

# Partnership to increase patient safety in the laboratory: organisational and infrastructural improvements and further training in Guinea



**HOSPITAL**  
PARTNERSHIPS

The Faculty of Medicine of the University of Rostock, the Brandenburg Medical School, the Hôpital Régional 'Alpha Oumar Diallo' de Kindia and the Laboratoire Médical Guinéo-Allemand, Guinea

## The challenge

The Guinean health system is organised centrally by the Ministry of Health in the capital, Conakry. Each of the eight regions of Guinea has a regional hospital, district hospitals, and health centres. The regional hospitals supervise and coach the district hospitals and health centres.

Life expectancy in Guinea is 59,6 years (compared to 80,7 in Germany). HIV prevalence in 2004 was approximately 1,4% (170.000 out of 12.5 million). Malaria is hyperendemic to holoendemic in Guinea. The incidence of tuberculosis was 177 per 100.000 in 2014 (compared to 5,6 per 100.000 in Germany).

The Ebola epidemic has exacerbated the shortage of human and material resources, and pre-existing deficits have become painfully apparent. As a result, deaths from treatable causes such as malaria are likely to increase massively. Guinea has fewer than one nurse and fewer than one doctor per 10.000 inhabitants.

Patient safety in Guinea is impaired by the unavailability of laboratory tests (e.g. thick and thin blood smears for malaria), inadequate usage of medical laboratory and imaging capacity, and insufficient monitoring of critically ill patients. Some of these shortcomings can be improved through targeted training and standard operating practices. Awareness of the need for consistent hygiene has improved in the context of the Ebola epidemic.

## Partnership activities

The partnership project between the University of Rostock and Hôpital Régional de Kindia intends to improve patient safety in three phases.

In the first phase, safety deficits in clinical routine will be identified through joint observations and discussions. Guinean-German teams will analyse the workflows in the hospital. In the second phase of the project, possible solutions will be elaborated jointly. Such solutions may include new standard operating instructions and training courses for the staff of the Guinean partner institution. In the third project phase, the new standards will be integrated into the daily clinical routine and monitored by mixed Guinean-German teams.

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*'The main goal of the partnership is capacity building together with the Guinean partners, and strengthening of the Guinean health system, which had been weakened by the 2014/2015 Ebola epidemic. The project emphasizes hygiene and other aspects of patient safety.'*

PD. Dr. med. Hemmer, Rostock

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In addition, a new diagnostic technology for the rapid detection of highly dangerous infections will be deployed in collaboration with Brandenburg Medical School. Joint workshops and training sessions will build capacity. A triage system will be introduced in the emergency room, and awareness of hygiene issues in the clinical routine will be improved.

## Financing

The funding program University and Hospital Partnerships in Africa makes part of the Hospital partnerships Initiative – Partners strengthen health. The Initiative is funded by the Federal Minister of Economic Cooperation and Development and Else Kröner-Fresenius Foundation and is a member of the ESTHER Alliance.

## Results

- In the laboratory, the project will improve safety in pre-analytics, analytics, and post-analytics (e.g. identification and handling of patient samples, notification of results). A system for the rapid diagnosis of infections will be introduced.
- The cleaning personnel will be familiarised with rules for the disposal of clinical refuse, particularly for laboratory waste. New employees will receive training in these policies before they start work.
- The medical and nursing staff will comply with diagnostic and therapeutic standards and hygiene regulations.

## The partners

### Institution in Guinea

The Hôpital Régional de Kindia (110 beds) has departments for internal medicine, surgery, gynaecology/obstetrics and paediatrics, as well as outpatient clinics (10.000 patient contacts per year), a new isolation ward, and a functioning laboratory (22.000 examinations per year). It cooperates with the national training centres for nurses and laboratory technicians.

The Laboratoire Médical Guinéo-Allemand (LGA) is the only medical laboratory in Guinea with a quality control system that meets international standards. The Executive MTA, Ms Rath, is responsible for quality assurance and for continuing education. Dr Diallo, a general practitioner trained in Germany, heads the department of clinical medicine of the LGA.

### Institution in Germany:

The Faculty of Medicine of the University of Rostock has 2.000 medical students. The Department of Tropical Medicine and Infectious Diseases has 20 in-patient beds, as well as out-patient clinics for HIV, tropical diseases, Lyme disease and hepatitis, and a tropical parasitology laboratory.

## Overview

<b>Name</b>	<b>Partnership to increase patient safety in the laboratory: organisational and infrastructural improvements and further training</b>	
<b>Impact</b>	Identification of strengths and deficits, development of standards, continuing education for laboratory staff, knowledge transfer to lower-level hospitals and clinics in the region	
<b>Countries</b>	Guinea	Germany
<b>Cities</b>	Kindia Conakry	Rostock
<b>Institutions</b>	Hôpital Régional de Kindia Laboratoire Médical Guinéo-Allemand	Medical Faculty of the University of Rostock and Brandenburg Medical School (Medizinische Hochschule Brandenburg)
<b>Term</b>	April 2017 – April 2019	
<b>Budget</b>	110.000 EURO	

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