A LITERATURE REVIEW OF COMMUNITY-BASED ANIMAL HEALTH WORKERS IN AFRICA AND ASIA WITH RECOMMENDATIONS FOR IMPROVED PRACTICES

EXECUTIVE SUMMARY
Introduction
The World Organisation for Animal Health (WOAH, founded as OIE) and VSF International are jointly implementing a two-year project entitled “Strengthening the enabling environment for community animal health workers through development of competency and curricula guidelines”, funded by USAID’s Bureau for Humanitarian Assistance (BHA). The project’s goal is to allow WOAH to develop community-based animal health worker (CAHW) competency and curricula guidelines and for VSF International to produce guidelines and recommendations for CAHW models. To contribute to this goal, this literature review consolidates learnings from CAHW programs in Africa and Asia to better understand the success factors and impediments for sustainable CAHW programs.

Background
The financial burden of providing animal health services, combined with pressure from donors to undertake structural adjustments, led many countries in the 1980s to hand over responsibility for animal health service delivery to the private sector. However, coverage in many rural and marginal areas was limited or absent. To fill this gap, NGOs in Asia and Africa soon began training small numbers of livestock keepers in basic animal health care and equipping them to provide these services to their respective communities. The aim was not to replace animal health services in rural areas but rather to complement them. In the early 1990s, UNICEF and AU-IBAR led an initiative to recruit and train thousands of CAHWs in East Africa to work for the Global Rinderpest Eradication Program, in which they proved crucial to the success of rinderpest eradication.

Previous assessments suggest that successful CAHW programs have certain characteristics in common: their services are widely accessible within the geographical area they are meant to serve, CAHWs have good basic technical knowledge, they have a dependable supply of veterinary inputs, they have regular supervision, and they are trusted by their communities. When these factors are present and sustainable, the positive impacts can be significant. At the same time, numerous problems persist, including lack of institutional memory, poor coordination of CAHW programs, confusion and mistrust over objectives and roles of CAHW programs, lack of standardization in CAHW training, and low financial sustainability of private CAHW service provision. The present literature review aims to analyze and discuss in detail these success and failure factors, to draw lessons learned, and make recommendations that promote successful CAHW programs.

Institutionalization of CAHWs
CAHWs are not formally recognized in many countries where they are active. Basing rural animal health services on CAHWs without a clear legal status is risky and confusing for stakeholders. There has been considerable hesitancy, in some cases outright opposition, to this recognition owing to concerns that CAHWs are not adequately trained or supervised to provide safe animal health services, will promote antimicrobial resistance through improper use of drugs, and will compete with veterinarians and veterinary paraprofessionals (VPPs).

Formal recognition of CAHWs can take several forms: full legal recognition of CAHWs; recognition of CAHWs in national livestock policies but without legal recognition; no legal recognition but frequent use of CAHWs by public veterinary services; and, rarely, a formal policy that expressly forbids CAHWs (see Appendix 2). The examples of countries in which CAHWs have a legal framework suggests that official recognition allows more appropriate training standards, accreditation and registration, and monitoring that can improve the level of CAHWs’ knowledge and skills. The establishment of competency guidelines by WOAH and/or regional economic communities can form the foundation for such legislation and provide the needed stimulus for countries to move towards full legal recognition of CAHWs.

Coordination of CAHW Programs
Lack of coordination in CAHW programs is common and can result in numerous problems, including: CAHWs with very different knowledge and skill levels due to different training standards; disequilibrium in the geographical
distribution of CAHWs, with too many CAHWs in some areas and none in others; and the offering of free animal health services to communities where CAHWs are trying to run a business. Together, these compromise the reputation and financial viability of CAHW service delivery. Creation of a national coordinating body should help ensure that the design and implementation of CAHW-related programs complement a country’s livestock development policies and priorities.

**Planning and Designing CAHW Programs**

Inadequate planning and design are important contributors to poor implementation and unsustainability of CAHW projects and result in lack of confidence in CAHWs by animal health stakeholders. Common examples of poor planning include inadequate duration and quality of training as well as inadequate exit strategies that fail to offer CAHWs a realistic chance of running a successful business after donor funding ends. These results when CAHWs lose access to technical support and supervision, refresher training and recertification, and a stable source for restocking of quality drugs, vaccines, and other inputs. Some of the more sustainable programs have in common that they involve all animal health stakeholders from the earliest stages of project design, are transparent, and emphasize raising community awareness of the benefits of animal health care.

