



TechnoHealth Surveillance Newsletter



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Editorial address

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From Editors' desk

Dear reader,

Kindly find in this issue how the Ministry of Livestock and Fisheries and the Southern African Centre for Infectious Disease Surveillance (SACIDS) have collaborated to enhance surveillance of animal health events in the slaughter houses.

We have improved access to TechnoHealth Surveillance by making it accessible over the web, which is highlighted in this issue.

We are delighted to share with you participation of SACIDS in the 4th Joint East African Commission Heads of State Retreat on Infrastructure.

SACIDS FELTEP resident participates in the birth defects surveillance supportive supervision, which is presented in this issue.

We look forward to your feedback and comments 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.

Enjoy your reading!

SACIDS and MoLF to enhance animal health and disease surveillance in slaughter houses

The livestock sector in Tanzania contributes much to the national economy. The livestock industry serves as source of cash income and labor as well as means of savings especially at household level. However, its development is challenged by different constraints including diseases, some of which are transmissible between animals and humans (zoonoses) posing public health threats. To improve livestock sector, surveillance of health events at different potential points/levels is critical for policy formulation and making informed decisions.

In Tanzania surveillance of health status of animals and carcasses at the slaughter houses (abattoirs) is the procedure being implemented by official veterinarians to safeguard public health. Depending on the nature of the event, relevant samples are collected for laboratory investigation.

Recognizing slaughter houses as one of important sources of valuable information of the incidence of animal diseases/conditions, the Southern African Centre for Infectious Disease Surveillance (SACIDS) in collaboration with the Ministry of Livestock and Fisheries (MoLF) in Tanzania have strengthened animal health surveillance at the slaughter houses by transforming the paper-based data capture system to digital system to enhance early detection, timely submission and prompt analysis of health events.

Through the *Enhancing Community-based Disease Outbreak Detection and Response in East and Southern Africa (DODRES)* project supported by the Ending Pandemics, SACIDS has developed digital disease surveillance tools packaged as *AfyaData*. From October 18-19, 2017 a team of Epidemiologists and Information, Communication and Technology (ICT) programmer from SACIDS met with officials responsible for animal disease surveillance from MoLF in Kibaha, Pwani Tanzania to revise and digitize the slaughter house surveillance form.

From October 31 to November 7, 2017, SACIDS conducted training on the application of digital technology (*AfyaData*) in the surveillance of animal health events. The trainees were all Livestock Field Officers (LFOs) from Kilosa (47), Ulanga (15) and Malinyi (10) districts. Other trainees were the District Veterinary Officers (DVOs) from the respective districts. *AfyaData* has been deployed in the three districts to capture health events at community and slaughter house levels.

Here we report on the summary of health events captured at the slaughter houses and the estimate of economic losses associated with condemned organs/carcasses.

From January to March 2018, a total of 311 animals were inspected before and after being slaughtered in Kilosa (168), Malinyi (120) and Ulanga (23). They included cattle (205), goats (74), sheep (18) and pigs (14). Nineteen (6%) carcasses were totally condemned because of jaundice (14) and cysticercosis (5). Those which were totally condemned because of jaundice were of cattle (10) from Kilosa and goats from Kilosa (2) and Ulanga (2). The ones condemned because of cysticercosis were of cattle (4) and goats (10) from Kilosa.

A total of 122 carcasses were partially condemned of which helminthosis was the leading cause (77%) of organ condemnation. Other reasons of partial condemnation of the carcasses were poor carcass condition, hydatidosis, cysticercosis and localized tuberculosis (Figure 1A). Largest proportion of carcasses which were partially condemned because of helminthosis was of cattle (Figure 1B). Cysticercosis was found to be the major parasitic condition responsible for partial condemnation of cattle (1) and goat (4) carcasses from Ulanga.

