Pastoralists' Preferences For Livestock Disease Reporting And Response In Northern Kenya: A Participatory Study

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Background

- Pastoral systems in Africa are heavily plagued with livestock diseases
- Livestock disease surveillance is important for early detection and control of diseases.
- Within pastoral settings in Africa where communities are resource constrained, passive surveillance is predominantly utilized.
- Passive surveillance is a system that relies heavily on the community to share information on livestock disease events for eventual response by relevant stakeholders.

Aim

- ***To understand pastoralists' preferences and reasons for choosing methods or stakeholders for reporting or responding to livestock disease occurrences***

Study area

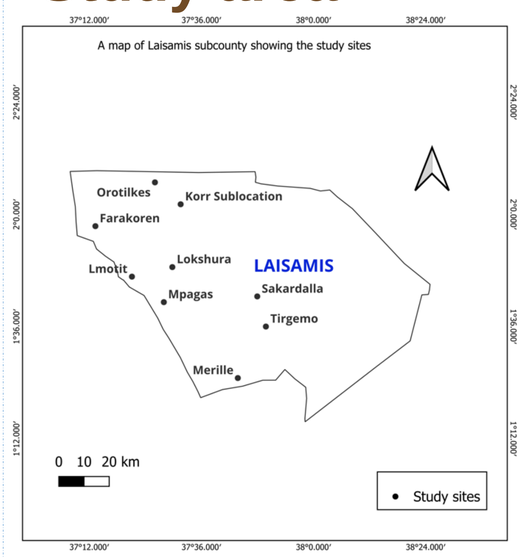

Fig 1: Map showing Kenya and the study sites

Materials and methods

Fig 2: Pastoralists scoring using various participatory epidemiology tools

- Participatory epidemiology tools utilized in 27 FGDs for pastoralists to share on:
  - Prioritization of stakeholders and methods (pairwise ranking); observing trends of these overtime (timelines with proportional piling)
  - Reasons for choice of a stakeholder or method used for reporting and response for disease occurrence (matrix scoring)
  - Level of agreement among groups determined by Kendall's coefficient of concordance (W) where:*W < / = 0.3 (Weak), W > 0.3 < 0.5 (Moderate), W > 0.5 (Strong), (n = 9).*

