



TechnoHealth Surveillance Newsletter



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Editorial address

TechnoHealth Surveillance
Newsletter
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From Editors' desk

Dear reader,

We are pleased to welcome you to Volume 2, Number 10 of the *TechnoHealth Surveillance*. In this issue, we share with you the strategies made by the Ministry of Livestock and Fisheries in collaboration with the Southern African Centre for Infectious Disease Surveillance to strengthen animal disease surveillance using digital technology.

AfyaData has been commended as a useful digital tool to support research data collection, submission, monitoring and feedback, which is presented in this issue.

We would like to share with you the international upcoming events that SACIDS will participate to share its research activities on the infectious diseases of human and animals.

Kindly find in this issue highlights on the SACIDS Resource Centre and its activities to enhance One Health community security.

We are looking forward to your contribution of articles and feedback on this and other issues of *TechnoHealth Surveillance*. Kindly do not hesitate to share with us stories on health related events occurring in humans, animals and environment for the sustainability of our newsletter.

We wish you a happy reading!

Ministry of Livestock and Fisheries to strengthen disease surveillance system using digital technology

From October 18-19, 2017 the Ministry of Livestock and Fisheries (MoLF), in collaboration with the Southern African Centre for Infectious Disease Surveillance (SACIDS) conducted a workshop of key stakeholders responsible for animal disease surveillance to identify gaps/challenges facing the animal disease surveillance system in Tanzania and propose solutions. The workshop was conducted in Kibaha and supported by the Skoll Global Threats Fund (SGTF) through the Disease Outbreak Detection and response in East and Southern Africa (DODRES) project.



The need to transform disease surveillance systems from paper-based to digital system was underscored by the stakeholders to enhance near-to-real time detection, reporting and feedback/response at all levels. The key areas of the surveillance system and tools identified for improvement included customizing tool variables to reflect the Tanzanian context, engagement of community, sensitization and training of disease reporting agents at grassroots levels, improving the geographical coverage of the passive surveillance system, participatory approach in disease surveillance, timely collection of geo-reference data, integration of data from multiple

sources, timely submission and access of data and feedback/response. Recommendation was made on the need to revise/develop additional surveillance forms for specific needs. Following this, key stakeholders revised/developed and digitized surveillance forms for abattoir report, animal movement permit, immediate/follow-up, outbreak reporting, institutional research report, large farms report, rumors log book, veterinary facility report, and weekly report.

Transforming animal disease surveillance system from paper-based to digital system and its deployment using participatory One Health approach provides potential opportunity to complement the national surveillance efforts. In particular, to strengthen interoperable, electronic real-time public health surveillance system that will support timely capturing, submission, and analysis of animal health data at different levels. This will ultimately enhance feedback mechanisms and response to suspected outbreaks and public health events/emergencies.

As we go to press the trainings on the use of *AfyaData* and mobile-phone devices are being provided to 82 Livestock Field Officers from Ulanga, Malinyi and Kilosa districts to support capture and submission of animal health events from community to district and national levels. In addition, the districts and MoLF are being supported with desktop computers to support data management.



AfyaData is a potential app for research data collection, submission, monitoring and feedback

The Southern African Centre for Infectious Disease Surveillance (SACIDS), with its headquarters at the Sokoine University of Agriculture (SUA), is a One health Virtual Centre of Academic and Research Institutions established in January 2008. It focuses on collaborative effort between natural and social sciences to advance the understanding of interactions between humans, animals and the environment to improve public and animal health. In May 2016 SACIDS was designated by the World Bank as African Centre of Excellence for Infectious Diseases of Humans and Animals in Eastern and Southern Africa (SACIDS ACE).

From October 18-20, 2017 SACIDS ACE conducted student induction workshop in Morogoro to equip the recruited PhD and MSc students with the knowledge, resources and contacts that they needed to make a good start to their training

programme. In addition, the workshop aimed at building relationships among students, and with academic staff and to align them with the aims and values of SACIDS ACE. Information shared with the students included the context of the SACIDS-ACE programme, structure of PhD programme and resources and support available to them.

During the event SACIDS ACE had an opportunity to showcase its scientific work in promoting One Health security including application of *AfyaData* to enhance early detection, timely reporting and prompt response to infectious diseases in human and animal populations. In addition, demonstration was conducted on potentiality of *AfyaData* to support capture, submission and feedback of other health related events including research data.

Information was highlighted on the SACIDS innovation lab set up and its functionality. Following this, some students were attracted to community-based disease surveillance programme and application of *AfyaData* to support capture, submission, monitoring and visualization of data in their study programmes. The interested students will be trained in detail on how to use

AfyaData and they will receive technical support from SACIDS innovation lab throughout their project life cycle. Likewise, some students will take part in the analysis of data being collected and submitted by various stakeholders from human and animal populations using *AfyaData*. They will construct models which will provide guidance on disease control and prevention.