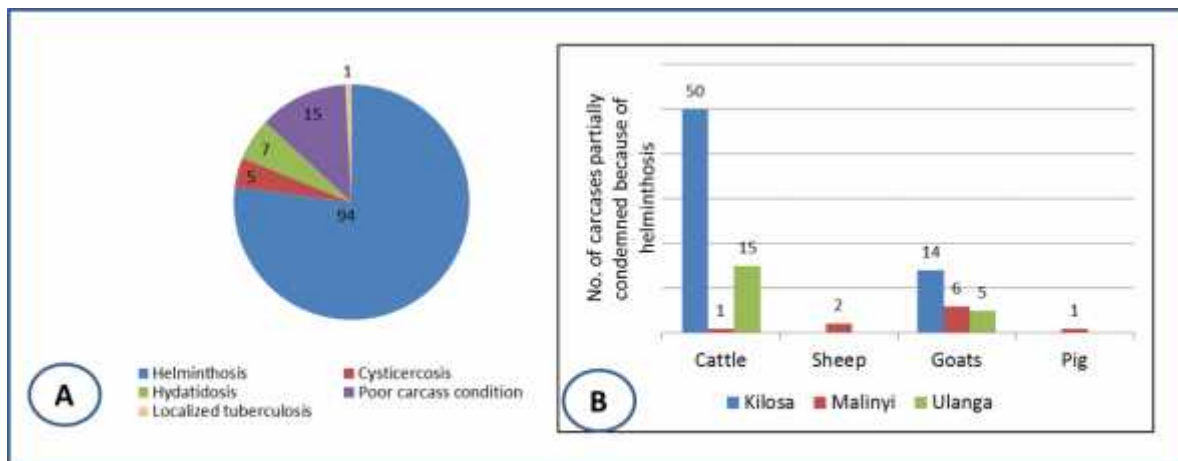


Figure: 1-A. Number of carcasses and reasons for partial condemnation. Figure: 1-B. Number of carcasses partially condemned because of helminthosis in Kilosa, Ulanga and Malinyi districts.

Furthermore, partial condemnation as a result of poor carcass condition was frequently reported in cattle (Figure 2).

Overall, the animal organs condemned had a total weight (Kg) of 302 and were mainly liver (191 kg) and lungs (73 kg)

(Figure 3). Rate of condemnation due to helminthosis was higher in the liver (119Kg) and lungs (33 Kg). Likewise, the rate of condemnation due to hydatidosis was highest in the liver (27 Kg) while for poor condition was highest in the lungs (16Kg) Figure 4).

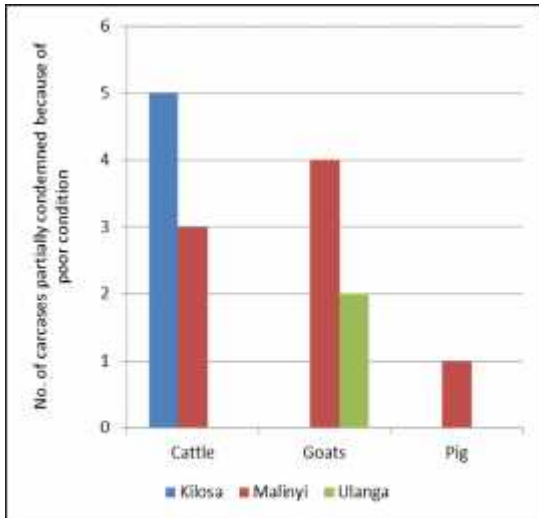


Figure 2: Partial condemnation because of poor organ condition in Kilosa, Malinyi and Ulanga districts

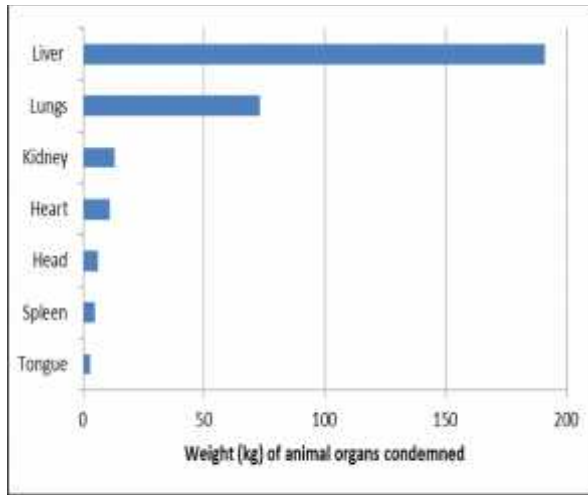


Figure 3: The animal organs condemned and their weight (Kg) in Kilosa, Malinyi and Ulanga districts

