for testing and current sample transportation of Yellow Fever samples involves mechanisms set up by WHO, where Yellow Fever samples are transported alongside measles samples to the respective laboratory by the state (Disease Surveillance Notification Officers) DSNOs.

It is expected that over the next few years, Yellow Fever samples will also be transported to the laboratories via TRANEX but this is subject to availability of sufficient funding to support the volume of samples that will need to be transported as well as a mechanism for central coordination from and by the NCDC.

Over the next couple of years also, the NCDC is working towards an integration of the Lassa and Yellow Fever laboratories' functions into an overarching VHF network, that will be responsible for detection and laboratory confirmation of ALL VHFs in-country. The laboratories are expected to operate within a network of national laboratories hubbed to the NCDC National Reference Laboratory, Gaduwa with both serology (ELISA) and molecular (PCR) capacity at the National laboratories and the more complex differentials and Plaque Reduction Neutalisation tests (PRNT) done at the NCDC NRL, for the full spectrum of testings required for confirmation of Yellow Fever.

We also expect an increase/improvement in the capacity and use of PCR for in-country confirmation of Yellow Fever outbreaks.

Contacts

Person(s) who should be contacted in case Gavi needs to ask for more information regarding the application.

Name	Position	Phone Number	Email	Organisation
Celestina Obiekea	Lab Network Advisor, NCDC	+2347030988456	celestina.obiekea@ncdc.gov.ng	NCDC
Nwando Mba	Dir. Lab Services, NCDC	+2348023117379	nwando.mba@ncdc.gov.ng	NCDC

Comments

Please provide any comments you have about this application and how to improve it

The application is somewhat too generic. In future, it can be made a bit more flexible so that countries can adapt to their individual situation, especially for countries that have more than 1 national laboratory, so that this can be effectively captured.

Version: July 2019

Government signature form

The Government of Nigeria would like to expand the existing partnership with Gavi for the improvement of the immunisation programme of the country, and specifically hereby requests Gavi support for yellow fever diagnostics (that is, laboratory reagents, supplies and equipment) as outlined in this request form.

The Government of Nigeria commits itself to developing national immunisation services, including laboratory testing that helps guide immunisation services, on a sustainable basis in accordance with the national health and immunisation strategic plans. The Government requests that Gavi and its partners contribute financial and technical assistance to support immunisation of children as outlined in this application.

Please note that Gavi will not review this application without the signatures of the Minister of Health, the Director of the national yellow fever laboratory, and the Director of Finance for the Ministry of Health or their delegated authorities.

We, the undersigned, affirm that the objectives and activities in this request are fully aligned with the national health and immunisation strategic plans (or equivalent), and that funds for procuring yellow fever laboratory reagents, supplies, and equipment will be included in future annual budgets of the Ministry of Health, including funds for co-financing of future Gavi-supported procurement of supplies once the details of the Gavi co-financing requirements are available.

We, the undersigned, further affirm that the terms and conditions of the Partnership Framework Agreement between Gavi and the Country remain in full effect and shall apply to any and all Gavi support made pursuant to this application.[6]

Minister of Health (or delegated authority)	**Director of national yellow fever laboratory (or delegated authority)**
Name: Dr Chikwe Ihekweazu	Name: Mrs Nwando Mba
Date: 21/9/20	Date: 21/01/2020
Signature:	Signature:

Director of Finance for Ministry of Health (or delegated authority)	**Minister of Finance (or delegated authority) (recommended but not required)**
Name: Mr Buhari Abdullahi	Name:
Date: 21-01-2020	Date:
Signature:	Signature:

[6] *In the event the Country has not yet executed a Partnership Framework Agreement, the terms and conditions of this application shall apply to any and all Gavi support made pursuant to this application.*