



Nigeria Centre for Disease Control: Capacity Development for Preparedness and Response for Infectious Diseases

NiCaDe – IPC

Capacity Development in Training of Infection Prevention and Control of Health Care Workers at Secondary and Tertiary Health Care Level

Duration

2019–2021

Budget/year

approx. 400,000 EUR

Partner country

Nigeria

Challenges addressed by the project

Hospital-acquired infections represent a serious disease burden and have a significant impact on patients and health care workers across the world. Applying standard precautions for infection prevention and control (IPC) to lower the risk of transmission can significantly reduce the incidence of hospital-acquired infections. However, numerous studies have shown that fact-based communication of IPC technical content and demonstrations of the “right” behaviour do not lead to the desired sustainable improvement of IPC practices in hospitals. Tackling IPC in health facilities is a systemic challenge and requires direct involvement of local actors for long-term success and sustainability.

Objectives

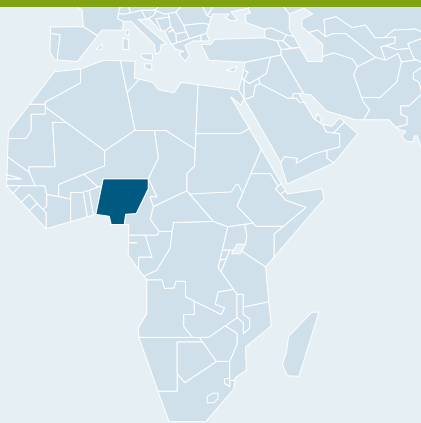
The overall goal of the NiCaDe project is to support the Nigeria Centre for Disease Control in capacity development to prevent and manage disease outbreaks. This sub-project aims to build up training capacities for infection prevention and control at NCDC and in four geopolitical zones of Nigeria.

Overview of activities

Experts from NCDC and RKI developed a training concept that considers the complexity of IPC improvement: the “Participatory Approach to Learning in Systems – PALS”. The concept is based upon theoretical concepts of inquiry learning and practised thoroughly as a participatory approach. Elements of “Theme-Centered-Interaction” (TCI) are incorporated into the training approach in order to display the influencing factors for IPC and to reflect a systemic view. In this way, health care workers are trained in competencies, techniques and especially attitudes for promoting change, to be able to initiate and promote IPC improvement.

To build up training capacities in Nigeria, selected health care workers and educationalists are trained as “Trainers”. They themselves will in turn train and support health care workers as “Change Agents” at health facilities. This approach allows to train many Change Agents in a relatively short time.

In July 2019, 22 future trainers started the program with a two-week course covering the medical-technical aspects of infection prevention and control. To ensure synergies with existing training structures in Nigeria, the IPC technical content of



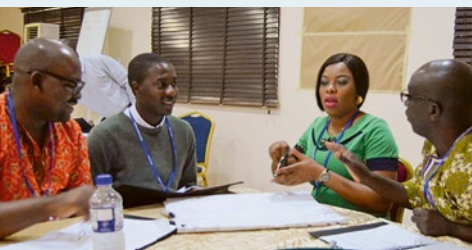
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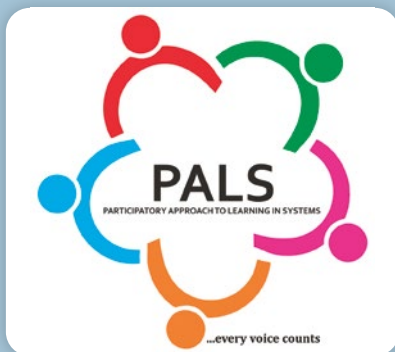
IPC training development workshop, 2019



Training kick-off with the first Basic IPC course,
June 2019



Training kick-off with the first Basic IPC course,
June 2019



The logo: a symbol of teamwork and “... every voice counts!”

Photos ©RKI

trainings follows the Basic IPC Course curriculum developed by the College of Medicine at University Lagos. Subsequently, they conducted an IPC risk assessment as field assignment.

The NiCaDe-PALS trainings for trainers took place in November 2019 and in January 2020, with an intermediate field phase. This part of the training focussed on the HOW of change processes: How can we put IPC into practice? How can we activate change processes that address local needs and conditions? Theoretical and practical elements were combined to train communication, participation, systemic perspectives and team building. At the same time, the training supported them to shift from the perspective of implementation to that of teaching, and to take first steps in their role as trainer. In the next phase of the project, the trainers will themselves conduct PALS training for health care workers and support them over six months to initiate IPC improvement processes in their health facilities. The project team will mentor and actively support the trainers.

In March 2020, the training program was put on hold due to the COVID-19 outbreak. Instead, project activities switched to support the outbreak response in Nigeria: the project team at NCDC helped different sectors of the Nigerian health system to develop IPC protocols and guidelines, and travelled across the nation to facilitate trainings. A series of webinars continued the PALS-training of trainers and focussed on application of PALS competences for IPC improvement during the pandemic. In September, trainers deployed to train health care workers of secondary health facilities in states with high health care worker infection rates in COVID-19 related IPC trainings that included PALS elements.

