

Foodborne Chagas Disease as an Emerging Transmission Pathway: A One Health Analysis of Outbreak Preparedness in Colombia

Mario Javier Olivera

Parasitology Group, National Institute of Health, Bogotá 111321, Colombia

INTRODUCTION & AIM

Foodborne transmission of *Trypanosoma cruzi* is an increasingly recognized cause of acute Chagas disease outbreaks in Latin America. These events require coordinated action across health, food safety, agricultural, and environmental sectors.

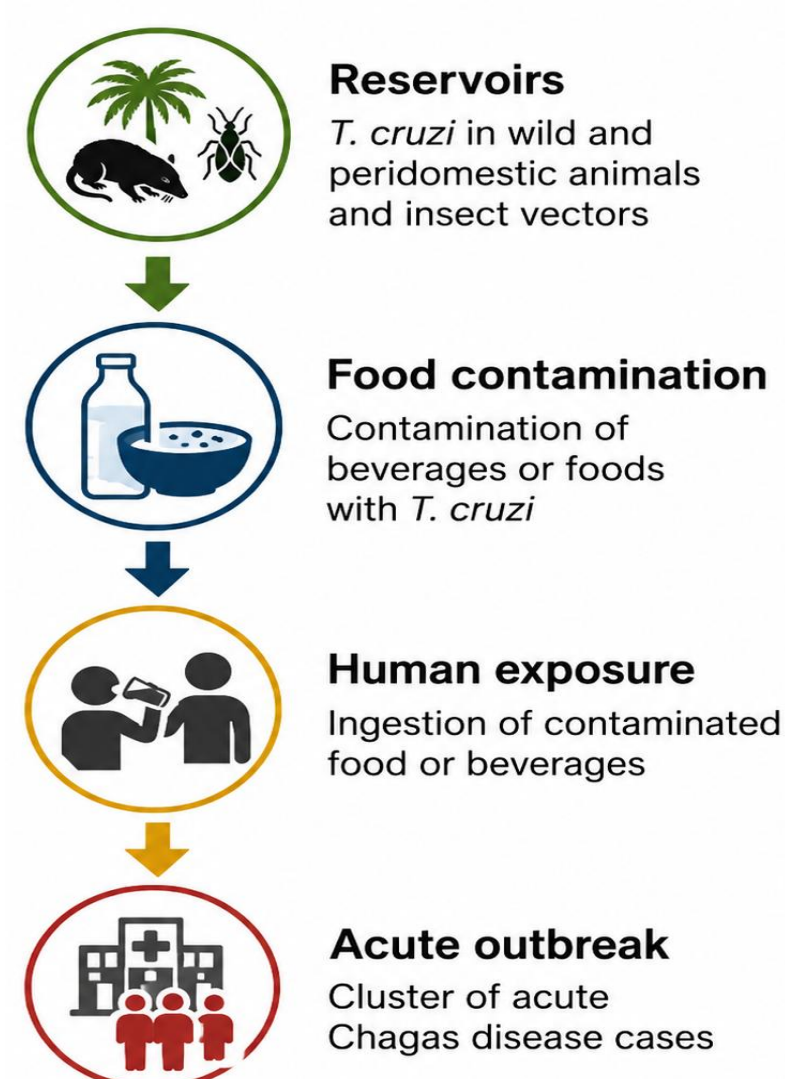


Figure 1. Foodborne transmission pathway

Objective: Evaluate Colombia's preparedness for foodborne Chagas disease outbreaks using a One Health and systems-thinking approach.

METHOD

Qualitative institutional case study based on documentary review and stakeholder consultations. Sixty-two official documents (2000–2024) were analyzed using a hybrid deductive–inductive thematic approach.