Upcoming events

The Epidemics 6 Conference to be held in Barcelona, Spain, November 29 to December 1, 2017

EPIDEMICS 6 – the 6th International Conference on Infectious Disease Dynamics will take place in Sitges, Barcelona, Spain from November 29 to December 1, 2017. The event will bring together international delegates in an intense dialogue on ideas, data, insight, models and methods in the field of dynamics of infectious disease of animals and humans. Further details can be found on the conference website: www.elsevier.com/epidemics-conference

The 35th Tanzania Veterinary Association Annual Scientific Conference, December 5-7, 2017, Arusha, Tanzania

Tanzania Veterinary Association (TVA) will hold its 35th Scientific Conference in Arusha Tanzania from December 5-7, 2017. The theme of the conference is: *The role of livestock sector in building an industry based economy in Tanzania*. The sub-Themes are: (i) Challenges associated with value addition in the livestock sector; (ii) Influence of farming system on productivity; (iii) The role of animal feed manufacturing industry on animal sector; (iv) The influence of antimicrobial resistance to value addition and; (v) Welfare and contribution of draft animals to the transformation of the agricultural sector. For more information, visit TVA website at www.tva.or.tz

SACIDS will participate in these events to share its research activities.

Key Partners:





SACIDS Resource Centre

Overview

SACIDS Resource center has a unique eco-health offering of public health and veterinary experts working with social-anthropology and social-economic experts. All of which are backed up with a strong base of developers and Information and communication technology experts.

Together we design, develop, use open source technology and apply expert analytical epidemiological skills to help partners improve collaboration, information flow and knowledge sharing to better understand and respond to infectious disease outbreaks.

With long term sustainability in mind, our multidisciplinary team of human, animal, social-anthropologist, social economical and software engineers help build fit for purpose solutions to respond and solve critical public health challenges.

About SACIDS

SACIDS is a **ONE HEALTH Virtual Centre** that links academic and research institutions in Southern Africa, which deal with infectious diseases of humans and animals, in an innovative partnership with world-renowned centers of research in high income countries, for instance, the University of London Colleges that constitute the London International Development Centre (LIDC) including the Royal Veterinary College - RVC - and the London School of Hygiene and Tropical Medicine -LSHTM. Other partnerships include collaboration with the International Livestock Research Institute (ILRI), other institutions in the USA, UK and Asia.

Our Team

Esrion Karimuribo: Principal Investigator

Calvin Sindato: Lead Epidemiologist

Eric Beda: Technology Lead

Mpoki Mwabukusi: System Analyst

Godluck Akyoo: Developer

Renfrid Ngolongolo: Developer

Robert Maduka: Administrative officer

We can help you deliver Techno-Health solutions to health workers

SACIDS Resource center helps partners assess opportunities for their health systems, design, develop or choose and configure the right tools for health workers, health experts and community members, design workflows, train local staff on our toolkit, deliver our tools to health workers, manage/monitor data gathering, provide expert health analysis and interpretation, advise on intervention strategies and evaluate impact

We have **Over 6 years** experience working within 'Human and Animal' health sector delivering support to **Asses, Design, Develop, Train, Collect & Hosting Data, Analyze, Interpret, Advise and Evaluating** health solutions

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Our Tools

AfyaData. Designed with community members, Human and Animal health experts

AfyaData

AfyaData is a software toolkit that combines easy data gathering and management, interactive feedback, decision support through a one health repository and public health analytics with graphing and mapping features.

Our tools are free, open-source, and built the last mile 'the community' and link them with local authorities and public health experts .

We focus on supporting communities, governmental and non-governmental organizations with technology based solutions and high science in early warning, detecting, managing and controlling infectious diseases.

Approach



We have worked with communities and deployed our mobile technology based solutions in Ngorongoro, Kibaha, Ngara, Morogoro districts in Tanzania, Kazungura, Sesheke districts in Zambia, Muyinga district in Burundi

What we may offer

Turn-key technology driven Disease Surveillance Systems

Programming of mobile phones for data collection, data storage and visualization

Expert response in disease outbreaks

Geo-spatial analysis, data interpretation

Epidemiological Analysis and one-health based intervention strategies

Collaborative research platform

Access to BSL-4 Laboratory and 3rd Generation sequencers

Linkage to public and animal health sectors as well communities at human-animal interface eco-systems in Africa

Some of our development partners include



InSTEDD
Innovative Support to Emergencies
Diseases and Disasters



**skoll global
threats fund**



Using
INNOVATION AND
TECHNOLOGY
to address
'ONE HEALTH
SECURITY'
at
COMMUNITY LEVEL



**skoll global
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