



Preparation for the prevention and control of highly pathogenic avian influenza in rural Tanzanian village settings

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SUMMARY. Village poultry flocks are important for the livelihood of resource-poor farmers in Tanzania. Most poultry are raised in the rural areas of the country; they are critical sources of animal protein and can be a quick source of income through the sale of chickens and eggs. Rural areas of Tanzania are organized into settlements in the form of villages and sub-villages. A village or sub-village may consist of tens to hundreds of individual households or groups of households most of which keep few village poultry. These flocks of chickens, ducks, guinea fowl, turkeys and pigeons are cared for by women, children and vulnerable individuals (aged, chronically ill or physically challenged). The free-ranging poultry from different households form a series of contiguous flocks, which may become one large flock during feeding and breeding times. The free range status of poultry in villages presents serious challenges for the application of disease prevention and control interventions. An individual farmer/household's effectiveness in disease management is highly dependent on the actions of neighbors. Additionally, the short term consequences of an implemented control strategy may be greater than its benefits. In Tanzania, the national policy for HPAI response is to stamp out affected birds and those nearby. It is evident therefore, that an occurrence of HPAI in the village settings of Tanzania would result in a disastrous loss of livelihoods. This paper attempts to offer an alternative way of preventing and controlling HPAI in village settings of Tanzania through community-based approaches.

Introduction

Village chickens

- An important resource to the livelihoods of the resource-poor and underprivileged (women, children, handicapped).
- Provides food, income and household necessities.
- Important for food security.

HPAI, village chickens and humans

- Extremely difficult to control in presence of ND
- Imminent calamity to livelihoods
- Possible cause of a major human health disaster due to
 - Close proximity of humans and their chickens (sleep in the same house, travel in the same buses, carry them for long distances on their hands, children share playing grounds with chickens)

Aim

Testing the effectiveness of a multi-level community approach to implement a Newcastle disease (ND) vaccination in preparation for HPAI preparedness and response in three districts in Tanzania

Methods

- Selected three rural wards bordering (fig. 1):
 - Wetlands and protected areas (Mlowa ward, Iringa)
 - Wetlands and neighboring country (Ufukoni, Mtwara)
 - Major town centre (Mzumbe, Morogoro).
- Trained on poultry production, health and marketing:
- Leaders
 - District, wards and village leaders
- Vaccinators and data recorders in all villages
- Selected household members from each village



Figure 1: The administrative map of Tanzania showing town centers, major roads and wetlands. Source: https://www.epsh.net/~bspindle/TanzaniaSite/Tanzania_map.JPG

Table 2: Number of vaccinators and data recorders

Ward	Vaccinators		Data recorders	
	Total	F M	Total	F M
Mlowa	16	4 12	6	1 5
Mzumbe	64	25 39	14	2 12
Ufukoni	6	3 3	6	3 3



Results

•197 leaders at district, ward and village levels, 86 vaccinators, 196 household members and 26 data recorders were trained from the participating wards. Trained leaders appointed vaccinators and data recorders. The ward executive officer supervised the vaccination and data collection exercise.

Table 1: Number of leaders in the three Districts participating in the program

District	Total	Female	Male
Iringa	20	6	14
Mtwara	38	9	29
Mvomero	38	10	28
Ward	Total	Female	Male
Mlowa	41	10	31
Mzumbe	38	17	21
Ufukoni	22	15	7

Table 3: Number of household members trained in three Wards participating in the program

Wards	Total	Female	Male
Mlowa	50	18	32
Mzumbe	66	19	47
Ufukoni	80	41	39

Discussion

Training of the three stakeholders (leaders, vaccinators, household members) ensured harmonious conduct of the program. The idea of using a known problem (ND) allowed smooth introduction of HPAI preparedness and response concept. Social approaches in dealing with animal health issue are uncommon. The success of disease control strategy rely on matching interventions into social, economic and ecological conditions.

Conclusions

Village poultry are important to the livelihoods of many communities. Therefore, community action to safeguard them is possible. Communities can implement HPAI preventive strategies because of the presence of ND. Motivation to control ND can be used in implementing basic concepts and strategies for **isolation**, a workable principle of biosecurity in the villages.

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