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From field data to publication: empowering Nigeria's Frontline In-Service Applied Veterinary Epidemiology Training (ISAVET) graduates with advanced scientific manuscript writing skills for enhanced research dissemination

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Abstract

The frontline In-Service Applied Veterinary Epidemiology Training (ISAVET) Programme was formed to build the capacity of the veterinary workforce in the area of veterinary epidemiology. This is to enable veterinarians have the requisite skills to prevent, detect and respond to animal disease outbreak. It was aimed to enhance proficiency in the animal health sector that will translate to an increase in livestock productivity, income generation as well as protecting human health. Veterinary field epidemiologists are the first line of defense against zoonotic and transboundary animal diseases. At the end of the frontline ISAVET Programme, every trainee is expected to write a project in line with the deliverables of the Programme. These projects are usually not published by the graduates of the Programme. The realization of this existing gap in the Programme led to the Organisation of the first Scientific Manuscript Writing Workshop (SMWW) to ensure that the projects of ISAVET graduates are published with the aim of building their writing and communication skills as well as showcase some of the impacts of the training. The training was successful with recommendation from the participants to have more of such trainings for the ISAVET graduates that are yet to be trained on scientific manuscript writing. Furthermore, some lessons were learnt such as the need for participants to come along with their project data set to accommodate further analysis where the need arises. Also, there is a need for the trainees to communicate with their mentors before submitting their manuscripts for assessment during the selection process.

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To establish the frontline ISAVET Programme, which stands for In-Service Applied Veterinary Epidemiology Training, several institutions collaborated, including USAID, Texas A&M University, Makerere University in Uganda, and the Inter-State School of Veterinary Sciences and Medicine of Dakar (EISMV) in Senegal [1]. Programs such as the Field Epidemiology Training Programme for Veterinarians (FETPV) and the Applied Veterinary Epidemiology Training (AVET) in Asia are already in operation and run in tandem with ISAVET. A new Food and Agriculture Organization (FAO) in-service program, the ISAVET Programme, addresses three critical areas: epidemiology, laboratory work, and emergency management [1]. The FAO collaborates with the government ministries in decision-making, makes sure the ISAVET Programme is located within each Ministry of Agriculture and/or Livestock, and promotes for ownership at the national and regional levels to guarantee the program's sustainability and improvement [1].

Focus of In-Service Applied Veterinary Epidemiology Training (ISAVET) Programme

The first line of defense against animal illnesses that may potentially impact people is the veterinary field, of epidemiologists [2]. In order to improve livestock production, food safety, food security, local and international trade of animals and animal products, and public health, the ISAVET

program was initiated to equip the veterinary workforce in field epidemiology with the skills necessary to anticipate, identify, and effectively respond to disease outbreaks and emergencies. Additionally, the program seeks to promote a One-Health approach in field epidemiology, provide essential veterinary services at the local, state, and national levels, and target the veterinary workforce in partner countries to control transboundary animal diseases and prioritised zoonotic diseases [3]. The program has so far assisted 17 nations spread over East, South, West, and Central Africa. Ethiopia, Ghana, Guinea, Kenya, Liberia, Mali, Mozambique, Nigeria, Niger, Senegal, Sierra Leone, Tanzania, Uganda, Burkina Faso, Cameroon, Côte d'Ivoire, and the Democratic Republic of the Congo are among them (Figure 1) [3].

With funding from the United States Agency for International Development (USAID), FAO Emergency Centre for Transboundary Animal Diseases (FAO-ECTAD) Nigeria was able to sponsor the programme (cohorts 1 to 4) while the cohort 5 of the programme was sponsored by FAO-ECTAD through USAID funding and the Regional Disease Surveillance Systems Enhancement (REDISSE) project (World Bank funded). Five cohorts of 156 veterinarians—64 females and 92—males have been trained throughout Nigeria since the ISAVET Program was founded in 2021 (Figure 2). Thus far, the program has had a notable beneficial effect. There are, nonetheless, shortcomings, such as the inability of ISAVET Programme alumni to publish their research after graduation. The capacity of the researcher to communicate his or her results to the general audience significantly increases the effect of the study. For programme graduates to effectively communicate their results to partners who are directly or indirectly dedicated to improving animal and public health, a scientific writing workshop is necessary.

