care facilities in Katsina State to assess the core activities and supportive functions of disease Surveillance for the period 2009–2014. Univariate and bivariate analysis were performed to generate frequencies, proportions, and odds ratios.

Results: Of the total number of LGAs and health facilities surveyed, shortages of data tools were noticed in 91% and 79% respectively. Only 40% of the LGAs carry out data analysis while same was not conducted at health facility level at all. Surveillance Resources were found to be adequate at state level but grossly inadequate at both LGA and health facility levels. There was no epidemic preparedness and response plan, budget line and emergency stocks of drugs and supply at LGAs. Timeliness and completeness of reporting improved across the state between years 2010 – 2013.

Conclusion: The disease surveillance system in Katsina State is weak as evidenced by inadequate resources for its core and supportive functions at LGA and health facility levels. It is recommended that capacity building on data analysis and adequate resources should be made available to make disease surveillance system functional at all levels in Katsina State.

http://dx.doi.org/10.1016/j.ijid.2016.11.336

20.129

The cost of responding to a waterborne cholera outbreak in a village in Uganda compared to a simple hypothetical intervention

E.A. Okullo[a,*], B.-P. Zhu[b]

[a] *Ms., Kampala, UGANDA/UG*
[b] *CDC, Epidemiology, Kampala/UG*

Purpose: In September 2015, a cholera outbreak occurred in a village in Hoima district, Uganda. The Ministry of Health assembled a rapid response team, with support byCDC, UNICEF and WHO, to investigate the outbreak, establish the Kaiso Cholera Treatment Center (KCTC), and implement control measures. The team identified 120 cholera cases (with 5 deaths) and determined that drinking contaminated water from the lakeshore caused this outbreak.

We sought to determine the cost of investigating and controlling this outbreak, and compare it to a would-be simple preventive measure – constructing deep wells to provide cleaner water.

Methods & Materials: We collected cost data,including personnel and material costs at KCTC, health facilities,Hoima district health office, Uganda Public Health Fellowship Program, UNICEF, CDC,and WHO. We defined direct cost of responding to this outbreak as expenditure on medications, medical equipment and supplies, utilities, and allowances and transport for responders; indirect cost included salary and other compensations for responders. We did not include difficult-to-measure costs such as vehicle depreciation, building maintenance, and loss of productivity to case-persons due to illness and deaths. The cost of constructing deep wells was quoted by a U.S.-based NGO.

Results: The total cost incurred in investigating and controlling this outbreak was $71,769, including $21,059 in direct cost ($19,225 for allowances and transportation, $1,774 for medical equipment and supplies, and $60 for utilities), and $50,620 in indirect cost (74,484 person-hours of salary and other compensationsfor responders). Conversely, constructing a deep well to provide cleaner water would cost approximately $2500. Essentially, the total cost incurred in this outbreak would have been enough toconstruct 28 (=71769/2500) deep wells;even the direct cost only would have been enough to construct 8 (=21059/2500) deep wells. One such deep well would have prevented this outbreak and averted future waterborne outbreaks.

Conclusion: A simple prevention measure such as constructing deep wells for village residents can be substantially cost-effective for preventing waterborne diseases such as cholera. We recommend that the government should proactively implement prevention measures for waterborne outbreaks whenever possible, instead of passively responding to these outbreaks.

http://dx.doi.org/10.1016/j.ijid.2016.11.337

20.130 ISARIC – enhancing the clinical research response to epidemics

R. Pardinaz-Solis[a], K.-S. Longuere[a], S. Moore[a], C. McMullen[a], G. Carson[b,*], P. Horby[c]

[a] *University of Oxford, ISARIC, Oxford/UK*
[b] *ISARIC/University of Oxford, Nuffield Department of Medicine, Tropical Medicine, Oxford/UK*
[c] *University of Oxford, Tropical Medicine-ERGO, Oxford/UK*

Purpose: The International Severe Acute Respiratory and emerging Infection Consortium (ISARIC) is a network of networks that was established in 2011 by investigators from around the world to ensure a rapid research response to outbreaks of pandemic potential. By bringing together multidisciplinary research groups in more than 110 countries across different resource settings, ISARIC has supported research responses to Ebola in West Africa, MERS-CoV in the Middle East and elsewhere, and more recently, the Zika outbreak in Latin America and the Caribbean.

Methods & Materials: ISARIC activities have aimed to fulfil its main objectives, which are to (i) develop standardised and globally accessible research tools, (ii) set up platforms for data collection and data sharing, (iii) establish a primed infrastructure to epidemic responses, and (iv) enable research in resource poor settings.

Results: ISARIC is working with WHO and the IDAMS consortium on a Clinical Characterisation Protocol/Natural history protocol for Zika. CRFs for Zika have been harmonised in collaboration with other research networks (PREPARE, REACTing and IDAMS), and adapted by PAHO as part of the harmonisation process for Zika surveillance.

ISARIC has established a data collection platform for SARI and VHFs to maximize the likelihood that data are prospectively and systematically collected, shared rapidly in a format that is easily aggregated, tabulated and analysed across many different settings globally. Now ISARIC is collaborating on a Zika digital image data platform.

ISARIC members have developed a standardised ISARIC/WHO Clinical Characterisation Protocol for Severe Emerging Infections; and a global short term incidence study on SARI - SPRINT-SARI (open to recruitment).

Making capacity building a reality with new networks forming around our initiatives e.g. a new East African network being led by Rwanda.

Conclusion: ISARIC's role is bringing many disciplines and networks together to reach a common goal in preparedness and response to emerging/re-emerging infections and continuing to play a facilitator's role with key partners such as WHO, PAHO, NGOs, IANPHI, local networks and individuals.

http://dx.doi.org/10.1016/j.ijid.2016.11.338