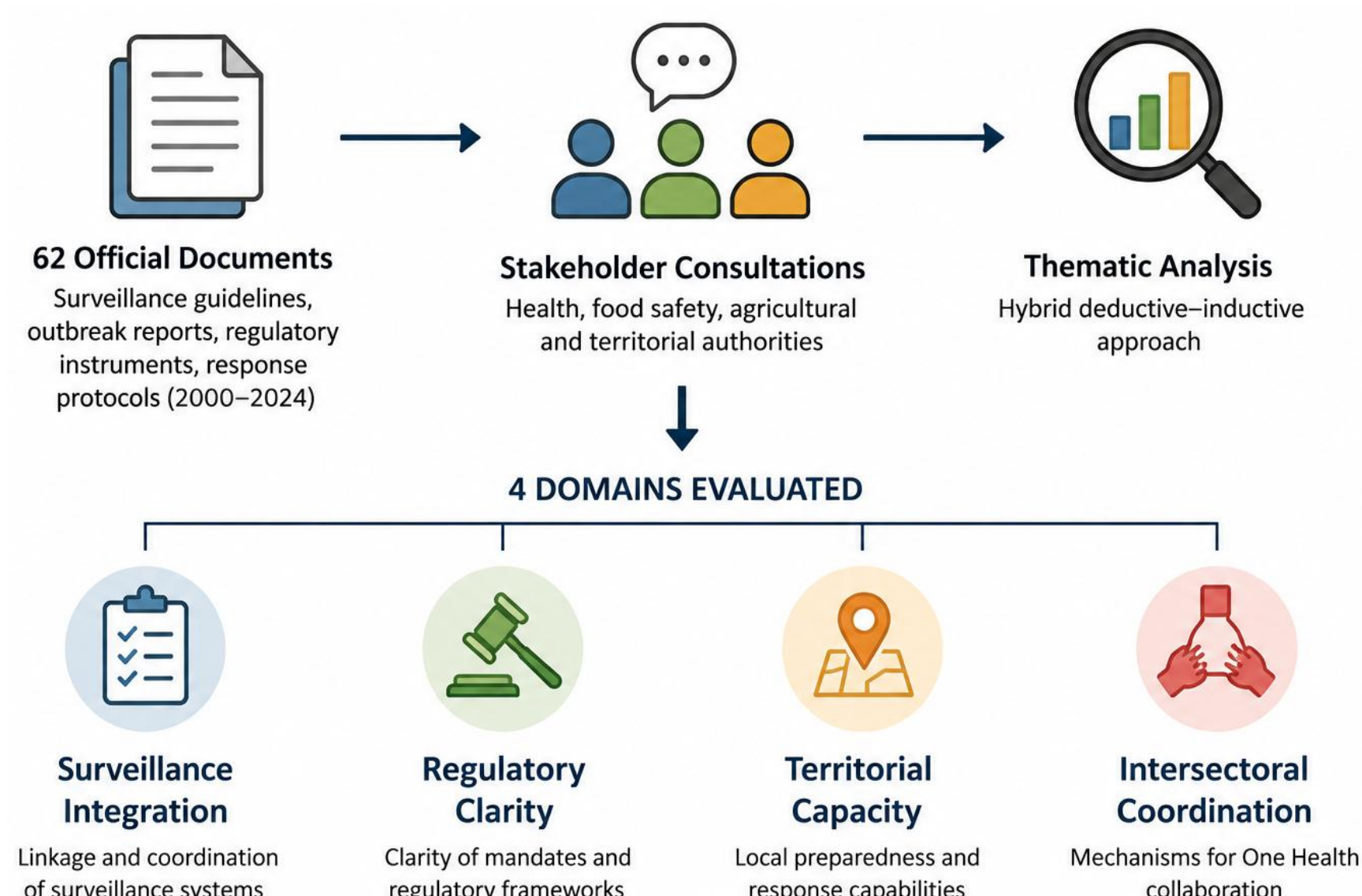


Figure 2. Study design and analytical framework

RESULTS & DISCUSSION

Key governance bottlenecks

- Ambiguous mandates
- Fragmented surveillance
- Uneven territorial capacity
- Reactive coordination