In 2021, the PALS training program will resume with Change Agent trainings at health facility level and the completion of the training of trainers.

Partner institution/Contact

Nigeria Centre for Disease Control (NCDC), Nigeria
Tochi Okwor tochi.okwor@ncdc.ng.gov

Supporting institution in Germany/Contact

Robert Koch Institute
Centre for International Health Protection
Flora Haderer hadererf@rki.de
www.rki.de/en



Nigeria Centre for Disease Control: Capacity Development for Preparedness and Response for Infectious Diseases

NiCaDe – HepE/Rota

Intensified Surveillance and Capacity Development in the Diagnosis of Hepatitis and Rotavirus Infections

Duration

2019–2021

Budget/year

approx. 160,000 EUR

Partner country

Nigeria

Challenges addressed by the project

Hepatitis E (HEV) and Rotavirus (RVA) are associated with a high morbidity and mortality in Nigeria and are therefore of major public health concern. At the same time, the true burden of HEV and RVA is underestimated in Nigeria. Nevertheless, the knowledge on the prevalence and diversity of circulating viral variants in Nigeria has a major impact for the diagnosis, therapy, risk assessment and prevention of these diseases.

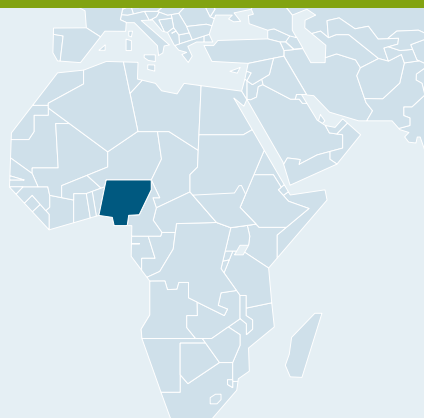
This subproject is intended to foster Nigeria's efforts to achieve the WHO goal of eliminating viral hepatitis until 2030 and the United Nations Millennium Development Goal 3.2 to minimise infant mortality from RVA infections causing severe diarrhoea.

Objectives

The main aim of this subproject is the implementation of a modern, intensified molecular surveillance (IMS) for HEV and RVA. In addition, already successfully established bi-national postgraduate education programmes and practical training of Nigerian students, as well as the training of researchers from Nigeria will be expanded.

The aims shall be achieved by:

- » Establishment of sentinel sites from different regions in Nigeria
- » Preparation of guidelines and Standard Operating Procedure (SOP) for sample collection and methodological work for the diagnosis and fine typing of HEV and RVA in terms of intensified molecular surveillance (IMS)
- » Application for ethical approval for the sub-project at the responsible ethics committees in Nigeria
- » Collection and asservation of blood and stool samples
- » Molecular analysis of samples and development of a data- and biobank at the NCDC
- » Training of healthcare professionals on molecular-epidemiological methods
- » Training of selected Nigerian students (PhD, Master, Bachelor) and guest scientists at the RKI, carried out by postdocs and heads of laboratories



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Visit of the German Health Minister Dr. Spahn at NCDC in 2019 (in the frame of his Africa tour) during a workshop of the NiCaDe project (Photo ©RKI)



Briefing and training workshop of the sentinel site staff of the HepE/RVA NiCaDe subproject 2 at NCDC, Abuja, in October 2019 (Photo ©RKI, NCDC)



Visit of Nigerian guest scientists at RKI: Ms Akanbi (PhD student), Dr Klink (RKI, Unit 15), Prof Omilabu (University of Lagos), Dr Opaleye (LAUTECH) (Photo ©RKI)



Nigerian guest scientists at bench work preparing molecular analysis of HEV samples at the laboratories of the RKI, Unit 15 (Photo ©RKI)

Overview of activities

January 2019: Kick-Off meeting and first workshop on the HEV/RVA-surveillance in Abuja, Nigeria, with appointment of the sentinel sites for the HEV- and RVA-IMS.

August 2019: Finalisation of the guidelines for the HEV- and RVA-IMS and standard operation procedures (SOP) for the methodological work for the diagnosis and fine typing of HEV und RVA.

October 2019: Workshops and training of the staff of sentinel sites for collection and preparing of samples at NCDC. Visit of German health Minister at NCDC.

February 2020: Finalisation of the update 2020 of the guidelines and SOP for the HEV- and RVA-IMS in cooperation with NCDC, the sentinel sites, and RKI.

April 2020: Ethical approval for the subproject 2 has been obtained for NCDC and Aminu Kano Teaching Hospital by the ethics committees of the responsible institutions.

May 2020: Data of the pilot study were published (Osundare et al. Hepatitis E Virus Seroprevalence and Associated Risk Factors in Apparently Healthy Individuals from Osun State, Nigeria. *Pathogens* 2020, 9, 392. doi: 10.3390/pathogens9050392).

November 2020: Activation of sentinel sites and start of sample collection and analysis.

Since April 2019: Visit of 5 Nigerian guest scientists at the RKI.

