

One Health and Canine Rabies Vaccination: A Systematic Review of Funding, Governance, and Sustainability

Charlotte Rendina¹, Rakesh Chand¹, Yinka Oyeleke², James Wood¹

¹ Department of Veterinary Medicine, University of Cambridge, Cambridge, UK, ² Department of Public Health and Primary Care, University of Cambridge, Cambridge, UK

BACKGROUND

Canine-mediated rabies remains a significant public and animal health challenge. It causes an estimated 59,000 human deaths annually, mostly in Africa and Asia, and imposes considerable economic and psychosocial burdens. Despite widespread mass dog vaccination efforts, sustainable elimination is hindered by inconsistent policies, limited resources, and variable political commitment. The One Health approach, which promotes integrated, transdisciplinary solutions, has been suggested to improve long-term disease surveillance and control, yet its impact remains unclear.

Significance of study

This review aims to identify the key determinants of sustainability in canine rabies vaccination programmes, critically evaluating the role of the One Health approach in influencing their organisation, funding, and implementation. It assesses whether the adoption of One Health has genuinely strengthened the long-term effectiveness of these programmes or if it remains predominantly a theoretical concept with limited practical impact.

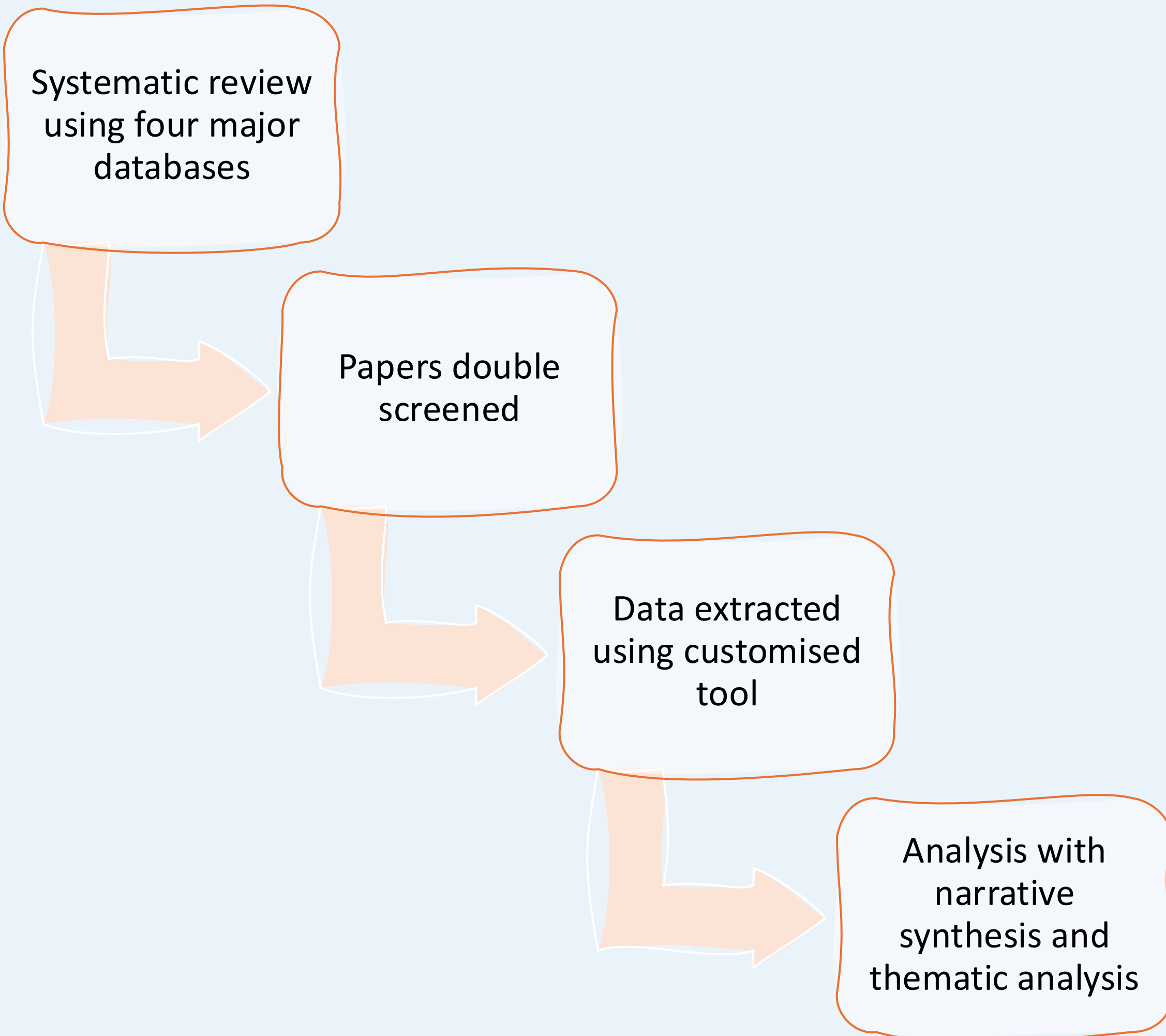
RESEACH DESIGN AND METHODS

Research question

"How has the One Health approach affected rabies vaccination programs?"

- Has the approach been applied to rabies vaccination programs?
- How has it been applied?
- Has it affected funding, implementation, governance, program continuation, and outcomes?

Methods



Charlotte Rendina, DVM, MSc

PhD Candidate
cr719@cam.ac.uk

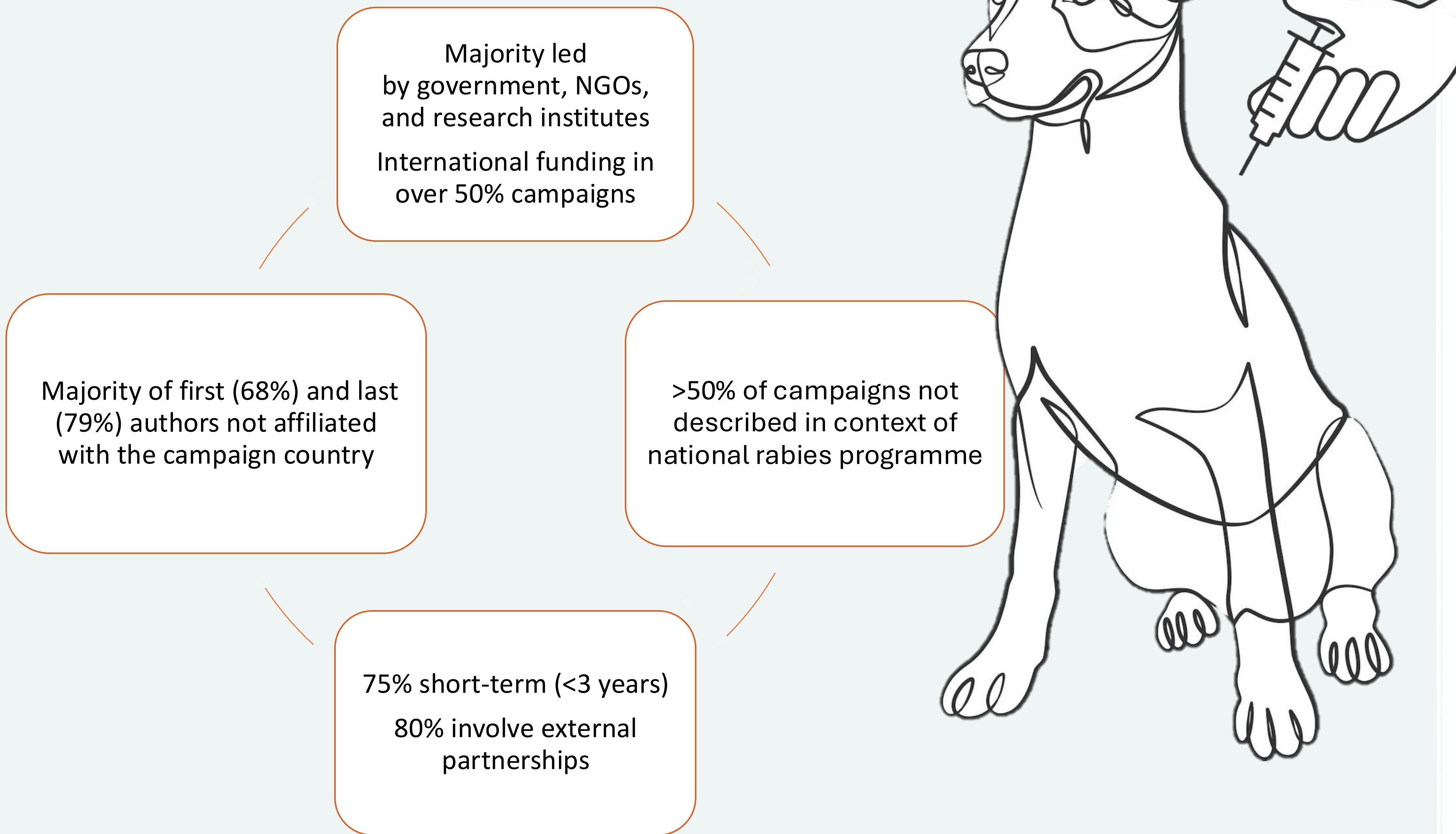
Department of veterinary medicine,
University of Cambridge, UK



