ENHANCING GLOBAL HEALTH SECURITY IN KENYA

In the past year, the Enhancing Global Health Security (EGHS) project, funded by the U.S. Centers for Disease Control and Prevention, has provided capacity building to improve the ability of the health and emergency response systems in **Kenya** to **prevent**, **detect**, and **respond** to public health threats.

We **PREVENT** the spread of disease outbreaks by taking a One Health approach that considers the interplay of human, animal, and environmental health.

- We developed a range of guidelines and protocols on cholera management, biosafety and biosecurity for live bird markets, and Marburg virus disease preparedness and response.
- Project staff led discussions on development of a biosafety and biosecurity short course that the Ministry of Health has now finalized, and all laboratory personnel in Kenya are required to take the course annually. The online, self-paced course was designed with sustainability in mind as it is less expensive and more flexible than an in-person course.

We enhance the ability to **DETECT** outbreaks by putting in place protocols for testing of samples, distributing guidance on antibiotic-resistant diseases, and training laboratory staff.

- EGHS provided technical assistance to the Ministry of Health to develop a laboratory checklist and testing protocol for the detection of priority pathogens, including cholera. The checklist is being piloted across 24 counties and will allow surveillance of disease trends at the county level so that health officers can investigate unusual findings.
- We trained and mentored 11 microbiology technicians at county laboratories on how to process eight bacterial pathogens likely to cause outbreaks. This initiative has increased confidence in the accuracy of test results and led to faster test turnaround times, which has improved the quality of clinical care.
- We improved the ability to track antibiotic resistance by putting in place Clinical and Laboratory Standards Institute Guidelines that provide a standard definition of resistant pathogens across Kenya's five county laboratories. Previously, different interpretations were occurring. These data have strengthened patient management of illness by giving accurate information to health workers, and the data are being analyzed over time to track patterns of antibiotic resistance.
- As a result of technical assistance, the supported laboratories are now preparing to be enrolled as antimicrobial resistance sentinel sites by the National Antimicrobial Steering and Inter-Agency Committee (NASIC) and then will start submitting antibiogram data on antibiotic resistance to the Global Antimicrobial Resistance and Use Surveillance System (GLASS) and the National Public Health Laboratory so that outbreaks of antibiotic-resistant pathogens can be identified at the national and global level.

- During the Rift Valley fever outbreak in January 2024, we trained surveillance staff to develop spot maps that pinpointed potential cases of disease in animals. These maps informed resource allocation and the dispatching of health teams to search for cases.

We strengthen the country's ability to **RESPOND** to dangerous outbreaks by training rapid response teams, helping establish an emergency operations center (EOC), and assessing needs within the health system and communities.

- Project surveillance staff conducted training on Rift Valley fever for 32 human, animal, and environmental health practitioners who now serve on rapid response teams in eight counties at high risk of an outbreak. Participants received training on syndromic and event-based surveillance, outbreak investigations, specimen collection, risk assessment, and communication using modules from the World Health Organization and the Food and Agriculture Organization of the United Nations.
- After Rift Valley fever was detected in Marsabit County, we conducted an assessment through key informant interviews and data collection to determine the level of preparation among county health staff, the level of risk and knowledge among community members, and the ability of the health care system to manage the outbreak. The team observed health facility staff, reviewed facility records, and interviewed health workers to gather in-depth information.
- We conducted six focus group discussions — four in Wajir County and two in Marsabit County — to gauge public understanding of Rift Valley fever and share informational messages. Findings from the assessment and focus group discussions have been shared with county governments to improve future response.
- The project provided health worker training on Rift Valley fever sample collection from humans and animals, sample processing, and data abstraction from health facility records.
- During an outbreak caused by an unknown pathogen at a school in Kakamega County, our project started establishing an EOC to streamline coordination of the investigation and support data management. We shared recommendations of the requirements of a fully operational EOC and trained a rapid response team and surge staff in data analysis and situation reporting, which led to 1,072 cases being reported and linked to health care.
- In response to a vaccine-derived polio outbreak in the Dabaab refugee camp, we assisted the Ministry of Health in planning investigation and response activities. In addition, during supplementary immunization campaigns in Garissa, Nairobi, Kiambu, and Kajiado counties, project staff provided monitoring, supportive supervision, vaccine and cold chain accountability, and data management. This assistance allowed for daily review of vaccination efforts to target resources and ensure reach to all households.

Our team has identified **future steps** to improve outbreak prevention, detection, and response. These include:

Surveillance

Further funding is needed for data reporting, aggregation, and visualization so that outbreaks can be quickly identified, response teams dispatched, and health facilities prepared to manage cases. With the increasing frequency of weather-related emergencies and the encroachment of humans into wilderness areas, zoonotic outbreaks are becoming more common. Surveillance systems need to be linked and integrated so that data can be shared across sectors. In addition, Kenya could respond more quickly to threats by establishing and maintaining an inventory of county rapid response teams.

Laboratory

Putting in place Laboratory Continuous Quality Improvement at county hospital referral laboratories would strengthen the ability to identify and address challenges in a timely manner. The establishment of national standard testing algorithms is needed to increase detection of priority diseases.

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