Approach to scientific manuscript writing

In addition to demonstrating the breadth of the study, a well-written scientific paper facilitates the dissemination of important findings and ideas to the larger scientific community, development partners and the general public. Scientific publications are more than just data compilations; they are tools for information transmission that help researchers, policymakers, and veterinary medical professionals remain up to date on the most recent advancements in the field. Researchers may successfully close the gap between intricate research findings and their applications by following the strictest guidelines for scientific writing [4].

Additionally, these publications are used by funding organisations and governments to make well-informed choices about the allocation of resources, which ultimately affects the direction of veterinary care. In the context of veterinary medical research, being proficient in scientific writing is not just a scholarly endeavour but also a potent driver of advancement and creativity in the profession. By honing their ability to write well-crafted scientific publications, researchers make a substantial contribution to the development of veterinary medicine, which in turn enhances the animal health industry and, to a greater degree, public health. Additionally, it serves as a platform to present to the world the state of different animal health issues and illnesses in relation to a nation or its various areas.

In academic and professional settings, being able to write scientifically is crucial [4]. Researchers, scientists, students, and professionals who can express themselves clearly and eloquently are often more successful in obtaining funding, partnerships, and employment prospects [4]. These classes are essential for professional growth and education in a variety of scientific fields because they educate students how to accurately convey complex ideas [4]. Manuscripts can be developed from reports of outbreak investigations, secondary data analysis (through evaluation of disease surveillance system/systems, data from veterinary clinics/laboratories and abattoirs), literature reviews (such as scope

reviews, systematic reviews) [5] and from projects/dissertations.

To this end, the first scientific manuscript writing workshop for the graduates of the ISAVET Programme was held from the 8th to the 17th of December 2024 (Figure 3, Figure 4). Thirty participants from cohorts 1 to 5 were selected through a rigorous assessment of the manuscript draft of their projects. They were trained with the aim of grooming them on effective scientific writing to enable them to publish their project findings in order to increase the pool of trained ISAVET graduates on scientific writing, the number of published articles by the ISAVET graduates, and to communicate relevant findings of the frontline ISAVET graduates to the public. The outcomes of this relevant training are; improvement of communication skills based on research findings; publicising the impact of the frontline ISAVET Programme to the general public (increase and improve visibility); provision of research findings to the policy makers and researchers for further actions; creating opportunities to secure grants and be identified by other researchers for further collaboration; and creating global impact due to published research.

In order to achieve this feat, facilitators and trainers were drawn from academia and graduates of the advanced Field Epidemiology Training Programme (FETP) in Nigeria who are known to have writing prowess, published in renowned academic journals and are well acquainted with teaching methods. Topics that were taught include; communicating scientific information; effective writing; writing scientific manuscripts in a limited resource setting; selecting a topic for research; forming of introductory aspect of the manuscript; formation of the methodology; crafting out result section of the manuscript; discussion aspect of a manuscript, formation of conclusion of a manuscript; acknowledgement; referencing; abstract evaluation criteria and types of abstracts; how to write a cover letter; choosing a journal for submission and crafting participants manuscripts into a publishable work. Participants were grouped into groups of three/four trainees per trainer and were tutored on the process until their manuscripts were crafted into a publishable article.

The training was successfully concluded with the trainees expressing their delight in what they had learnt. All manuscripts will be published with Pan Africa Medical Journal - One Health as a Special Issue for the ISAVET Programme. Participants recommended more training on the manuscript writing workshop to ensure that more of the ISAVET graduates are trained on scientific writing and communication. Some of the lessons learnt during the training were the need to inform trainees to come with their data set for further analysis of their work, as well as the need to consult those who mentored them during the ISAVET Programme before submitting their draft manuscripts to ensure better output of their work.

Conclusion

The Scientific Manuscript Writing training is an essential tool in propagating the impact of the ISAVET Programme. A trained writer has the potential to explicitly convey his/her findings to the scientific community and the public, including the possibility of further research collaboration with other researchers. This training has equipped the ISAVET graduates, and their manuscripts will be published as a supplement with the Pan Africa Medical Journal- One Health (PAMJ OH). It is hoped that more of such trainings will be done in the future for further expansion of the visibility and impact of the Programme.

Competing interests

The authors declare no competing interests.