Results

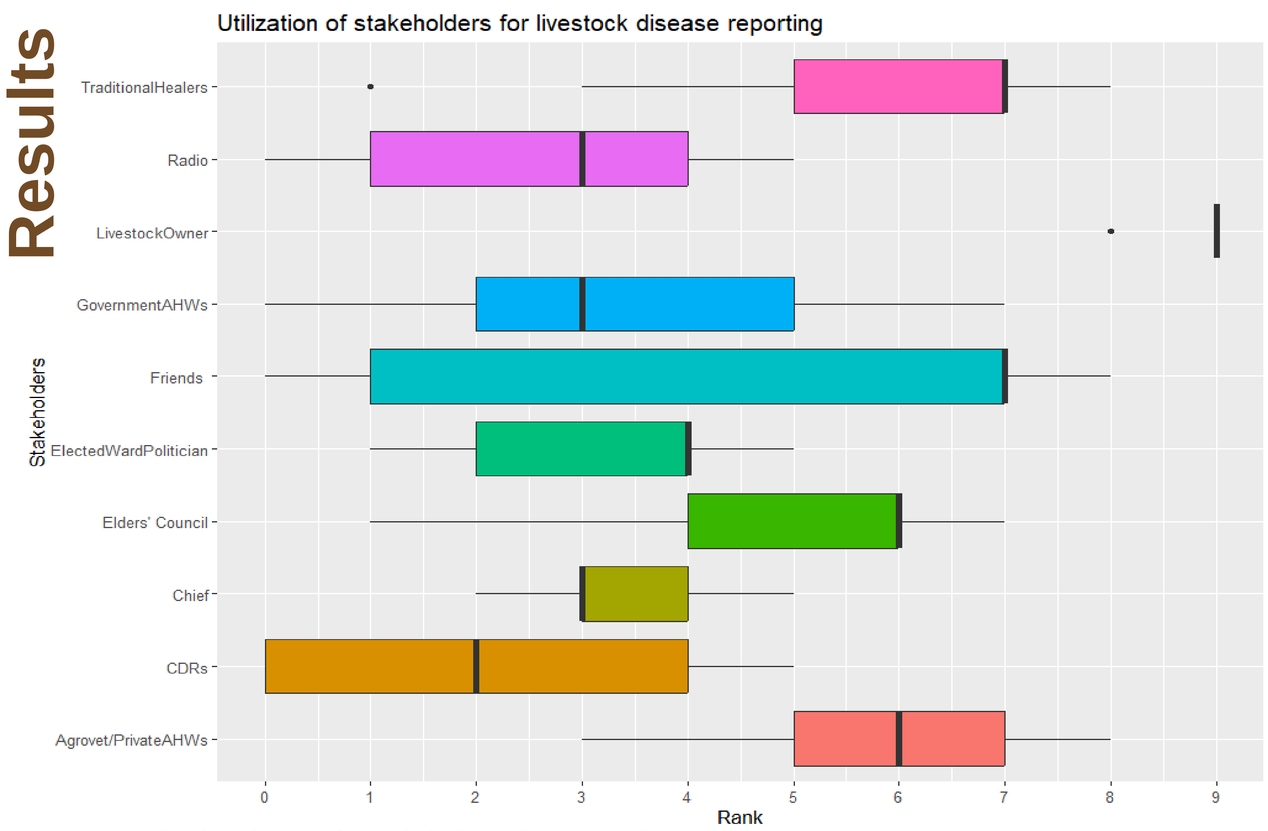

Fig 3: Pastoralists' preference for stakeholders they report livestock diseases to

Major reasons that guided pastoralists to choose a stakeholder included: Empathy (W = 0.736**), having knowledge and expertise in synthetic medicine (W = 0.617**), ability to spread information wide (W = 0.524**)

Median scores show Livestock owners (9/10), traditional healers (7/10), agrovets and elders, both 6/10 were reported to most

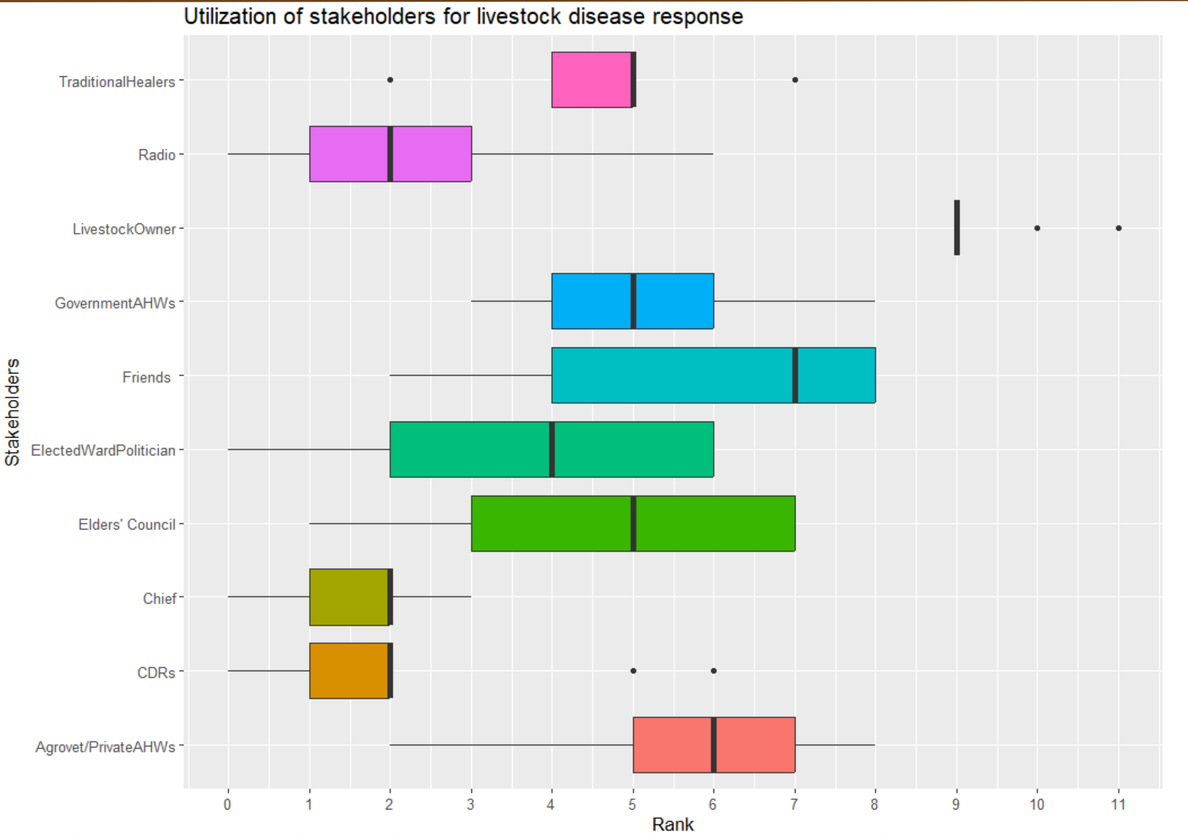

Fig 4: Pastoralists' preferences for stakeholders responding to occurrence of livestock diseases

