



Call for Fellowships Afrique One-ASPIRE

TTP5: Human and Animal Disease Surveillance-Response Systems

TTP5 aims to address the need to increase the reporting of zoonotic diseases through integration of human and animal surveillance systems, the use of innovative surveillance tools and involvement of communities in disease reporting. This TTP will focus on three themes:

- Surveillance tools and community involvement
- Surveillance-response systems
- Cost–benefit analysis of integrated human–animal disease surveillance systems

Theme 3: Cost–benefit analysis of integrated human–animal disease surveillance systems

[Ref: TTP5-Surveillance-Response-PhD3](#)

Project Title: Cost analysis of integrated disease surveillance and response systems in Sub-Saharan Africa

Enrolment: The selected candidate will be enrolled at MAKUN, Uganda.

Project Description: Zoonotic diseases are an important cause of illness and death in Sub-Saharan Africa. To address this problem, Afrique One-ASPIRE is developing a regional strategy of integrated disease surveillance and response (IDSR) based on a One Health approach. This calls for a coordinated use of resources, tools and approaches for early detection and response to zoonotic diseases. The main objective of this study is to analyse cost vs. benefit of IDSR based on a One Health approach compared with the conventional strategy based on segregated human and animal disease surveillance.

Systematic communication between medical, veterinary and wildlife disciplines is important for efficient surveillance, diagnosis and control of zoonotic diseases. Such collaborations reduce costs and delays and can enhance disease detection and control. Interdisciplinary collaboration has already started to yield good results in the control of zoonotic diseases. The cost–benefit gains derive from achieving more while sharing resources or by doing the same using fewer resources. Typical examples as quoted from the 'Economics of One Health' include:

- 'In Chad, joint animal–human vaccination campaigns of DPT and polio in children and CBPP control in livestock resulted in greater coverage in both humans and livestock, and pastoralists became more aware of public health services.'
- 'In Jaipur, India, dog vaccination and sterilization resulted in a decline of human rabies cases to zero (whereas cases increased in other states that did not have this campaign). The population of stray dogs declined by 28 percent.'
- 'In Kyrgyzstan, public health and veterinary workers together visit farms, resulting in lower costs of surveillance for brucellosis, echinococcosis, and other zoonotic diseases.'
- 'In Canada, the integration of animal and human health facilities led to a 26% reduction in operation costs, an improvement in efficiency that is not yet directly applicable in most developing countries.'

This study will involve data collection for conventional and One Health–IDSR activities focusing on brucellosis.

Mentorship Team: Richard (IRED); Joram Buza (NM-AIST); Julius Keyyu (TAWIRI), Esther Schelling, Jürg Utzinger and Jakob Zinsstag (Swiss TPH); Daniel Haydon and Sarah Cleaveland (UoG); Phare G. Mujinja (MUHAS); Emmanuel Mpolya (NM-AIST); Enock Matovu and Vincent P. Alibu (MAKUN); Bassirou Bonfoh (CSRS)

Qualification: The candidate must be a citizen of an African country and have a BSc in health and allied sciences and an MSc in health economics.

For more information, contact the Co-leads:

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