Authors' contributions

Benjamin Obukowho Emikpe: concept. Ayi Vandi Kwaghe, Benjamin Obukowho Emikpe, Ayi Vandi Kwaghe, Otto Vianney Muhinda, Asinamai Athliamai Bitrus, Lami Hannatu Lombin, David Dazhia Lazarus, Patience Tomoh, Ayodele Majekodunmi and Asabe Adamu Dzikwi-Emennaa: essay draft. Authors revised the draft critically for content and accuracy of information. All the authors have read and agreed to the final version of this manuscript.

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Figures

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Figure 3: opening ceremony of the first scientific manuscript writing workshop for the In-Service Applied Veterinary Epidemiology Training Programme graduates at Lekki, Lagos State, Nigeria

Figure 4: hands-on sessions on crafting manuscript at the first scientific manuscript writing workshop for the In-Service Applied Veterinary Epidemiology Training Programme graduates at Dover Hotel, Lekki, Lagos State, Nigeria

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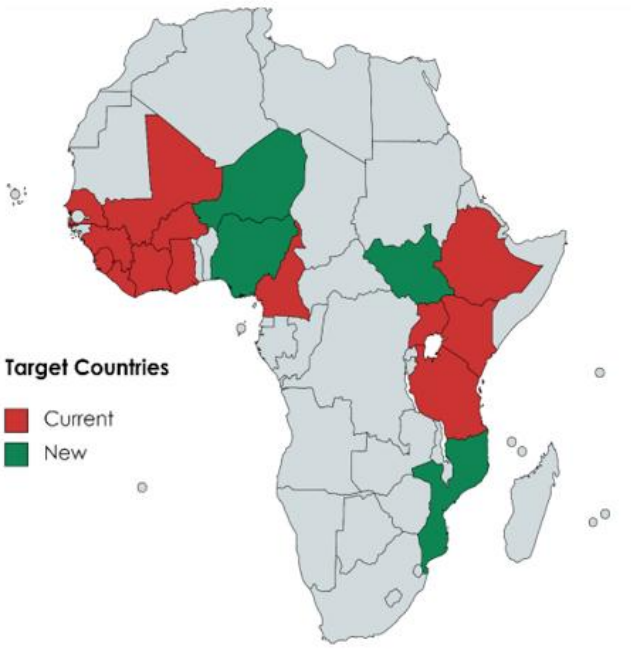

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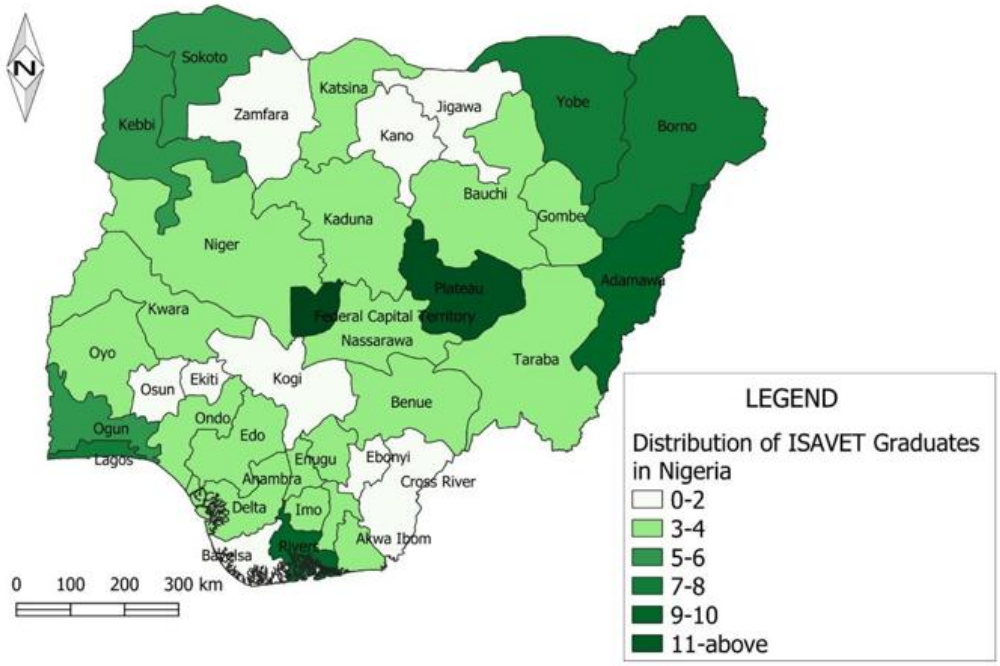

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