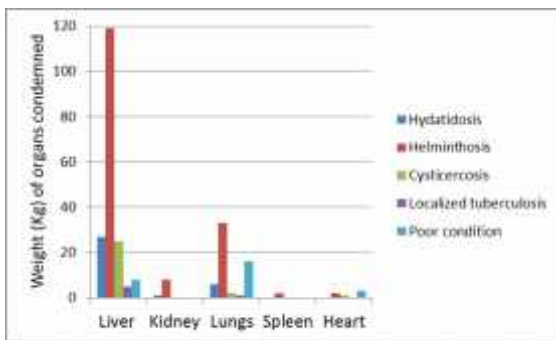


Figure 4: Weight (Kg) of animal organs condemned and associated conditions in Kilosa, Ulanga and Malinyi districts

Considering the average cost for cattle during the period at TZS 700,000 (US\$ 318) and that for goat at TZS 120,000 (US\$ 55); the loss due to 10 cattle and 4 goats, which were totally condemned accounted to a total sum of TZS 7 million (US\$ 3,180) and TZS 480,000 (US\$ 220), respectively. Considering further the average price of the animal organs at TZS 8,000/Kg (US\$ 3.6/Kg); the loss due to 302 Kg of the animal organs condemned is estimated at a total loss of TZS 2,416,000 (US\$ 1,098).

In the three districts, parasitic diseases have been found responsible for the condemnation of major organs and carcasses during meat inspection, leading to the associated economic losses. There is a need to address the causes of organ and carcass condemnation including improvement of animal husbandry to reduce disease transmission and associated economic losses. Contrary to the old system that was paper-based, the livestock officials in Kilosa, Ulanga and Malinyi districts and Morogoro region have commended usefulness of digital technology, in particular *AfyaData* to enhance timely capture, submission and access to animal health data.

TechnoHealth goes online

TechnoHealth Surveillance Newsletter is one of the channels SACIDS utilizes to disseminate disease surveillance and other public health related information among partners and the general public. The newsletter is produced on monthly basis and has been shared with stakeholders through email addresses and postal mails. Currently, it has reached over 400 readers within and outside Tanzania.

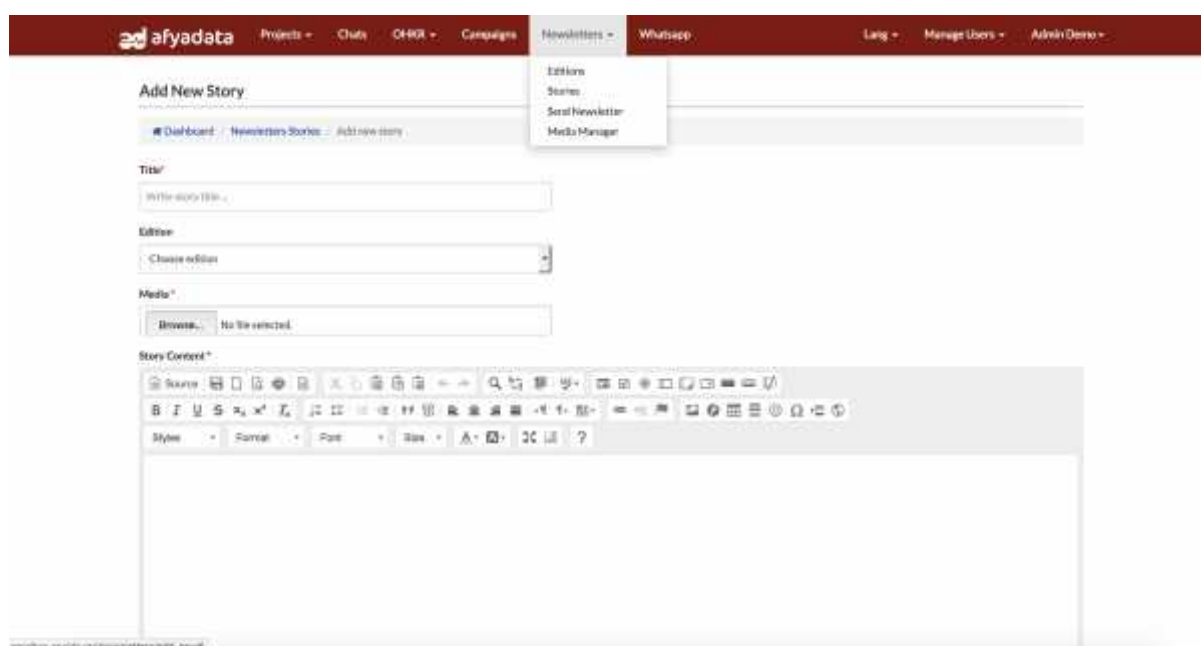
The Southern African Centre for Infectious Disease Surveillance (SACIDS) has worked further to improve access to the newsletter by making it accessible over the web. This makes it easier to distribute and share various stories produced in our newsletter. By reading these stories online, it gives us a better analytical on the newsletter readership including the number of readers, what kind of stories are liked, and gives us the room to share more photos and videos on events occurring in our communities.