**Selection of CAHW Candidates**

CAHW candidate selection involves not only deciding on the criteria used in their selection (e.g., age, experience, education level…) but also on how many CAHW candidates are selected for a given area. All stakeholders should participate meaningfully in the choice of CAHW selection criteria. Trust in CAHWs is reinforced when communities clearly understand how CAHWs are selected, how they are to be trained, and what their roles and responsibilities are. To promote the sustainability of CAHW service delivery, in many cases it is advisable to prioritize quality over quantity. Providing fewer CAHW candidates with longer training in technical and business topics can improve CAHW capacities and avoid overwhelming competition between them.

**CAHW Training Programs**

Training is the cornerstone of successful CAHW programs because it strongly impacts technical knowledge and skills. Several countries have developed national CAHW training curricula. In countries without standard curricula, the divergences in training within the country can be significant. In addition, good practices for training semi-literate adults – which describes many CAHWs – involve the use of participatory adult learning methods and hands-on instruction. But CAHW training manuals rarely address pedagogic approaches. Establishment of CAHW training standards at the national or regional level would likely improve and harmonize the level of CAHW skills, clearly distinguish CAHW trainings from those of other categories of animal health workers, and increase stakeholder confidence in CAHW competencies.

**Supervision and Monitoring of CAHWs**

Ensuring monitoring and supervision is one of the biggest obstacles to CAHW programs. Effective monitoring and supervision help to maintain and improve CAHW performance, limit misconduct, strengthen confidence in CAHWs, better harmonize CAHW knowledge and skills, and establish a chain of command that is necessary for efficient animal health service delivery and disease surveillance and reporting. CAHW motivation may be positively linked to the capacity of public or private animal health services to supervise them. And good CAHW supervision and monitoring are essential if public veterinary authorities and policy makers are to support initiatives to offer legal status to CAHWs. Yet, CAHW programs sometimes provide little supervision or monitoring of the CAHWs they train. Ideally, veterinarians and VPPs supervise and monitor CAHWs, but it is precisely the lack of veterinarians and VPPs that creates the need for CAHWs in the first place.
Public Good Functions of CAHWs

CAHWs offer a cost-effective, efficient tool for public veterinary services to conduct a broad range of public animal health activities in remote areas. CAHWs have been instrumental in mass livestock vaccination campaigns and delivering animal health services to vulnerable communities following disasters. They are ideal front-line actors in animal disease monitoring and surveillance in remote areas, and are sometimes used as meat inspectors, not without some controversy. One Health principles are increasingly included in training curricula, helping CAHWs recognize and report human diseases encountered during their livestock work.

A common objection to formal recognition of CAHWs is that they are inadequately trained to administer drugs appropriately and so will promote the development of antimicrobial resistance (AMR). Proponents, on the other hand, argue that CAHWs will limit AMR development because they prevent livestock owners from purchasing poor quality drugs and administering them on their own. Linking each CAHW with a veterinarian supervisor who acts as the source of drug procurement for the CAHW is a potential model for improving supervision and providing advice to CAHWs on good drug use practices.

Well-trained CAHWs can serve very useful roles as public health protectors, promoters, and communicators, including raising community awareness of issues such as food safety, zoonotic diseases, and AMR. Payment to CAHWs for these services can supplement their incomes and reinforce the financial viability of their services.

Women and CAHWs

Women CAHWs are conspicuously lacking in most CAHW programs. The obstacles for women CAHWs are numerous and include: preferential selection of men over women to become CAHWs; training logistics that are poorly adapted to the needs of mixed gender groups; lack of women instructors; subject matter that focuses on cattle and less on poultry or small ruminants, for which women CAHWs are more likely to be called on; and the significant time requirements placed on women to perform domestic tasks. Despite these obstacles, the potential for women CAHWs to expand the reach of animal health services, particularly to other women, is great. Simple changes to CAHW training programs can encourage larger numbers of women recruits. These changes involve more use of women training instructors, making all instructors more gender-sensitive, and offering more flexible training schedules and locations. Sensitization of communities to gender and women’s empowerment can further reduce barriers to women’s recruitment as CAHWs.

