



Antibiotic Resistance Global Surveillance

ARGOS

Support in Developing AMR Surveillance Systems

Duration

2016 – 2021

Budget/year

approx. 193,000 EUR

Partner countries

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

Challenges addressed by the project

In many African countries there is insufficient laboratory capacity to diagnose bacterial pathogens and their potential antimicrobial resistance patterns. This is both due to a lack of infrastructure and often inadequate training of laboratory staff.

In addition, only a few countries in sub-Saharan Africa are equipped with surveillance systems for antimicrobial resistance (AMR), resulting in data gaps on bacteria that are of public health relevance.

These weaknesses ultimately result in inappropriate antibiotic treatment for patients, which in turn promotes the development of AMR.

Objectives

The ARGOS project aims to strengthen bacteriological diagnostics, including resistance testing, in selected partner countries to gain a better overview of the AMR situation and thereby introduce sustainable antibiotic resistance surveillance. This is achieved in close cooperation with GHPP-TRICE (Training on Investigation and Control of Epidemics). In detail:

- » Support the African partner countries Côte d'Ivoire (CIV) and Burkina Faso (BF) in establishing or improving existing laboratory infrastructure to support bacteriological laboratory diagnostics and AMR testing. This involves implementing validated standard procedures such as blood culture diagnostics and use of EUCAST (European Committee on Antimicrobial Susceptibility Testing) guidelines
- » Train laboratory and hospital staff, including on sampling, analysis, and communication of results
- » Connect selected sentinel hospitals and their laboratories in CIV and BF to national AMR surveillance systems

Overview of activities

The main activities of the project include the construction and expansion of laboratory infrastructure, regular staff training on-site and support for ongoing quality management activities.

Since the beginning of the project, two existing laboratory facilities at the Centre Hospitalier Régional (CHR) Guiglo, CIV and the medical health centre (CMA) Dano, BF were converted, expanded and fully equipped with the necessary laboratory materials including both machines and reagents.



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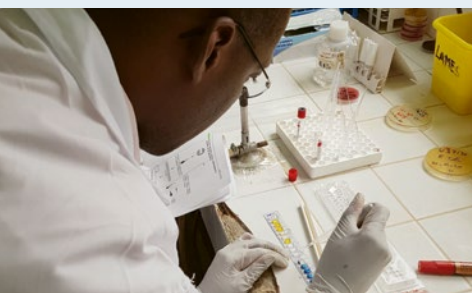


Federal Ministry
of Health

on the basis of a decision
by the German Bundestag



Laboratory staff at the CHU introducing the use of the blood culture machine



Local PhD Fidèle Sounant Touré at CHU Bouaké performing an API test for bacteriological identification



Training of local lab technician at CHR Guiglo in the interpretation of Gram staining)



The bacteriology consultant's visit to the Brobo site, CIV

Repeated workshops and trainings on blood culture diagnostics (including the implementation of a blood culture machine in Bouaké), classical bacteriology, antimicrobial resistance testing, quality management and data management were organized in CIV and BF with participation of members from DRC and SA. According SOPs were jointly developed.

Trainings were held both from experienced staff from RKI and African bacteriologists since one of the approaches of ARGOS is the experience exchange within our partner countries

To strengthen the experience exchange beyond the face to face trainings, ARGOS became member of the online ECHO platform for regular online meetings with all partners.

Since most of our project members in the partner countries are involved in their national COVID-response, many activities of ARGOS in 2020 concentrated on the support of the partner labs in molecular SARS-CoV-2 diagnostics instead of only bacteriological support. According activities were carried out in close cooperation with TRICE as well as the BMBF funded network ANDEMIA. Within this cooperation we were able to provide our partners urgently needed lab materials for SARS-CoV-2 diagnostic as well as the respective laboratory trainings (PCR, serology, mobile sequencing). ARGOS also developed protocols for serological SARS-CoV studies in BF and CIV, which will likely be implemented by the end of the year.

Partner institutions /Contact

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