Major reasons that guided pastoralists to choose a stakeholder to respond included: Ability to provide quick response (W = 0.661**), having indigenous/local animal health management knowledge (W = 0.802**), ability to offer services on credit (W = 0.609**)

Median scores show Livestock owners (8/10), traditional healers, agrovets (6/10), traditional healers, elders and Government AHWs, all 5/10, were preferred most for disease response

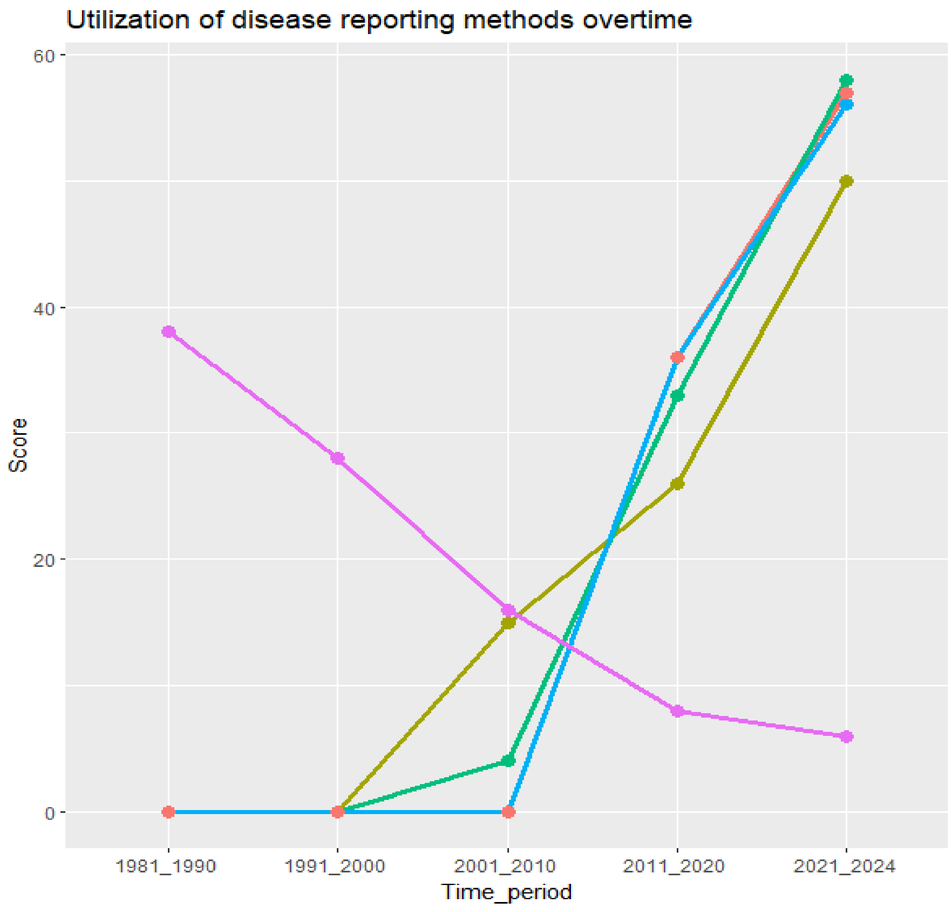

Fig 5: Trends of Utilization of livestock disease reporting methods between 1981 to 2024

Major reasons that guided choice of a reporting method included, whether the method was: affordable (W = 0.481**), easy accessible (W = 0.783**), could spread information wide (W = 0.755**), was within pastoralists' control (W = 0.871**)

Between 1981 to 2024, disease reporting on foot has steadily decreased, motorbikes, motor vehicles and radio have experienced a gradual increase in comparison to phones whose use within the same period has been steeply risen

