

Scotland's Rural College

Global Study: Participation in One Health Networks and Involvement in COVID-19 Response Activities

Streichert, L.; Sepe, L.; Jokelainen, P.; Stroud, C.; Berezowski, J.; Vilas, V. DeIRio

Published in:

The International Journal of Infectious Diseases

DOI:

[10.1016/j.ijid.2021.12.247](https://doi.org/10.1016/j.ijid.2021.12.247)

Print publication: 01/03/2022

Document Version

Publisher's PDF, also known as Version of record

[Link to publication](#)

Citation for published version (APA):

Streichert, L., Sepe, L., Jokelainen, P., Stroud, C., Berezowski, J., & Vilas, V. D. (2022). Global Study: Participation in One Health Networks and Involvement in COVID-19 Response Activities. In *The International Journal of Infectious Diseases: Supplement* (Vol. 116). (International Journal of Infectious Diseases). Elsevier. <https://doi.org/10.1016/j.ijid.2021.12.247>

General rights

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the public portal ?

Take down policy

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

PS23.01 (354)

Global Study: Participation in One Health Networks and Involvement in COVID-19 Response Activities

L. Streichert¹, L. Sepe², P. Jokelainen^{3,*}, C. Stroud¹, J. Berezowski⁴, V. DelRio Vilas⁵

¹One Health Commission, Apex, NC, United States

²German Federal Institute for Risk Assessment (BfR), Berlin, Germany

³Statens Serum Institut, Infectious Disease Preparedness, Copenhagen, Denmark

⁴Scotland's Rural College, Inverness, United Kingdom

⁵World Health Organisation, South East Asia Regional Office, New Delhi, India

Purpose: This global study examined whether being part of a One Health Network (OHN) was associated with being involved in COVID-19 response activities at the early stages of the pandemic. Barriers to workforce involvement in the pandemic response and the perceived value of OHN activities were studied to inform future targeted evidence-based strategies for workforce capacity-building.

Methods & Materials: We conducted a cross-sectional descriptive study, using an online questionnaire that was globally distributed in July-August 2020. With a snowball sampling approach via OHN listservs, social media, and further sharing, we aimed to reach individuals in the global health workforce across locations, organizations, and sectors to survey their participation in OHN activities and involvement in COVID-19 response.

Results: The sample included 1050 respondents from various types of organizations and work sectors, from 94 countries across all WHO regions. Being part of an OHN was positively associated with involvement in the COVID-19 response (odds ratio: 1.8, 95% confidence interval: 1.3 – 2.4). The OHN activities most indicated as useful during COVID-19 pandemic by the survey respondents included 'increased public awareness of One Health' and 'networking with professionals across sectors with common interests'. Overall, 44% of survey respondents who were part of an OHN found OHN activities very or extremely helpful to their COVID-19 response. Lack of opportunities was a commonly reported barrier to involvement in COVID-19 response globally, and lack of funding was a barrier particularly in the WHO Africa region.

Conclusion: This study provides a snapshot of the multisectoral response to COVID-19 and an assessment of the contribution of OHNs. The lessons learned during this pandemic can be used to identify measures to improve global health capacity, including OHN activities to build and strengthen workforce response to future global health challenges.

<https://doi.org/10.1016/j.ijid.2021.12.247>

PS23.02 (423)

Evaluation of the Risk of Rabies in Human Victims through Implementation of Integrated Bite Case Management System in Phnom Penh, Cambodia

K. Tazawa^{1,2,*}, A.N. Lewis^{2,3}, S. Ly⁴, Y. Peng⁴, V. Duong⁵, F. Lohr^{2,3}, A.D. Gibson^{2,3}, W. Phimpraphai⁶, L. Gamble^{2,3}

¹Kasetsart University, Kamphaeng Saen, Nakhon Pathom, Thailand

²Worldwide Veterinary Service, Cranborne, Dorset, United Kingdom

³Mission Rabies, Cranborne, Dorset, United Kingdom

⁴Institut Pasteur du Cambodge, Epidemiology and Public Health Unit, Phnom Penh, Cambodia

⁵Institut Pasteur du Cambodge, Virology Unit, Phnom Penh, Cambodia

⁶Kasetsart University, Faculty of Veterinary Medicine, Kamphaeng Saen, Nakhon Pathom, Thailand

Purpose: This study aims to evaluate the implementation of a hospital-based integrated bite case management system (IBCM) in Phnom Penh to identify potential improvements and assess the risk of rabies in human victims to help guide animal health interventions and post-exposure treatment.

Methods & Materials: The surveillance programme was initiated from human dog-bite patients presented to the Institute Pasteur du Cambodge (IPC) Vaccination Unit in Phnom Penh for post-exposure prophylactic treatment, or through public reports between October 2020 and June 2021. All identified individuals with knowledge of a biting dog were engaged during the investigation. The standardised questionnaires were administered by phone, or in-person where deemed necessary. Each case was assigned with a rabies status; rabid, probable, suspect/inconclusive, and non-case depending on the outcome of an investigation. Univariate logistic regression was performed with all inputs except for inconclusive cases to evaluate the risk factors in case demographics associated with rabid animals.

Results: During the study period, 5,035 investigations were conducted. The surveillance system detected 17 rabid cases associated with human dog-bite patients, and 2 cases through other reports. Fifty-seven cases were defined as probable, and 2,745 biting dogs were considered not rabid at the time of the incidents. A definitive conclusion was not drawn in 2,214 cases. The vaccination rate of known biting dogs was 18.6%. Univariate analyses showed that case demographics from the earliest stage of an investigation including animals showing signs of sickness (OR: 135.8, 95%CI: 42.0 – 439.3), animals' death described as spontaneous (OR: 111.2, 95%CI: 26.3 – 469.9), animals that were killed (OR: 126.3, 95%CI: 42.4 – 545.3), ownerless animals (OR: 33.5, 95%CI: 11.5 – 97.4), patients older than 15 years old (OR: 5.3, 95%CI: 1.5 – 18.9), and multiple bite victims in a case (OR: 6.8, 95%CI: 2.3 – 20.2) were associated with confirmed rabid cases.

Conclusion: The study identified barriers to successful sample collection and thorough follow-up with patients which could impact on the system competency. The results of the study indicated that the initial case demographics could be used to assist not only prioritise cases for the IBCM investigation, but also spare PEP prescription for cases of low risk.

<https://doi.org/10.1016/j.ijid.2021.12.248>

PS23.03 (728)

Tricycle Project – One Health approach: Whole genome sequencing(WGS) of Extended-spectrum beta-lactamase (ESBL) producing Escherichia (E.) coli derived from human, food chain and environment

R. Hashim^{1,*}, S. Amir Husin², N. Ahmad³, N. Bahari⁴, N. Abu⁵, R. Mohd Ali⁶, N.H.F. Hashim⁷, P. Ramasamy⁸, M.R. Hassan Saberi⁹, L. Yee Laine¹, F. Abdul Rashid¹, N.A. Abd Rasid², S. Chun Paul¹⁰

¹Institute for Medical Research, National Institute of Health, Bacteriology Unit, Infectious Disease Research Institute, Selangor, Malaysia

²Ministry of Health, Medical Development Division, Putrajaya, Malaysia