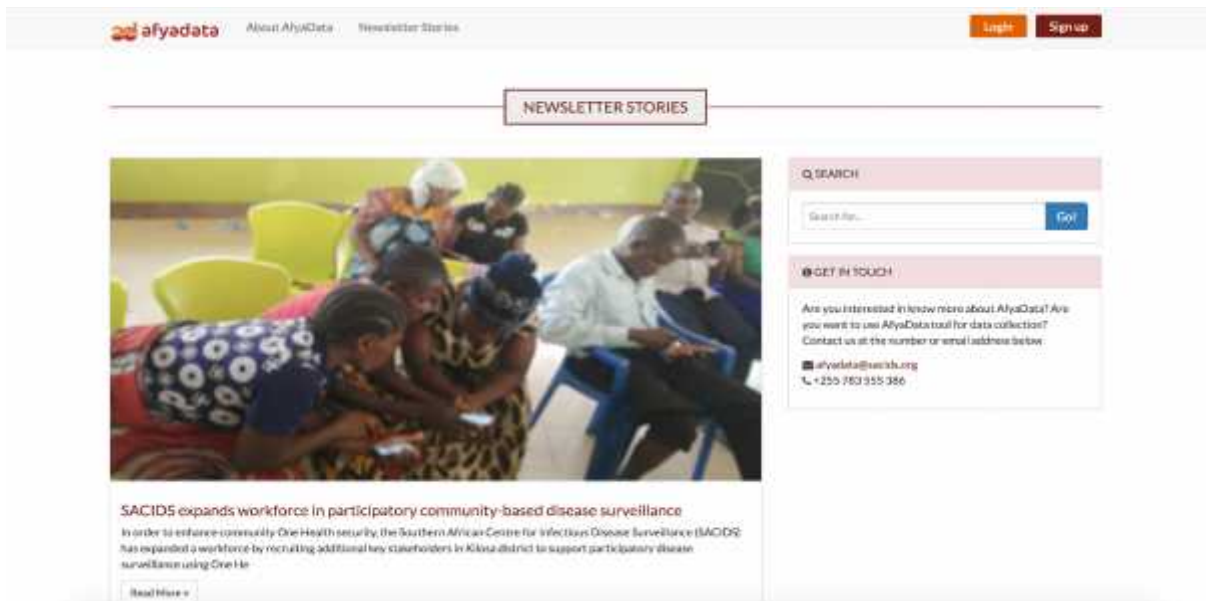
What is even more exciting is that the new system provides our readers with the ability to join in the discussions by commenting and rating our stories.

How this works!

- *Afyadata* administrator uploads newsletter stories onto the website dashboard.
- Then the reader signs up to register on *Afyadata* website to access stories through <http://afyadata.sacids.org/newsletter/stories>.
- It also provides opportunity to readers to share views/opinions/comments on each story.
- The readers can subscribe using email to receive notifications for new stories once uploaded in close to real-time.

We encourage our readers to sign up for the TechnoHealth.