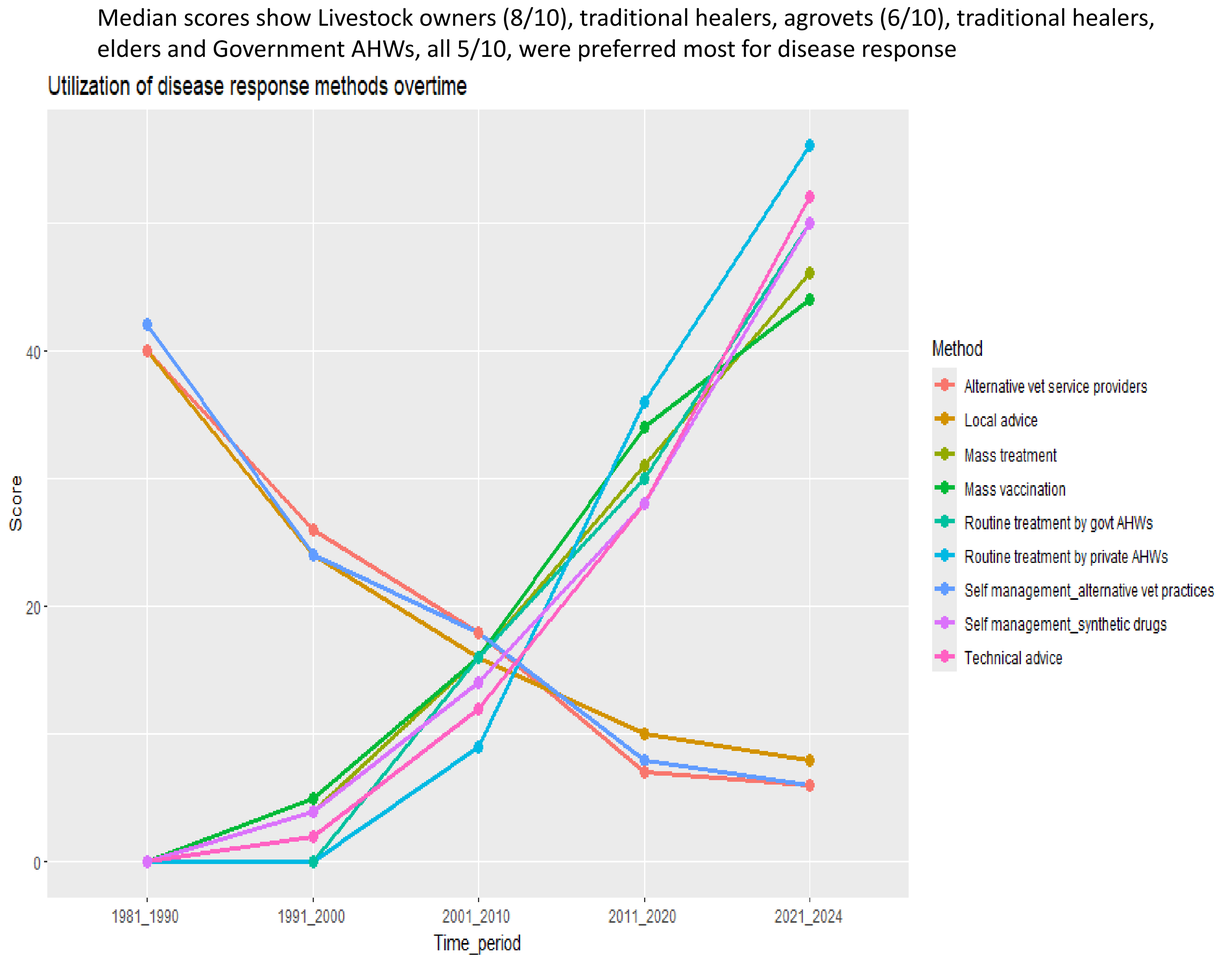

Fig 6: Trends of Utilization of livestock disease response methods between 1981 to 2024

Major reasons that guided choice of a response method included, whether the method was: affordable (W = 0.516 **), based on local knowledge (W = 0.885**) or technical knowledge (W = 0.573 **)

Between 1981 to 2024, use of alternative veterinary practices, traditional healers and local advice have decreased, all other methods including use of synthetic medicines, agrovets, mass treatments and vaccinations have increased

Conclusion

- Thorough understanding of communities' behavioral influences and interactions is important in developing adoptable, sustainable and affordable surveillance systems. This approach can be considered by public and private efforts geared towards developing or improving systems.
- Legislative reforms and policies can streamline disease data collection through pastoral communities' reporting structures, this would strengthen existing disease surveillance systems in ASALs

Recommendations

- Decisions on disease reporting by pastoralists were predominantly influenced by accessibility, proximity and affordability of available Animal health service provider or methods of delivery of the report.
- Choice of response was mainly influenced by response time, technical knowledge and affordability of responding Animal health service provider or the method of delivery of the service.

Acknowledgments:

This study was conducted within the BMBF and FONA-funded project „Increasing efficiency in rangeland-based livestock value chains through machine learning and digital technologies " (InfoRange)

Federal Ministry of Research, Technology and Space

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