

INPLASY

Protocol for a systematic review and network analysis of zoonoses in One Health compartments in Kenya (2005-2025)

INPLASY202680103

doi: 10.37766/inplasy2026.8.0103

Received: 28 August 2026

Published: 28 August 2026

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ADMINISTRATIVE INFORMATION

Support - CGIAR.

Review Stage at time of this submission - Formal screening of search results against eligibility criteria.**Conflicts of interest** - None declared.**INPLASY registration number:** INPLASY202680103**Amendments** - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 28 August 2026 and was last updated on 28 August 2026.

INTRODUCTION

Review question / Objective To systematically identify the zoonotic agents reported in Kenya over the past two decades and to map their occurrence in One Health compartments (humans, domestic animals, wildlife, vectors, food and the environment).

Rationale Zoonoses are responsible for a considerable disease burden in humans and animals in Kenya, but the evidence is scattered in host species, sectors and study types and has never been synthesised together to show a national picture or which diseases and One Health compartments are the most consequential and which require more attention.

Condition being studied Zoonotic infections (viral, bacterial, fungal and parasitic) reported in Kenya in One Health compartments.

METHODS

Search strategy Systematic literature searches of leading scientific databases will be performed and terms for Kenya and zoonotic agents, host/compartment terms, and the One Health concept will be applied. The reference sections of relevant reviews will also be scanned to obtain references not captured by the primary searches. The full search strings will be reported in the systematic review.

Participant or population Humans, domestic and wild animals, arthropod vectors, and food and environmental samples in Kenya in which zoonotic agents were investigated.

Intervention Not applicable.

Comparator Not applicable.

Study designs to be included Primary studies reporting the detection or occurrence of zoonotic agents. These will include cross-sectional/

prevalence studies, case reports and series, outbreak investigations and surveillance reports.

Eligibility criteria Records are eligible when they investigate or report the occurrence of a zoonotic agent in Kenya in the last 20 years preceding the literature search (2005-2025), in any host or compartment.

Information sources Major bibliographic databases will be searched, including African Journals Online, Embase, PubMed, Scopus, and Web of Science. The reference sections of included review articles will also be perused.

Main outcome(s) Zoonotic agents reported in Kenya and the source/matrix they were reported in. The interconnectedness will be represented as a bipartite agent-source network.

Additional outcome(s) The network structure (the most consequential zoonoses and One Health compartments/sources), as well as the completeness and the temporal trends of the evidence found.

Data management Records will be screened in Rayyan platform independently by at least two reviewers and all conflict will be resolved by consulting another review member. Data will be extracted into a structured spreadsheet. Data analysis will be performed in R statistical software environment.

Quality assessment / Risk of bias analysis Not applicable. As this study is aimed to describe and map the occurrence of all zoonotic agent research in Kenya in the last 20 years, risk of bias tools for standard meta-analyses are not applicable here. Uneven research effort will however be accounted for in the planned analyses.

Strategy of data synthesis A bipartite network linking zoonoses and the One Health compartments they were identified will be constructed and corrected for research effort. Network and node-level metrics will be used to determine the zoonotic disease landscape in Kenya and the most consequential network nodes. The completeness and temporal trends of the evidence found will also be analysed using standard methodologies in disease ecology. No pooled meta-analysis of effect sizes is planned as this is not the aim and the studies are very heterogeneous given the multiple zoonoses anticipated.

Subgroup analysis Not applicable.

Sensitivity analysis Not applicable.

Language restriction None.

Country(ies) involved Kenya, Germany, Finland.

Keywords zoonoses; One Health; Kenya; systematic review; disease surveillance; network analysis.

Dissemination plans Publication in a peer-reviewed journal, with possible presentation in relevant scientific meetings.

Contributions of each author

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