PRELIMINARY RESULTS

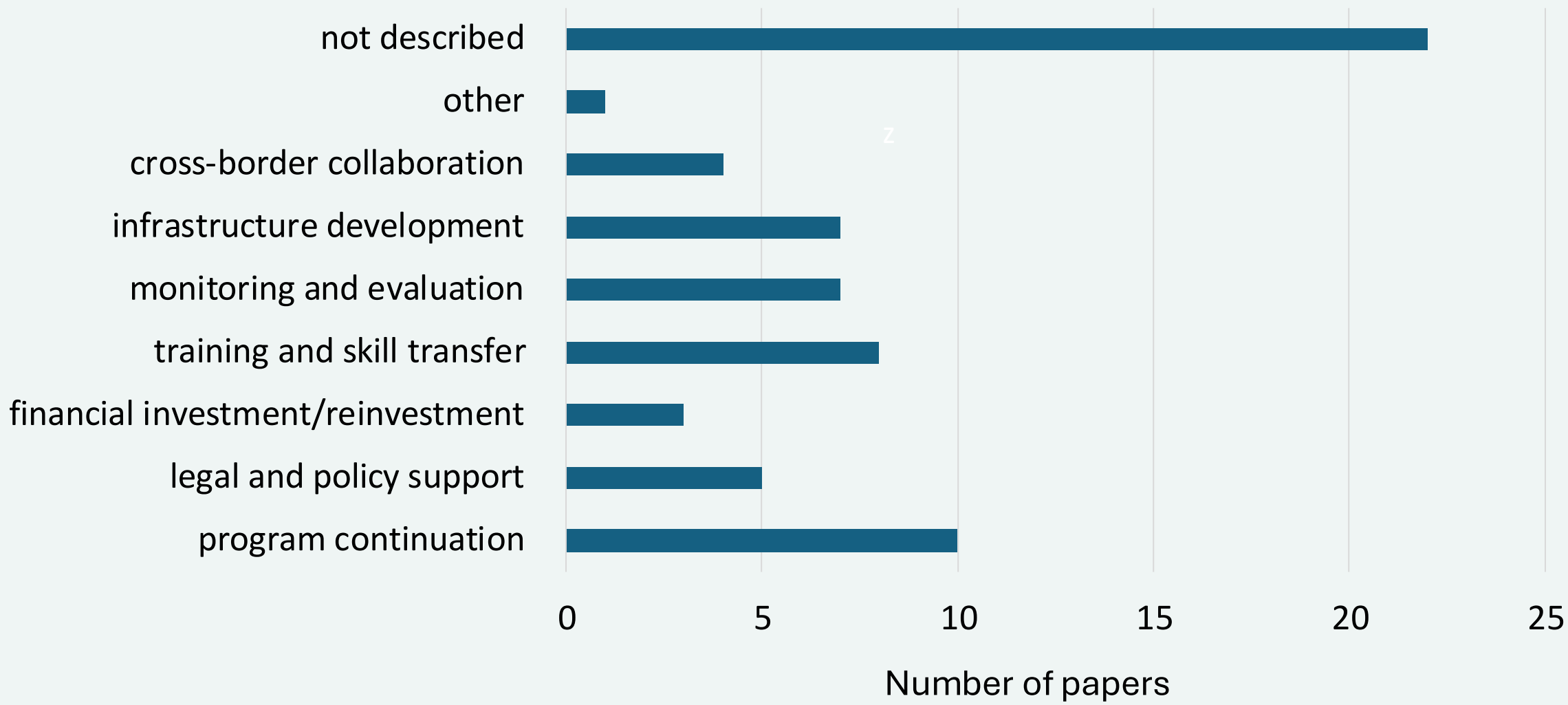
- 4,072 papers on global rabies vaccination campaigns identified
- 49 studies from 25 countries (1954–2022) included in the analysis