Sustainability of CAHWs

The sustainability of CAHWs is as important an issue as their technical skills and knowledge, and in many ways more difficult to address. To be successful, there must be demand for CAHW services. Demand stems from public confidence in CAHWs, which this literature review suggests is a consequence of good training and supervision; dependable access to drugs and other inputs; availability to respond to calls in a timely manner; and absence of overwhelming competition (from other CAHWs and from governments and development partners).

Access to veterinary drugs, vaccines, and other inputs is particularly critical for a sustainable CAHW business. CAHW programs may need to incentivize the establishment of veterinary input suppliers in a CAHW area while CAHWs are being trained to work there. Poor entrepreneurial skill among CAHWs is another serious obstacle to sustainability. Increased emphasis on business topics in training can assist with this. And promoting community awareness of the benefits of good animal health care can stimulate demand and willingness to pay for CAHW services, thereby increasing their financial viability.
MAIN RECOMMENDATIONS

CAHW Policy Frameworks
1. WOAH should formulate clear, concise competency guidelines for CAHWs to promote harmonization of minimum CAHW competencies.
2. Countries should recognize and define CAHWs in national veterinary legislation.
3. Encourage CAHWs to organize into associations to advocate for their interests.

Planning and Designing CAHW Programs
1. Individual countries should consider creating a national coordination authority to coordinate and guide the design and implementation of CAHW programs.
2. All animal health stakeholders should be consulted at all stages of project design.
3. Realistic exit strategies should be included in project planning and design.
4. Public veterinary services and NGOs should implement community awareness strategies on the benefits of good animal health care.
5. Emergency/humanitarian interventions should integrate measures to support private sector animal health service providers.

Selection of CAHW Candidates
1. Any entity intending to train new CAHW candidates should conduct a thorough study to estimate the optimal number of CAHWs to be trained.
2. Favor using existing animal health workers, when present, rather than training new CAHWs.
3. Prioritize quality over quantity in CAHW selection. Select fewer CAHW candidates and offer them high quality technical and business training.
4. Selection criteria for new CAHW candidates should be established in consultation with animal health stakeholders—particularly livestock owners and their communities—and consistently applied.

CAHW Training Programs
1. WOAH should formulate CAHW training curricula guidelines.
2. Countries should create a regulatory entity to establish minimum CAHW training standards.
3. Entities that train CAHWs should develop teaching approaches for adult learning, and CAHW instructors should use these approaches.
4. Consider carefully the use of stipends, expense reimbursements, and free inputs to CAHW candidates to avoid attracting poorly motivated candidates.

Supervision & Monitoring of CAHWs and CAHW Programs
1. Countries should establish clear regulatory frameworks that encompass CAHW supervision and monitoring.
2. Public veterinary services should strengthen their capacity to regulate and monitor CAHWs.
3. Consider ways to promote willingness of veterinarians and VPPs to supervise CAHWs.

Public Good Functions of CAHWs
1. National guidelines should establish CAHW responsibilities in disease reporting and remuneration, if any, for performing these duties.
2. One Health and public communication topics should be included in CAHW training curricula.
3. Facilitate the supply of licensed, quality veterinary drugs through strengthened value chains, enforcement of drug quality standards, and building community awareness of the dangers of poor-quality drugs.
4. CAHW supervision should include assessing inappropriate use of drugs.

CAHWs and Women
1. Recruitment of more women CAHW candidates should be facilitated by better adapting training programs to their needs.
2. Raise community awareness concerning gender and women’s empowerment.
3. Community animal health awareness campaigns should include issues that specifically concern women, such as poultry, small ruminants, and food safety.

Sustainability of CAHWs
1. Veterinarians and qualified staff of veterinary pharmacies should participate in CAHW training to strengthen supply chain relationships.
2. Promote the establishment of pharmacies in or near areas with CAHWs.
3. Link CAHWs to a veterinarian or pharmacy to facilitate re-stocking.
5. Provide frequent technical support and mentoring to new CAHWs.
6. Offer CAHWs opportunities for professional development, upward mobility.
7. Free or heavily subsidized animal health care should be strongly discouraged, with some exceptions, so as not to undermine private sector providers.
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