

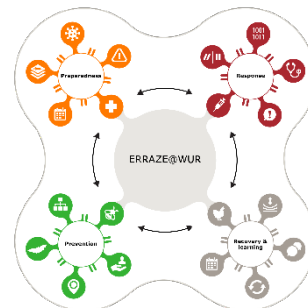


Paradigm Shifts for Global One Health

Greater resilience requires transformation and integration

Book of Abstracts

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Integrating social sciences in preventing and responding to zoonotic diseases outbreaks

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Aim

Zoonotic diseases occur due to pathogen spillover from animals to humans, and a subsequent increase in human disease cases. Although much technical knowledge is available to prevent and control zoonotic diseases, social science expertise is less commonly integrated. Social science expertise is required to prevent and mitigate zoonotic diseases outbreaks, for example, by understanding and modifying human behavior. This was recognized after the 1918 influenza pandemic and amplified during the recent COVID-19 pandemic. The potential contributions of social sciences are currently underutilized. The objective of this review was to map the literature on the integration of social science expertise in preventing and responding to zoonotic disease outbreaks, for identifying knowledge gaps.

Methods

We conducted a scoping review following the PRISMA-ScR guidelines. As basis for the review, we developed a conceptual framework to help understand the contribution of social science expertise during zoonotic disease outbreaks. The framework comprised of three components: outbreak drivers, outbreak management and post-outbreak effects. The retrieved studies were mapped in relation to these components, and particularly, regarding their contributions to zoonotic disease prevention, preparedness, response, and recovery. Articles were searched in SCOPUS, Web-of-Science, and CAB Abstracts.

Results

After de-duplication, and title and abstract reviewing, 833 articles were eligible for full-text screening, and finally, 764 articles were retained for data extraction. Rabies (127 articles), brucellosis (65) and avian influenza (58) were the most studied zoonoses. Ethiopia (rabies), India (rabies), USA (swine influenza, rabies), and Australia (Hendra virus) were the main focus countries. About 50% of the studies applied insights from behavioral sciences, mainly employing the 'Knowledge, Attitude and Practices' (KAPs) framework. Most of these studies also assessed associations, not causality, between KAPs and socio-economic characteristics, which limit the policy relevance of the findings. Wildlife trade and (religious) festivities were the most studied socio-economic disease drivers. About 70% of the studies focused on disease prevention, mainly towards understanding stakeholders' KAPs and risk perceptions. Relatively, more studies were also retrieved regarding disease prioritization (preparedness) and evaluation of risk communication and media coverages (recovery/learning). However, scientific reporting of integration of social science expertise in responding to zoonoses is limited. Most impact assessment studies performed simple cost estimation for evaluating disease burdens, without assessing the broader socio-economic impacts of outbreaks.

Conclusions

Rigorous and comprehensive analyses of economic, social and environmental drivers and impacts of zoonosis outbreaks, as well as their preventing and mitigating strategies, are limited but required for informed decision making to effectively control zoonotic diseases.

Keywords: Epidemics, Preparedness, Prevention, Response, Social science, Zoonosis