1 Characteristics of vaccination campaigns



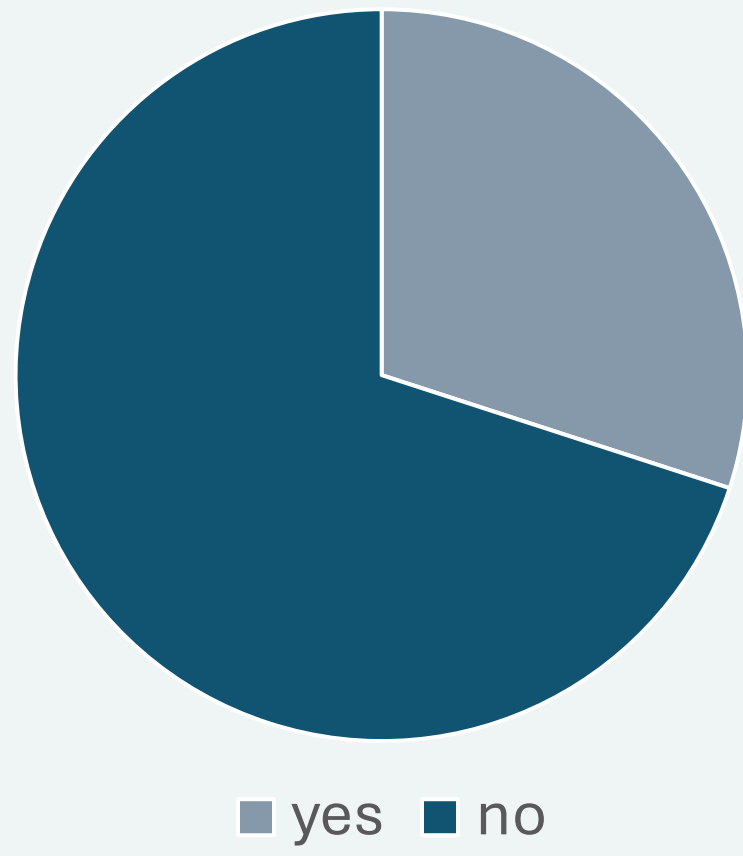
2 Sustainability in rabies vaccination campaigns

Indicators of long-term program continuity (sustainability)

