

Burden of COVID-19 among Health Care Workers

BCHW

Assessing Infection, Risk Factors, Vaccine Coverage and Effectiveness, Working Experiences and One-Health Implications: a Mixed Methodology, Multisite International Study

Duration

2021–2023

Budget

approx. 4,000,000 EUR

Partner countries

Côte d'Ivoire
Democratic Republic of the Congo
Nigeria
Madagascar

Challenges addressed by the project

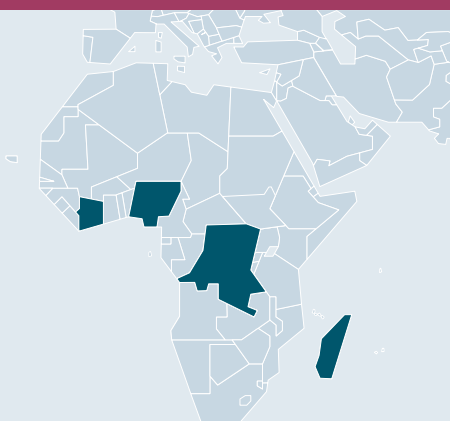
Health workforce is key to health system resilience. In the COVID-19 crisis, health care workers (HCWs) are a critical part of the health system's ability to respond to the pandemic. They can be at higher risk of SARS-CoV-2 infection as they may be directly or indirectly exposed to COVID-19 patients. If infected themselves, they could contribute to further hospital transmission and spread the virus into their families and environment. Current reports on COVID-19 in Africa reported gaps in response capacities, especially in human resources, vaccine availability and access, and personal protective equipment, which put HCWs at higher risk of infection and leads to greater physical and emotional exhaustion as well as other contextual challenges.

Objectives

To better address research gaps in this at-risk population, a multidisciplinary expert collaboration at Robert Koch Institute's partner institutions in Sub-Saharan Africa and the Friedrich-Loeffler-Institut identify the following four priority modules to be addressed using a multi-dimensional and complementary approach:

- » M1: Determine vaccine, and effective vaccine coverage, as well as incidence of symptomatic and asymptomatic acute SARS-CoV-2 infection, and its seroprevalence relatively to vaccine status among healthcare workers through cross-sectional health facility-based surveys
- » M2: Use the data collected in the cross-sectional surveys to assess infection-associated risk factors, occupational and private exposures and practices of HCWs, as well as vaccination coverage, readiness and barriers. Using these results, an intervention may be planned and implemented accordingly
- » M3: Analyse the experiences of HCWs to identify challenges, support needs and effective coping and support strategies specifically in Nigeria and Germany
- » M4: Strengthen public health systems through a One Health approach by fostering in country capacities for diagnostics, molecular epidemiology and field investigations across sectors

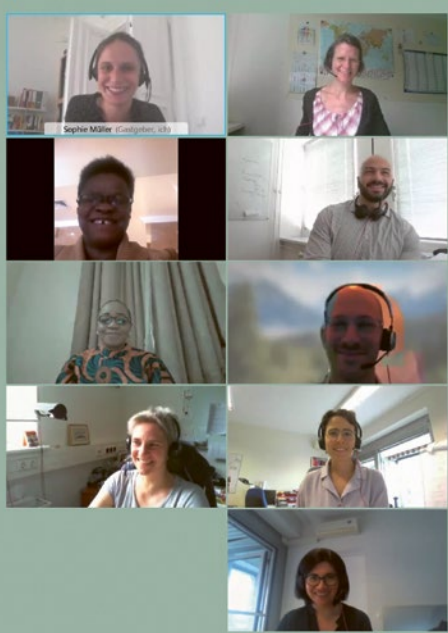
The project will give more insight into the current situation of infection among HCWs in health facilities in Sub-Saharan Africa to evaluate the burden of disease in this risk group. Each country will start by conducting a one-time sero-epidemiologic



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Virtual meeting between colleagues from the Nigeria Center for Disease Control, the Friedrich-Loeffler-Institut and the Robert Koch Institute (Photo ©RKI)

cross-sectional survey in the first half of 2022 and subsequent repeated cross-sectional studies will be planned. To assess the associated risk factors for SARS-CoV-2 infection among HCWs and to gain an in-depth insight and understanding of the experiences of HCWs during the COVID-19 pandemic, participants in Germany will be asked about their work, current mental health status and support needs. This will be supplemented by observation of the HCWs' daily work environments. Human-animal interfaces will be studied with ethnographic methods as well as blood samples from peri-urban wildlife as well as domestic animals and relevant livestock. All data will be analysed and compared between countries and result in a conclusive picture on the burden of COVID-19 infection amongst healthcare workers in Sub-Saharan Africa and Germany. This will include information regarding possible spillover events from humans to animals, creating a secondary reservoir, which may become important in the course of eradication campaigns. Therefore, enhancing the existing capacities of partner countries in molecular epidemiology and training in pathogen detection is important. Evidence gathered will be used to develop specific interventions, such as training programmes on infection prevention and control measures for HCWs, support and continued enhancement of local pandemic preparedness strategies. Insights into HCWs' experiences during COVID-19 are crucial to inform policies concerned with preparedness and response for future outbreaks. In addition to the project, there will be trainings in short term format providing specific know-how needed for the capacity enhancement.

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