Partner institutions/Contact

Main partner

- » Nigeria Centre for Disease Control (NCDC), Nigeria
Dr Adedeji Adebayo adedeji.adebayo@ncdc.gov.ng

Sentinel sites

- » Asokoro District Hospital (ADH), Abuja
- » Ladoke Akintola University of Technology (LAUTECH), Osogbo
- » Lagos State University Teaching Hospital (LASUTH), Lagos
- » Nnamdi Azikiwe University Teaching Hospital (NAUTH), Nnewi
- » Aminu Kano Teaching Hospital (AKTH), Kano

Supporting institution in Germany/Contact

Robert Koch Institute

Department for Infectious Diseases

Unit 15 | Gastroenteritis and Hepatitis Pathogens and Enteroviruses

Prof Dr C.-Thomas Bock bockc@rki.de

Dr Patrycja Klink klinkp@rki.de

www.rki.de/en



Nigeria Centre for Disease Control: Capacity Development for Preparedness and Response for Infectious Diseases

NiCaDe – AMR

Supporting Implementation of Antimicrobial Resistance (AMR) Surveillance and Diagnostic Stewardship

Duration

2019–2021

Budget/year

approx. 166,000 EUR

Partner country

Nigeria

Challenges addressed by the project

The project aims to support the Nigeria Centre for Disease Control (NCDC) in capacity development for infection prevention and control.

Objectives

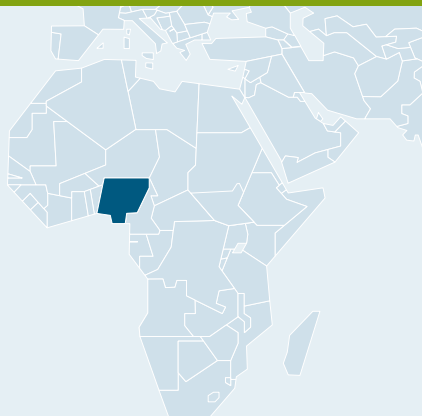
NiCaDe – AMR aims to support the national implementation of antimicrobial resistance (AMR) surveillance and a strategy for improving diagnostic stewardship. A focus will be placed on secondary health care facilities. Planned activities include the provision of technical support for the procurement of laboratory equipment and materials, capacity building for laboratories, diagnostic stewardship, data management and analyses and use of data for patient management as well as infection prevention and control.

Overview of activities

In February 2019, Robert Koch Institute (RKI) supported the facilitation of an NCDC practical workshop on antimicrobial susceptibility testing (AST) and the use of WHONET, also in collaboration with the World Health Organization and the South African National Institute for Communicable Diseases.

In spring 2019, experts from NCDC and RKI engaged in a technical exchange to finalize the national AMR surveillance guidelines and the harmonisation of standard operating procedures (SOPs) for diagnostic bacteriology.

Following this work, a concept for ongoing laboratory mentorship was discussed to encourage sustainable quality improvement. Four facilities in the Abuja Municipality in the Federal Capital Territory and in Lagos State were strategically selected in close cooperation with regional state health authorities in spring 2019 and were evaluated using a standardised laboratory assessment checklist. A microbiologist consultant conducted laboratory mentorship visits to these four selected facilities in June and August 2019. Critical gaps and next steps were discussed to further standardise practices and improve quality. In early 2020, NCDC and RKI finalised a study protocol to evaluate a diagnostic stewardship intervention in selected hospitals and this was approved by the local ethics committee in spring 2020. Due to the COVID-19 pandemic and the engagement of the project experts at NCDC and RKI in the response, some activities were delayed and shifted to virtual communication tools. Despite these challenges, NCDC continued to work to engage with the hospital study



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Laboratory mentorship visit, Abuja, Nigeria
(Photo ©RKI)



COVID-19 laboratory work, Abuja, Nigeria



Data collection in Maitama General Hospital,
Abuja, Nigeria



Data collection in Bwari General Hospital, Abuja,
Nigeria

sites to prepare for the diagnostic stewardship study. In August 2020, NCDC and RKI organised a virtual training workshop on the study data collection best practices and in September 2020, the study commenced with the pre-intervention data collection in two facilities. Future priorities will focus on preparing the study intervention period including the equipment/material procurement, supply chain improvement, implementation of developed SOPs for pre-analytics, analytics and post-analytics in the facilities, and engaging local microbiological experts in the laboratory mentorship strategy.

Learned lessons from the study will be documented in a guide to promote improved diagnostic stewardship and further support will be given on the analysis of AMR data for local and national use.

Partner institution/Contact

Nigeria Centre for Disease Control (NCDC), Nigeria
Dr Abiodun Egwuenu abiodun.egwuenu@ncdc.gov.ng

Supporting institution in Germany/Contact

Robert Koch Institute
Department for Infectious Disease Surveillance
Unit 37 | Healthcare-associated Infections, Surveillance of Antibiotic Resistance
and Consumption
Sara Tomczyk tomczyks@rki.de
www.rki.de/en