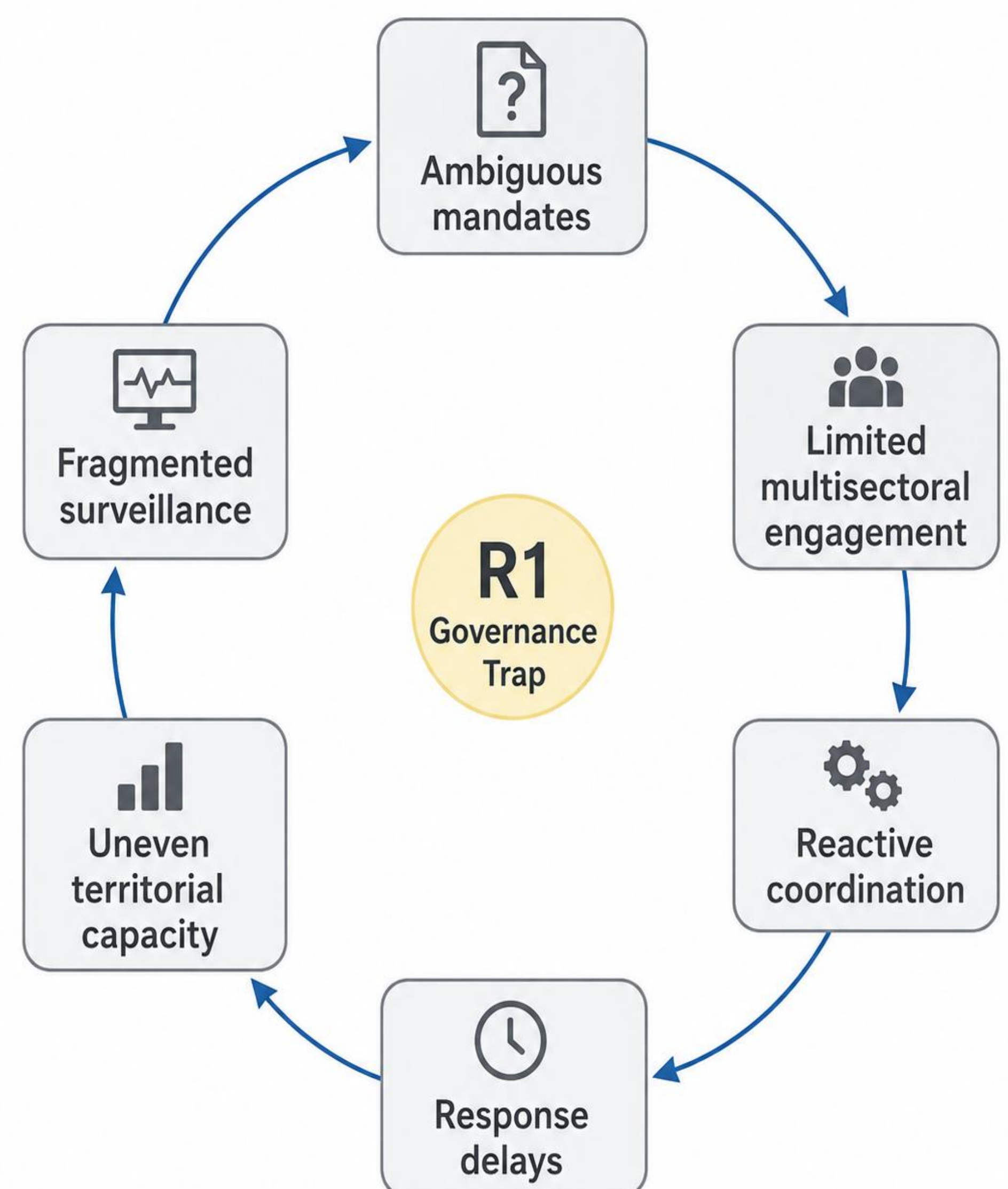


Figure 3. Governance feedbacks constraining preparedness

Preparedness emerges as a systemic property of governance arrangements rather than individual institutional performance.

CONCLUSION

Foodborne Chagas disease preparedness in Colombia is limited by governance fragmentation rather than technical capacity alone. Strengthening interoperable surveillance, territorial capacity, and institutionalized One Health coordination is essential to move from reactive outbreak response to proactive risk prevention.

FUTURE WORK / REFERENCES

- Develop interoperable One Health surveillance systems.
- Strengthen territorial preparedness and multisectoral coordination.
- Incorporate environmental and food safety indicators into early warning systems

1. Olivera MJ, Rincón Acevedo CY, Olivera AJ, Mendez-Cardona S, Vera Soto MJ. Addressing Chagas disease from a One Health perspective: risk factors, lessons learned and prevention of oral transmission outbreaks in Colombia. *Sci One Health*. 2024;3:100066.
2. One Health Joint Plan of Action (2022–2026). FAO, WHO, WOA, UNEP