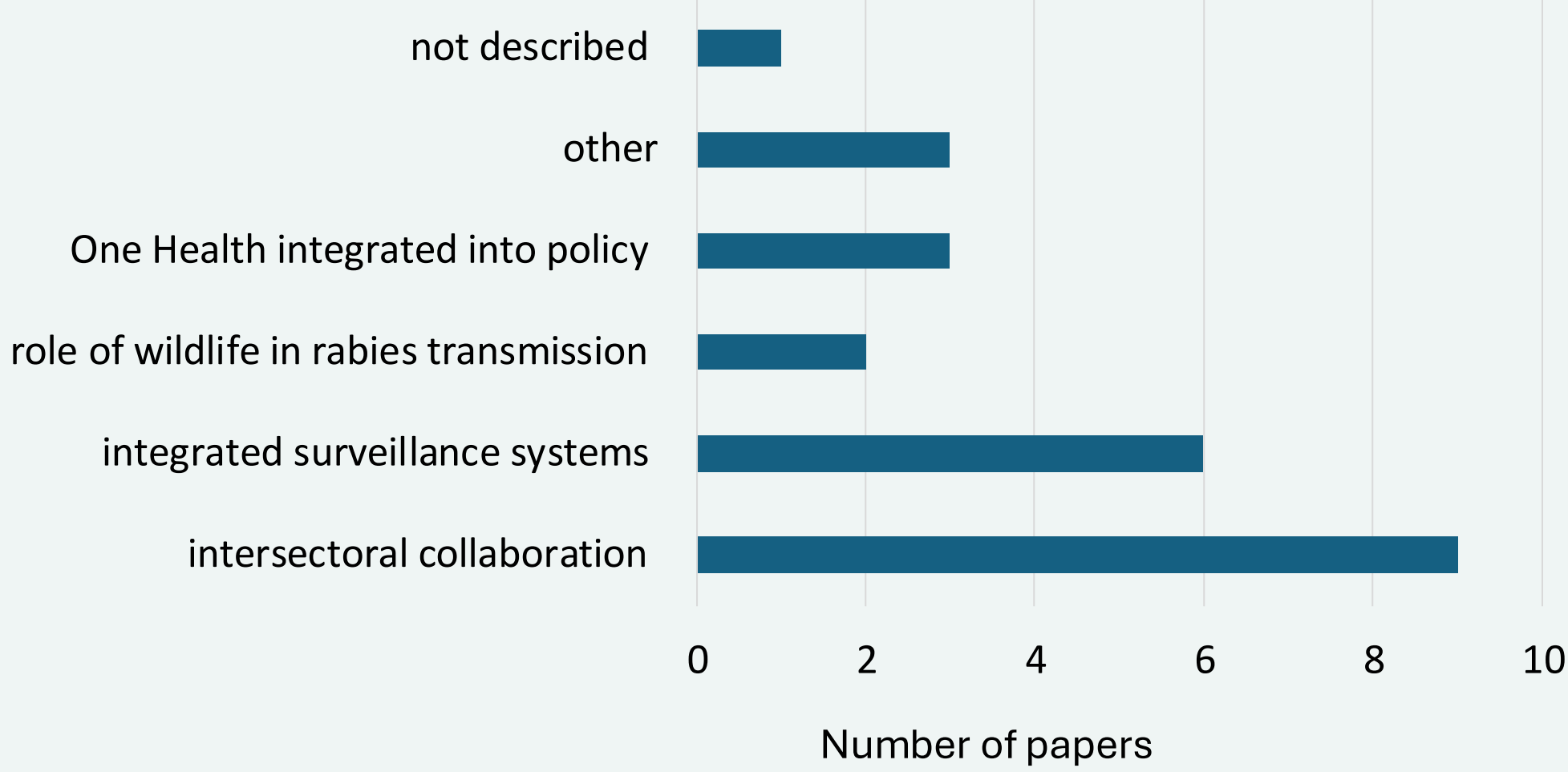


3 One Health in rabies vaccination campaigns

Authors mention the term "One Health"



Authors use the term "One Health" referring to...



What does it mean?

Our review indicates that many rabies vaccination campaigns lack the essential components for long-term sustainability, resulting in short-lived efforts. Government involvement varies widely, with international partners often playing a crucial role in both leading and funding these initiatives. While some studies highlight effective collaboration between human and animal health sectors, few explain how these initial partnerships evolve into sustained, policy-driven One Health strategies. Overall, our findings suggest that current approaches prioritise vaccination coverage and operational efficiency over long-term, integrated strategies for rabies elimination. This underscores the need for comprehensive, policy-supported programmes that address long-term elimination goals. It is important to note that, since our review did not include grey literature such as government reports, these results should be interpreted with caution.

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