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Increasing access to and uptake of livestock vaccines and women’s empowerment with gender-responsive vaccine delivery systems

Livestock Vaccines Innovation Fund (LVIF) Projects

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KEY GENDER BARRIERS TO LIVESTOCK VACCINE USE

- The majority of rural women and men in LMICs are engaged in livestock rearing; however, women are often disadvantaged when it comes to access to animal health services and inputs, including vaccines.
- Restrictive gender norms exacerbate gender inequalities in the livestock sector, disadvantaging women, particularly in vaccine delivery systems.
- Interventions that intentionally support the empowerment of women, particularly those that address gender norms that discriminate against them, can effectively support women’s access to and adoption of vaccines.
- Institutionalizing a gender-responsive vaccine-delivery model that combines improved vaccine delivery channels, digital technologies and socio-institutional arrangements is needed for scaling.

INTRODUCTION

There are persistent and significant gender gaps in low- and middle-income countries (LMICs) which negatively impact productivity, food security and livelihoods. Livestock, particularly chickens, sheep and goats, are essential to sustain livelihoods and nutrition in rural areas of LMICs. They are particularly important to the livelihoods of women and their households given that women farmers in rural areas have few alternative ways of making a living. Preventable, deadly diseases such as Newcastle (ND) and Peste des petits ruminants (PPR), however, often decimate flocks of chicken and herds of sheep and goats.

Vaccines to prevent these diseases exist, yet livestock keepers, particularly women in rural areas, infrequently use them. Without these interventions, the health and productivity of the animals are compromised and so is women’s ability to support their livelihoods and that of their households. Both technological and social factors limit access to and uptake of livestock vaccines. For example, technological factors may include a lack of cold chain infrastructure to transport the livestock vaccines. Socio-institutional factors may include informal rules in a community that forbid women from liaising with unrelated men, reducing their ability to obtain animal health services and vaccines from vets (who are almost exclusively men).

The empowerment of women is often seen as a way of addressing gender-based disadvantage and providing women with the capabilities to leverage livestock to support their livelihoods and that of their families. Empowered women farmers are more likely to hear about, access, adopt, utilize and benefit from animal vaccines and healthier livestock. Facilitating women’s empowerment requires addressing women’s limited agency, access to resources, and opportunities. These in turn are influenced by restrictive gender norms, that shape informal rules of behavior and inequitable policies. Gender-responsive policy efforts bundled with interventions that transform restrictive norms could potentially support women’s engagement in the livestock sector and their potential to get empowered.

Between 2019 and 2023, four research for development projects funded by Canada's International Development Research Centre, the Bill and Melinda Gates Foundation, and Global Affairs Canada, were implemented across six countries (Kenya, Ghana, Uganda, Senegal, Nepal, and Rwanda):

1. Transforming the vaccine delivery system for chickens and goats in Ghana: what approaches and what benefits for women (The Women Rear project)
2. Hearing their voices: action research to support women's agency and empowerment in livestock vaccine distribution, delivery and use in Rwanda, Uganda and Kenya (SheVax+ project)
3. Advancing women's participation in livestock vaccine value chain in Nepal, Senegal, and Uganda (UF Advancing)
4. Gender-inclusive vaccine ecosystem: enhancing distribution and delivery systems for Newcastle disease (ND) and contagious caprine pleuropneumonia (CCPP) among smallholder farmers (Give projects)

All the projects aimed to transform the livestock vaccine systems to reach and empower women farmers, and to increase the adoption of animal vaccines. All the projects implemented both gender-accommodative and transformative interventions. Accommodative interventions work around existing gender-based constraints without intentionally addressing the underlying structural barriers that create the constraints (Cole et al., 2020; Njiru et al., 2024). Transformative interventions intentionally address restrictive gender norms at various levels of society, to address imbalances in gender-based power dynamics and relations, rigid and restrictive gender roles, and harmful practices (Cislaghi et al., 2019; Cole et al., 2020; Njiru et al., 2024).

The projects used a harmonized tool—the Women Empowerment in Livestock Index (WELI)—to assess the effects of interventions on women's empowerment.

SUCCESSFUL METHODS TO ADDRESS INEQUITABLE NORMS

The four LVIF projects adopted unique transformative approaches to address restrictive gender norms in the livestock system, including social and technical interventions. Some of the social interventions were community conversations, photo voices, engagement of women and men gender champions, recruitment of women animal health service providers, and training on animal vaccination and vaccination schedules. Some of the technological interventions included improving vaccine cold chains; for example, through establishing cold chain facilities (solar-powered refrigerators) and rapid distribution of vaccines to rural areas using drones. For the research component, all the projects employed a mixed methods approach—which enabled triangulation of the study findings.