SACIDS participates in the 4th Joint EAC Heads of State Retreat on Infrastructure

The 4th Joint East African Community (EAC) Heads of State Retreat on Infrastructure was held in Kampala, Uganda on February 22, 2018. The theme of the event was “*Deepening and widening regional integration through infrastructure and health sector development in the EAC partner states*”. It aimed at accelerating the attainment of the objectives of the EAC development strategy, African Union agenda 2063 and the Sustainable Development Goals in the infrastructure and health sectors in the EAC.

The Retreat was graced by the EAC Heads of State; Ministers, Permanent/Principal Secretaries and Senior Officials from government institutions and agencies; high-level guests from the international community including African Union, Heads of State

from the Tripartite institutions including Common Market for Eastern and Southern Africa, East African Community, Southern African Development Cooperation, Economic Community of West African States and Intergovernmental Authority for Development.

The Southern African Centre for Infectious Disease Surveillance (SACIDS) was represented by Ms. Clara Yona, Prof. Gerald Misinzo, Mr. Renfrid Ngolongolo, Eng. Eric Beda and Mr. Yunus Karsan. Exhibiting its works during the retreat, SACIDS showcased its strength in research, capacity building and demonstrated its AfyaData application, a digital disease surveillance tool, which enhances early detection, timely reporting and prompt response to health events in humans and animals.

AfyaData app incorporates all the features of current official disease surveillance data collection in both the human and animal health sectors plus additional features such as geo-tagging and mapping, feed-back loops and integrative knowledge management to assist primary responder decisions.

SACIDS booth was privileged to be visited by, among others, the Minister of East African Community Affairs Rt. Hon Kirunda Kivejinja, Tanzanian Minister for Health, Community Development, Gender, Elderly and Children Hon. Ummu Mwalimu.



SACIDS Team during the EAC Summit meeting in Kampala, Uganda. (From left: Gerald Misingo, Renfrid Ngolongolo, Clara Yona, Eric Beda and Yunus Karsan)

SACIDS FELTP resident participates in the birth defect surveillance supportive supervision

The Tanzanian Ministry of Health Community Development Gender Elderly and Children (MoHCDGEC) has attached a Field Epidemiology (FELTP) resident, Dr. John Gwakisa, to the Southern African Centre for Infectious Disease Surveillance (SACIDS) to

learn and gain experience on the use of digital technology in disease surveillance. The application of digital technology is being implemented by SACIDS through the Enhancing Community-based Disease Outbreak Detection and Response in East

and Southern Africa (DODRES) project supported by the Ending Pandemics.

In 2015, MOHCDGEC established a facility based birth defect surveillance system for selected major external birth defects with goals to detect and estimate the magnitude of birth defects, inform planning for prevention strategies, improving the quality of life of affected individuals and families, and assist to evaluate the impact of mandatory food fortification.

From February 26 to March 3, 2018, Dr. Gwakisa lead the Birth Defect Surveillance Supportive Supervision conducted in Kilombero District in Morogoro, Tanzania. Other members of the team included the Morogoro regional and Kilombero district birth defect focal persons.

The exercise involved five health facilities which were St. Francis Referral Hospital, Kibaoni Health Centre, Mlimba Health Centre, Mngeta Health Centre and St. Judeous Health Centre. The supportive supervision aimed at learning the challenges related to birth defect surveillance to inform improved strategies.

The challenges identified included inadequate clinician involvement in the detection of birth defects at district and health facility level, poor case detection from still births, inadequate trained/oriented staff for birth defect case notification/reporting, inadequate feedback and advocacy at different levels, poor networking with stakeholders on referral of

birth defect complicated cases needing ambulance and nursing escort, and lack of appropriate mechanism/timing for transmission of notification forms from health facility to higher levels.



Supportive supervision team with health workers at Mlimba Health Centre

The recommendations made during the surveillance supportive supervision included:

- The need to implement the quality improvement strategy to strengthen surveillance.
- The need to orient more health care workers on birth defects potential entries to increase case detection especially from still births.
- To use an electronic reporting system to enhance early reporting of birth defect events and feedback at all levels.
- To initiate advocacy on birth defect surveillance and prevention strategies at community level including the use of community radio programmes.
- Improve continuous birth defect advocacy within the participating health facilities.

Key Partners:

