T01P06 / One Health: From Agenda-Setting to Implementation and Evaluation

Topic : T01 / POLICY PROCESS THEORIES

Chair : Annemieke van den Dool (Duke Kunshan University)

Second Chair : Elizabeth Shanahan (Montana State University)

GENERAL OBJECTIVES, RESEARCH QUESTIONS AND SCIENTIFIC RELEVANCE

The One Health approach has emerged as a collaborative, multi-disciplinary approach that recognizes the interconnectedness of human, animal, and environmental health. This conceps promotes comprehensive public health strategies, through the understanding that disease prediction, prevention, and response requires an integrated examination of diseases at the human-animal-environment interface, thereby improving medical, veterinary, and ecological health outcomes globally and contributing to pandemic prevention.

While One Health is considered a promising approach to human, animal, and environmental health, moving from theory to practice through agenda setting, policy making, implementation, and evaluation is lagging behind.

To better understand complexities and advancements in the governance of One Health, this panel approaches One Health from a policy process perspective. The panel examines the challenges and opportunities in agenda setting, policy formulation, policy implementation, and policy evaluation regarding One Health. Topics of interest include but are not limited to infectious diseases, antimicrobial resistance, and food safety in relation to One Health.

We welcome submissions that engage with the following policy process themes:

Agenda-setting: How has the One Health approach been framed in policy narratives? How has framing changed over time? Who are the policy actors that promote this approach? What are the drivers and obstacles that put or prevent One Health to the forefront of policy making?

Policy formulation and decision-making: How do different policy actors (including scientists) negotiate and resolve disagreement among human, animal, and environmental health stakeholders?

Policy implementation and operational challenges: How can different interventions improve One Health awareness and practices?

Policy evaluation: What methods and criteria can be used for measuring effectiveness of One Health policies, including multi-sectoral coordination and policy outcomes?

Policy change and the dynamics of policy learning: How does the One Health concept and related policies travel between different policy levels (i.e., global, supranational, national to local) and political systems?

We especially welcome papers that use existing theories of the policy process to examine One Health, including the Advocacy Coalition Framework, Institutional Analysis and Development framework, Multiple Streams Framework, Narrative Policy Framework, Policy Feedback Theory, Policy Diffusion and Innovation, Ecology of Games Framework, the Programmatic Action Framework, and the Punctuated Equilibrium Theory.

CALL FOR PAPERS

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T01P06 / One Health: From Agenda-Setting to Implementation and Evaluation

Chair : Annemieke van den Dool (Duke Kunshan University)

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Session 1AMR

Wednesday, July 2nd 16:00 to 18:00 (A3)

Discussants

Annemieke van den Dool (Duke Kunshan University)

Elizabeth Shanahan (Montana State University)

Effective evaluation of One Health policy and programs to address antimicrobial resistance and the Sustainable Development Goals

Angeline Ferdinand (University of Melbourne)

Mauricio Coppo (University of Melbourne)

The World Health Organization (WHO) has identified antimicrobial resistance (AMR) as one of the top ten threats to global public health. The effects of rising rates of AMR threaten development and achievement of the Sustainable Development Goals (SDGs); furthermore, conditions that foster underdevelopment are significant drivers of the increase in AMR. One Health approaches that integrate sectors across human health, animal health, food production and the environment are essential to both addressing antimicrobial resistance (AMR) and achieving the Sustainable Development Goals (SDGs). This paper aims to examine operational and implementation challenges in One Health, and positions evaluation of One Health policies and programs as a way of making explicit underlying theories, actor motivations, facilitators and obstacles that affect the effectiveness of One Health approaches. The paper particularly focuses on the use of One Health approaches to controlling and preventing AMR and advancing the SDGs.

As an inherently cross-sectoral and multi-disciplinary approach, achieving an equitable balance in the design, implementation and operations of One Health initiatives is a challenge. Adhering to a One Health model necessitates integration between sectors and the design of programs that represent the needs and priorities of each equitably. The evaluation of policy, programs, processes and outcomes is required to ensure there is increased and more robust evidence for effective approaches in this space. While the evaluation of One Health initiatives is increasing, a review of 1839 papers found that only 7 reported quantitative metrics when assessing program outcomes (Baum et al, 2017).

A monitoring and evaluation component should be incorporated from the early stages of designing AMR control initiatives, including SDG evaluation where possible. Formative evaluation built into program design can be supportive of cross-sectoral cohesion within programs. This is particularly important for ensuring cohesion and aligning new initiatives with AMR National Action Plans. The formative evaluation process would ideally include a robust assessment of how the One Health approach will be defined; for example through use of the Network for Evaluation of One Health (NEOH) evaluation framework (Rüegg et al, 2018). The quadripartite organisations also provide guidance on monitoring the impact of addressing AMR on the achievement of the SDGs, including the ‘mainstreaming’ of AMR and AMR-relevant indicators in evaluation of development programs, such as through integration of AMR in monitoring and data collection systems.

Our experience in undertaking a One Health approach to controlling AMR spans the Asia-Pacific region through partnerships to build capacity in prevention, diagnosis, surveillance and management of AMR pathogens across human and animal health; and as mentors within key partner institutions in the UK Government’s Fleming Fund Fellowship Scheme and Country Grant program, providing training and mentorship across human and animal health settings in low- and middle-income countries. This paper will draw on our experience in conducting evaluation in this area to highlight integration of evaluation and One

Health frameworks to strengthen One Health approaches, improve our understanding of effective strategies in this field, and forge stronger links between initiatives to address AMR and broader issues of development.

(Virtual) Exploring Facilitators and Barriers to Collaborative Governance of Antimicrobial Resistance in Rural China from the Perspective of 'One Health': A Qualitative Study Using the SFIC Model and Institutional Collective Action Theory

Zhixin Fan (Shandong University, China)

Background?
Antimicrobial resistance (AMR) is widely recognized as one of the major threats to global public health, with serious threats to human health and socio-economic development. The AMR governance in different sectors is fragmented and divided, and the related governance initiatives are not effectively connected and synergized, which seriously limits the overall AMR control. This study aims to explore the facilitators and barriers to collaborative governance of AMR.
Methods?
Adopting an exploratory qualitative research design, we conducted semi-structured interviews with 45 respondents from three counties in three different provinces in China, selected based on economic development and geographic location. The relevant respondents for this study comprised managers primarily responsible for AMR governance across various administrative departments, such as the county health commission, the bureau of agriculture and rural affairs, and the bureau of ecology and environment. Furthermore, physicians, head of institutional sensibility and pharmacy managers from various county hospitals and township hospitals were also included. We organized the data according to the SFIC Model and Institutional Collective Action Theory (ICA), focusing on system and policy elements that impact collaborative governance.
Results?
Our study interviewed 45 interviewees, including 7 from the agriculture sector, 8 from the environment sector, and 30 from the health sector/medical institutions. Among the interviewees, 26.7% (12/45) were aware of the concept of "One Health," and 37.8% (17/45) were familiar with the National Action Plan on AMR. All interviewees agreed on the necessity of multisectoral collaborative governance for AMR. Using the SFIC model and ICA theory, several key points emerged: In the Starting Conditions, facilitating synergy among the concepts and values of various stakeholders was particularly important; In the Facilitative Leadership component, the establishment of coordinating committees was advocated by most respondents; In the Institutional Design, policies formulated at the national and provincial levels serve as the primary basis for achieving cross-sectoral collaborative governance and policy implementation at the county level, with clarifying the responsibilities and accountability mechanisms of each department being the cornerstone of effective collaboration; In the Collaborative Process, the core of achieving multi-sectoral collaborative governance for AMR lied in reducing collaboration costs and risks while increasing collaboration benefits.
Conclusions?
The relevant governors from relevant departments have recognized the necessity and urgency of multisectoral collaborative governance for AMR. Cross-sector health education promotion and data sharing are important avenues for future governance of AMR.

(Virtual) Implementing One Health Governance Approaches to Mitigate Antimicrobial Resistance Across Institutional, Social, Economic and Political Contexts

Chloe Clifford Astbury (York University)

Authors: Chloe Clifford Astbury, Jaskeerat Singh, Suzanne Naro, Geneviève Boily-Larouche, Mathieu Poirier, Arne Ruckert

Introduction
Antimicrobial resistance (AMR) poses a serious threat to global health by compromising the effective treatment of infectious diseases across human, animal, and ecosystem health sectors. The One Health (OH) approach emphasizes multisectoral collaboration and is critical to addressing AMR. Since the World Health Organization developed the Global Action Plan on AMR in 2015, 178 countries have developed national action plans focusing on AMR, with many emphasising OH governance. However, challenges remain in implementing OH governance effectively. In particular, there remains limited understanding of how OH governance mechanisms can be effectively implemented across diverse institutional, social, economic, and political contexts. Governance includes aspects of policy formulation and decision-making as well as encountering context-specific implementation challenges. This mixed-methods project aims to synthesise theoretical and empirical knowledge on effective, context-appropriate OH governance implementation in order to support different countries and regions in strengthening governance for AMR mitigation.

Methods and Analysis
This mixed-methods project involves three phases:

A systematic scoping review of peer-reviewed and grey literature, synthesising literature discussing the implementation of OH governance in diverse institutional, social, economic and political contexts;

Qualitative comparative analysis identifying key dimensions of context and OH governance mechanisms and how they may interact to support or undermine successful implementation of OH governance; and

Case study analysis focusing on a series of cases representing different combinations of contextual factors, incorporating document analysis and key informant interviews to assess how OH governance was implemented.

Findings and implications
Emerging findings from this project will help to identify which mechanisms, or combination of mechanisms, for OH governance can be most effective across diverse contexts, including both existing governance structures and wider contextual factors such as country income, geography and disease burden. This will support countries in strengthening their OH governance, amplifying efforts to mitigate AMR as well as other OH concerns such as zoonotic and vector-borne diseases, and pandemic prevention, preparedness and response. In addition to synthesizing practical recommendations, this project will theoretically reflect on the findings and explore policy theories for their utility in understanding OH processes, including the Advocacy Coalition Framework (ACF) to examine stakeholder coalitions and their influence on AMR policy; the Institutional Analysis and Development (IAD) Framework to analyze how institutions shape collective action in OH governance; and Multi-Level Governance (MLG) approaches to explore interactions between global, national, and local governance levels.

Science, Policy, and the Next Pandemic – The Role of Science in Public Discourse Dynamics on Antimicrobial Resistances

Johanna Hornung (University of Lausanne)

Manuel Fischer (Eawag)

Which role does science play in the public discourse to set the agenda for emerging problems and corresponding solutions in One Health? The COVID-19 pandemic presented a severe public health crisis that has sparked renewed research interest in the interaction between science and policymaking (Cairney & Toth, 2023; Eichenberger, Varone, Sciarini, Stähli, & Proulx, 2023). Recently, the scientific community is warning of the impending “overlooked pandemic of antimicrobial resistance” (AMR) (Laxminarayan, 2022), which is already causing more than one million deaths per year – a number that is likely to increase (Pulingam et al., 2022). The salience and framing of an issue in public policy discourses can be an important antecedent to agenda setting and the subsequent policy process that formulates policies to tackle a given issue (Bromley?Trujillo & Karch, 2019). Consequently, the reception of scientific evidence on AMR in policy discourses is essential to addressing AMR challenges before they become major crises.

Contributing to this strand of research, this study innovates by combining the analysis of public discourses with a focus on science-policy interactions in AMR policy. Thereby, it tackles an issue that can be described as creeping crisis (Boin, Ekengren, & Rhinard, 2020). It examines the discourse dynamics of science-policy interactions around AMR over time. More specifically, it asks the following two interrelated questions: How central is science for agenda-setting, i.e., before an issue reaches the agenda? To what extent does science contribute to defining problems and formulating coherent solutions?

To answer these questions, we study the public discourse presented in two major newspapers in Germany and Switzerland between 1999 and 2021. In this period, 1090 articles and 4225 statements therein deal with the issue of AMR. Analyzing their content systematically over time allows us to account for developments depending on different national contexts, external events, and scientific disciplines. The long-term study of Swiss and German newspaper articles between 1999 and 2021 reveals how scientists and scientific evidence shape public discourse in different systems of scientific policy advice, and how these dynamics develop over time. While the analysis finds no linear dynamics, science does seem to have a systematic influence after certain events and when it comes to specific problem types and solution types, whereby problems and solutions directly related to science dominate in these patterns. The results also point towards a lower relevance of science for agenda setting while outlining its benefit for policy formulation.

T01P06 / One Health: From Agenda-Setting to Implementation and Evaluation

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Session 2Zoonoses

Thursday, July 3rd 10:15 to 12:15 (A3)

Discussants

Annemieke van den Dool (University of Amsterdam)

Elizabeth Shanahan (Montana State University)

The policy process and networks among systems in charge of zoonoses management in Peru: A One Health approach

Lisset Dumet Poma (OHSU-PSU School of Public Health)

Zoonoses—diseases transmitted between animals and humans—disproportionately affect low-resource countries. One Health (OH) serves as a framework to understand the interconnection of zoonotic risk factors and encourages collaboration, coordination, and communication among sectors. However, OH faces policy and organizational barriers to translating programs into policy and sustaining cross-sectoral work. We utilized the Institutional Analysis and Development framework alongside the OH approach to describe the policy process and networks among the systems involved in preventing and controlling zoonoses in Peru. This research aims to (1) elucidate the perspectives of policy communities regarding the drivers and consequences of zoonoses' emergence and endemicity; (2) describe the policy conditions, including priority-setting, processes for solution selection, and authority rules; (3) determine the structure of the policy network and mechanisms for resource sharing and coordination.

We conducted a case study using a multiple-methods approach. We conducted 75 semi-structured interviews and 77 network surveys with policymakers and experts integral to zoonoses programs (June-November 2023). Participants included representatives from human, animal, and environmental systems at subnational, national, and international levels. We employed the rapid qualitative method (RQM) to analyze the semi-structured interviews and qualitative systems dynamics (QSD) to map participants' perspectives on the risk factors associated with zoonoses. We applied social network analysis (SNA) to assess networks.

Representatives from animal, human, and environmental public organizations described a structural conceptualization of zoonotic risk factors related to pets, humans, wildlife, and livestock. The diagrams produced through QSD depicted economic and environmental risk factors linked to the emergence and endemicity of zoonoses, with a more prominent emphasis on risk factors affecting livestock.

Participants indicated that limited surveillance systems fail to capture the local burden of zoonoses. Prevention and control activities focused on addressing zoonoses classified as national priorities rather than local ones. Policies are developed through multidisciplinary teams, multisectoral regional meetings, and expert opinions. Local policies regulating roles in multisectoral activities are seen as accessible solutions for addressing zoonoses. However, hierarchical governmental rules deter local policymaking and adaptations.

SNA results revealed multisectoral collaborations between human and agricultural systems, with few connections between national and subnational levels. Our study found that OH collaborations among participants from different organizations were more common than those within the same organization. RQM results identified implementation barriers, such as inadequate regulations supporting funding for cross-sectoral activities, which create resource inequities between human and agricultural systems. There is a need to formalize the functions of environmental systems.

By applying the OH approach, we captured diverse perspectives from individuals affiliated with various

sectors, including subnational government levels and international organizations in Peru. We discovered that structural barriers, such as national priorities, overshadow local zoonoses. Empowering local technicians and experts was recommended to sustain multisectoral work and policy adaptations. Further research is needed on the rules-in-use of current multisectoral programs, as well as an evaluation of the policy network over time to inform the effectiveness and sustainability of OH.

Co-authors (I'll request their IPPA registration upon abstract acceptance): Kenzie,E.PhD; Goodman,J.PhD; Merino,V.DVM; Cruz,V.BSc; Atto,R. BSc; Vilchez,P. ; O'Neal,S. MD

Examining Policy Change and Learning in Neglected Tropical Disease Control: A Case Study of Dengue Programs in India

Nikita Pandey (Indian Institute of Technology, Bombay)

The One Health approach recognizes the interconnectedness of human, animal, and environmental health, advocating for integrated disease prevention and control strategies. While One Health has gained traction in global health discussions, its practical implementation in low- and middle-income countries remains fragmented. This study examines how the One Health concept has influenced the governance of dengue control in India by analyzing the evolution of programs, plans, and schemes through a policy process lens. Using the Narrative Policy Framework, the research explores how policy narratives shape the framing, diffusion, and adaptation of One Health-informed dengue control strategies across different levels—from global and supranational frameworks to national and local implementation.

Through a document analysis of key policy texts and stakeholder engagements, this study investigates whether and how the One Health approach has been integrated into India's dengue response. It also examines whether its absence in dengue-related programs and plans has led to missed opportunities for a more comprehensive response. The research seeks to understand the actors, institutional mechanisms, and learning processes that influence policy change and adaptation in dengue governance. Furthermore, it identifies the challenges in multi-sectoral coordination, the dominance of biomedical-centric narratives, and the institutional barriers that hinder the adoption of a holistic One Health perspective.

Findings from this study contribute to the broader understanding of policy learning and change in neglected tropical disease control, offering insights into how global health concepts like One Health travel across different policy levels. By highlighting gaps and opportunities, this research aims to inform future policy directions for a more integrated approach to dengue control in India and beyond.

Disease Prevention Measures for Cats and Dogs – What are the factors leading to public acceptance?

Michelle Wyler (University of Bern)

OneHealth consists in the balancing and optimizing of the health of humans, animals and the environment. The concept recognizes that the health of humans, domestic and wild animals, plants, and the wider environment are closely inter-dependent. While OneHealth is an interdisciplinary and transdisciplinary collaboration, policy making, implementation, and evaluation, is often lagging behind.

Public acceptance is crucial for a successful implementation of OneHealth interventions. The factors influencing acceptance of policy measures are therefore an important research topic to improve OneHealth awareness and practices. This study aims to address the theme of public acceptance through a survey and survey experiment with pet keepers. In this regard, the article seeks to answer the following research questions:

"What are the factors influencing acceptance and resistance of pet keepers for policy measures to prevent, manage, and combat zoonoses in household pets?"

The OneHealth area of zoonosis control is a field where new policy measures are important. More than 60% of the infectious diseases which adversely affect the health of humans and 75% of recently emerging infectious diseases are of zoonotic origin. But while zoonotic diseases in connection with livestock already draw considerable attention in policymaking, a gap can be identified in the area of household pets such as cats or dogs. The Covid-19 pandemic, in which cats and dogs have been carrier of the disease, has highlighted the importance of research and policy actions to address the risks of zoonotic diseases in connection with pets.

Pets have a special status in modern society. For many people, a pet is a member of the family to which they form a deep emotional attachment: pets have a higher emotional value in society and social function

than other animals. This forms the requirement of special sensitivity when developing socially acceptable measures for pets in the area of epidemics in order for them to be effectively implemented.

In order to answer the research question, a survey and survey experiment will be conducted with keepers of cats and dogs in Switzerland. The aim is to examine pet keepers' acceptance of different animal health policies, as well as their views, concerns and expectations from an ethical perspective. The survey will explore in which situations different health policy measures are accepted among different pet keepers. A survey experiment will then test different awareness raising and communication measures that could increase the acceptance of disease control measures among pet keepers. The questions and answer options will be based on a previously conducted literature analysis after PRISMA guidelines on factors influencing public acceptance of disease control measures on pets, a stakeholder workshop and 23 interviews conducted with different stakeholders from various areas.

Results are expected to portray the hypotheses drawn from the above-mentioned previous studies and confirm the importance of an emotion-sensitive communication and the trust that pet owners place in veterinarians, which, in the following, play a major role in the communication and implementation of measures.

The robustness of One Health narratives in zoonotic spillover problem definitions

Elizabeth Shanahan (Montana State University)

How an issue is defined will inform what solutions are presented to solve the problem and who should fix it. While many Narrative Policy Framework studies focus on the power of narrative form, this study examines the narrative content of how people define the problem of zoonotic spillovers. One Health fundamentally recognizes the interdependence between human, animal (wild and domestic), and environmental health. In a survey of Australian residents (n = 3978), participants provided opened ended responses to why zoonotic spillovers are occurring more frequently, what the solution to the problem should be, and who should solve the problem. The narrative content was inductively coded, whereas the problem definitions were deductively coded to reflect partial and complete One Health problem definitions.