

UK-PHRST – Research update, Jan 2021

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New Year 2021 will start as we mean to go on (we hope!) with UK-PHRST research teams travelling to support field work in several countries. In Nzerekore, Guinea, a project team delayed not by COVID-19 but by elections, will join in-country counterparts to start collecting oral fluid to test a novel process for identifying potential hotspots for Ebola virus infection by screening for past infection. In Turkey, diagnostic performance testing of a new point of care test for Crimean Congo Haemorrhagic Fever (CCHF) will shortly be underway with team of collaborators from the UK-PHRST, Liverpool School of Medicine and the Turkish Ministry of Health Virology Reference Laboratory in Ankara. A pilot implementation of the test in a remote area, where CCHF is endemic, is planned for later in the spring.

Meanwhile in Kasese in Western Uganda, the study team from Kagando Hospital, Glasgow University and the UK-PHRST has started recruiting healthcare workers to study exposure to viral haemorrhagic fever, aiming to improve prevention, protection and surveillance. This team overcame COVID-19 restrictions by creating a complete remote training and supervision programme to support the in-country study team from afar.

Back in the UK, the UK-PHRST data scientist has returned from working with the Bangladesh Institute of Epidemiology, Disease Control and Research and WHO on a survey of COVID-19 seroprevalence in the Rohingya camps of Cox's Bazar and, together with a colleague from the LSHTM/MRC International Statistics and Epidemiology Group (previously Tropical Epidemiology Group), is now supporting data analysis of the survey.

Three other COVID-19 related research projects are also now in analysis phase: an online survey collating healthcare workers' views on COVID-19 public health interventions; formative research to understand the mental health response to the COVID-19 outbreak in Africa; and development of a blue print tool to help low and middle income countries to build their own targeted Mass Open Online Courses (MOOCs) to support outbreak response.

Two research projects completed during this quarter. The first, sprang from an RST deployment to enhance surveillance for waterborne diseases after the massive mudslide in Sierra Leone in August 2017, and is an example of the UK-PHRST goal of bringing together deployment, research, and capacity development to improve outbreak response. The study focussed first on identifying prevalent pathogens in patients presenting with diarrhoea at Connaught Hospital, Freetown, then field validated a new multiplex PCR device. By combining the results, the team produced an operational algorithm which can help target and effectively deploy available testing methods in the country. The second study focussed on Lassa Fever Virus (LASV), again after outbreak deployment, developed and tested a novel minimally-invasive oral fluid assay to identify past LASV infection as a tool to facilitate better epidemiological understanding of the disease in advance of vaccine development.

With several new research projects already in the pipeline, 2021 is likely to be a busy year for UK-PHRST research!