BARRIERS AND PATHWAYS TO WOMEN'S EMPOWERMENT

Results show that gender norms are a critical barrier to women's engagement in the livestock sector, and to their empowerment. These norms can be understood as the stereotypical attributes associated by communities to men and women (based on other individual characteristics such as age, ethnicity, religion, etc.) that affect what diverse women and men can say, own, do, etc. Norms that disapprove of women publicly declaring that they own an animal, for example, have negative impacts on women's ability to benefit from livestock and consequently to engage in livestock rearing. Because they cannot declare that they own an animal, even if they purchase it or look after it, women cannot claim any of the revenues generated from the animal; if their husband dies, all the household livestock, including women's, will go to his brother. As a consequence, women have very little incentive to engage in livestock rearing, despite their interest in doing so.

Explorations of local understandings of empowerment showed that both women and men consider collective action and ownership of resources as being necessary to achieve economic empowerment. However, women value 'managing their resources independently' and 'men's support' as critical pillars for their empowerment. On the contrary, men value the ability to support both their families and community members.

Critical pathways to women's empowerment include addressing discriminatory gender norms and disparities in resource access and control, and enhancing women's agency to make strategic decisions. Gender transformative approaches were shown to be particularly effective in supporting more gender equitable norms which in turn facilitate women's empowerment and their access to and adoption of animal vaccines. Overall, a combination of technical and socio-institutional innovations, particularly when the latter included transformative approaches, was shown to be most effective.

One project implemented in Ghana is exemplary. It showed that a combination of three approaches was key: (i) technical/technological interventions, (ii) their combination with socio-institutional arrangements (generally gender-accommodative approaches), and (iii) gender-transformative approaches. Technical interventions included the installation of solar fridges in rural communities to maintain the cold chain for the vaccines; the use of drones to distribute vaccines fast and cheaper to remote areas; digital apps tested for usability by women farmers, to bulk vaccine orders; and training about the importance of vaccines and vaccine schedules. These were combined with socio-institutional arrangements such as the hiring and capacity building of women veterinarians, the engagement of community-level lead farmers to facilitate the interactions between the farmers and the vets, and the use by the farmers of the digital app. Transformative approaches included community conversations that question inequitable norms, radio programs with gender equity messages, and engagement of women and men gender champions. With these interventions combined, women farmers began rearing and claiming ownership of their animals, and they increasingly began selling their animals to meet family and own needs; women vets were accepted as animal health service providers by both women and men farmers. Previously, it was unacceptable for women to engage in such activities. Scientific evidence showed the positive impact on household financial wellbeing of women's ability to own animals, access animal vaccines, and control the revenues generated from the livestock. Given its effectiveness, the project approach was adopted by the government of northern Ghana in its PPR-eradication campaign.

Overall, in all four projects, women and men farmers have realized the benefits of inclusive and effective livestock health management systems; the number of women accessing livestock vaccines, and the number of animals vaccinated increased. Also, the number of women working as animal health service providers increased.

POLICY RECOMMENDATIONS

The results from the projects show that policies that support women and men to equitably access livestock production resources are critical to advancing women's empowerment and household wellbeing. Gender-responsive policy and development efforts are also needed, to additionally enhance women's access to and uptake of livestock vaccines.

Given the evidence of how technological interventions combined with socio-institutional ones, particularly transformative approaches, can mitigate restrictive gender norms, we recommend that policy efforts should provide an enabling environment supportive of such approaches. Critically, policy efforts could:

1. Provide a regulatory framework that promotes gender equality and inclusion in the enrolment and recruitment of women and men to veterinary training institutions and in post-training recruitment. The training curriculums can integrate courses on gender dynamics and norms.
2. Develop policies that champion favorable and conducive work environments for women and men animal health service providers. Such efforts can include resources and facilities needed, for example, equipment that can enhance providers' mobility—such as motorcycles, which are easy to use by women and men.
3. Establish a regulatory framework that promotes continuous support for women and men farmers to access and utilize animal health services, which could enhance productivity, livestock and public health, and women's empowerment. Such policy efforts could ensure affordable local veterinary care, and subsidized or free livestock and veterinary training for women and men farmers.
4. Increase efforts to champion and support close collaboration with the private sector, particularly distributing good quality vaccines. These include ensuring equitable access to vaccines for both women and men farmers by addressing gender-specific barriers such as mobility, financial constraints, and access to information. Additionally, encouraging women's participation in vaccine distribution networks, such as through women-led businesses or cooperatives, can further strengthen gender inclusion while improving vaccine reach and adoption among women and men farmers.

5. Facilitate allocation of resources to women such as land, livestock, credit, markets, and veterinary services and vaccines—particular in the case of policies such as inheritance laws.
6. Ensure that government animal-vaccine campaigns combine technical interventions with socio-institutional ones—particularly gender-transformative interventions—to ensure that both the social and technical environments facilitate vaccine uptake and household wellbeing.

These measures could help create equitable opportunities, improve livelihoods, and foster sustainable development in livestock contexts.

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