



Training on Investigation and Control of Epidemics

TRICE

Strengthening Expertise in Outbreak Investigation and Containment

Duration

2016–2021

Budget/year

approx. 230,000 EUR

Partner countries

Burkina Faso
Côte d'Ivoire
Democratic Republic of the Congo
South Africa

Challenges addressed by the project

Compared to other regions of the world, the African continent has to cope with a disproportionately high burden of infectious diseases. In addition, many African countries are often inadequately prepared for acute outbreaks due to a lack of infrastructure in their health systems.

In the event of an outbreak, external aid usually aims less at sustainability and more at acute aid, whereby both are usually possible and knowledge can be increased in the process.

In addition, disease outbreaks among wild animals are often not noticed, but are an important indicator of circulating diseases and outbreak risks due to their potential for transmission to humans.

Objectives

- » Support for prevention and intervention in both nosocomial and pathogen-specific outbreaks in the population
- » Capacity building with regard to laboratory diagnostics (pathogen identification and resistance testing) and support for the establishment of local surveillance systems in selected hospitals in partner countries (TRICE's activities are demand-oriented and extend to other African countries in the event of an outbreak)

Overview of activities

TRICE focuses on the detection of outpatient and nosocomial infections, the development of diagnostics for haemorrhagic fever (including Ebola) and the development of prevention strategies as well as on antimicrobial resistance (in cooperation with ARGOS) of the found pathogens. Core activities include targeted practice-oriented training components. In the sense of a One-health approach, these activities pursue the approach to disease outbreaks both in the human population and among wild animals.

Training content is oriented towards concrete questions. This year focused mainly on the COVID-19 response. In cooperation with the departments of ZIG/RKI, PCR- and extraction kits for SARS-CoV-2 diagnostics were sent to the existing partners as well as to partners in Zambia in order to enable reliable diagnostics as quickly as possible. In addition to the materials, special training documents such as protocols and video trainings were prepared to provide direct assistance even in times of travel



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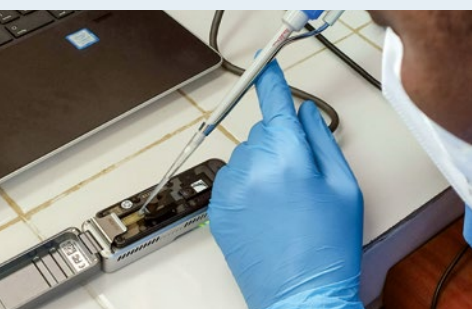
on the basis of a decision
by the German Bundestag



Through TRICE support, the new laboratory building should be finished by the end of 2021, Côte d'Ivoire



Local postdoc Etile Anoh preparing extracted genetic material for sequencing



Local postdoc Etile Anoh putting the extracted sample into the mobile sequencing machine



RKI staff Caroline Röthmeier supporting local staff in DRC in SARS-CoV-2 diagnostics

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restrictions. These were shared with all partner institutions and made freely accessible online, in order to ensure that subsequent training sessions by employees of our partners on site can be done independently.

Three trips of RKI trained staff to our partner institutions (in DRC, CIV and BF) were organised in 2020 in close cooperation with the GHPP project ARGOS and the BMBF funded network ANDEMIA to support local laboratory staff in SARS-CoV-2 diagnostics (PCR, serology and mobile sequencing). Besides the practical support, our staff held workshops and trainings to ensure the previously implemented methods stay in place. Regularly online meetings provide a platform for follow up and pending questions regarding SARS-CoV-2 diagnostics.

In addition to infection control, an important point is the scientific analysis of the outbreak in the various countries. TRICE supports the genomic sequencing of individual virus strains through the MinION system in Côte d'Ivoire, Burkina Faso and Zambia, in order to get a better picture of the distribution pattern of individual strains. TRICE provided the equipment and the subsequent online training of the staff. This is particularly important as sequencing allows the identification of individual transmission chains. Through this common effort, TRICE could facilitate together with our partners in Bouaké (CHU) the publication of the first sequences of SARS-CoV-2 in Ivory Coast.

Besides laboratory trainings, the construction of a training centre at the campus of the CHU Bouaké started in January 2020 and will be finished by the end of the year despite the difficulties due to the pandemic. The new building will serve as a centre for laboratory trainings in future projects but will also enable our partners to perform lab analyses within the continuously growing number of joint projects.

From the beginning of TRICE in January 2016, 14 trainings/workshops and 8 outbreak investigations have been carried out in 9 countries.

Partner institutions

- » Centre Muraz (CM), Burkina Faso
- » Centre Hospital University Sourou Sanou (CHUSS), Burkina Faso
- » Bouaké University Teaching Hospital (CHU Bouaké), Côte d'Ivoire
- » University Alassane Ouattara (UAO), Côte d'Ivoire
- » Central Laboratory of Animal Pathology (LANADA), Côte d'Ivoire
- » National Institute for Biomedical Research (INRB), Democratic Republic of the Congo
- » Kinshasa University Hospital, Democratic Republic of the Congo
- » National Institute for Communicable Diseases (NICD), South Africa
- » University of Pretoria (UP), South Africa

Supporting institution in Germany/Contact

Robert Koch Institute

P3 | Epidemiology of Highly Pathogenic Pathogens

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