



Community-based Animal Health Workers: Where Are We Now? Lessons from Ethiopia, Kenya and South Sudan



In pastoralist areas, disease is the single biggest cause of livestock losses in normal years. Many diseases are preventable or treatable using medicines which cost only a fraction of the market value of livestock.

Veterinary care and resilience in pastoralist areas

Within resilience frameworks, improved basic veterinary services in pastoralist areas could have multiple benefits. Livestock are the main financial asset of both poor and wealthier pastoral households, and improved basic veterinary care can help to:

- Reduce disease-related losses and so **protect assets**
- **Build assets** – herd growth is the logical long-term economic strategy for poorer households
- Ensure **food security and nutrition**, through the direct consumption of livestock products – especially milk, and protecting livestock which can then be exchanged for cereals.
- Enhance capacity to withstand and recover from **drought**
- For wealthier households, ensure a supply of livestock to **domestic, regional and export markets**.

In the Horn of Africa in a normal year, livestock losses due to disease in pastoral herds are higher than other types of losses, such as those due to predation, theft or starvation. For example, in Ethiopia disease-related losses caused herd depletion of between 5% and 18% per yearⁱ, and this translates into approximately 3.6 million animals per year, valued at US\$798 million. In comparison, the value of total, formal livestock and meat exports from Ethiopia in 2012 to 2013 was US\$218 millionⁱⁱ - the value of disease-related livestock losses was more than three times the value of formal livestock and meat exports. This excludes losses due to diseases which do not kill animals, and lost milk production and related impacts on human food security.

Alternative approaches: the origins and early impact of CAHWs

Conventional fixed-point service delivery is difficult in pastoralist areas due to their large physical size but weak infrastructure, frequent insecurity, and the need to reach mobile communities. As in other parts of the world with small human populations in remote locations, the transaction costs of service provision are relatively high.

In the late 1980s NGOs started to work with pastoralists to select and train local people as basic-level veterinary workers. These workers became known as “paravets” or more usefully, **community-based animal health workers (CAHWs)**.ⁱⁱⁱ These NGO-led CAHW projects were small-scale but this situation changed in the early 1990s when it was proposed that CAHWs could be used to assist with the eradication of rinderpest as part of the Global Rinderpest Eradication Programme. This approach was used in South Sudan, Ethiopia, Kenya and Uganda, and was led by UNICEF in South Sudan, and the African Union’s Interafrican Bureau for Animal Resources^{iv} working with national governments. Although veterinary experts and policy makers were initially sceptical, the results were dramatic:

- **Ethiopia** - in 1994 the Pan African Rinderpest Campaign trained 20 CAHWs in Afar Region and supplied them with heat-stable rinderpest vaccine. Prior to this activity conventional, government teams had vaccinated around 20,000 cattle per year in Afar and achieved approximately 60% immunity. From 1994 to 1995 the 20 newly-trained CAHWs vaccinated 73,000 cattle and achieved 83% immunity. No outbreaks of rinderpest were reported from Afar after November 1995.^v
- **South Sudan** – from 1989 to 1992, the UNICEF livestock program used conventional cold chains and vaccinated approximately 283,750 cattle against rinderpest per year. In 1992 the work came to a virtual standstill due to insecurity and only 140,000 cattle were vaccinated that year. In 1993 a CAHW



Community participation was seen as central to the design, implementation and monitoring of CAHW projects in the early years.

program was developed and in 1993, 1994 and 1995, CAHWs vaccinated 1,489,706, 1,743,033 and 1,070,927 cattle against rinderpest, respectively – up to a 10.6 fold increase in vaccination coverage.^{vi} Confirmed outbreaks of rinderpest decreased from 11 outbreaks in 1993 to one outbreak in 1997; there were no confirmed outbreaks of rinderpest in South Sudan after 1997.

Towards sustainability

From the early 1990s greater effort was also directed at the sustainability of CAHW systems, partly due to concerns that projects collapsed after the withdrawal of NGO support. Some NGOs and AU/IBAR started to position CAHWs as private sector workers who should be linked to private suppliers of veterinary medicines. Various projects supported the development of **private veterinary pharmacies (PVPs)** owned or run by veterinarians or veterinary assistants through training in small business development, credit systems and other activities. This work usually complemented national veterinary privatization programs, where these programs existed.

The OFDA reviews and evaluations of CAHWs

In 1998 the Office for Foreign Disaster Assistance (OFDA) commissioned a review of CAHW projects in the Greater Horn of Africa.^{vii} This was a response to considerable OFDA support to these projects in complex emergencies such as South Sudan, as well as during droughts in Ethiopia, Kenya and other countries. The review documented the impacts of CAHWs on disease control and livelihoods, while also recognizing the challenges. For example, in relation to policy support for CAHWs:

“Although attitudes are changing, there is still considerable work to be done in terms of policy reform, formal recognition of CAHWs and veterinary privatization. CAHWs and privatized approaches are a long way from being mainstream, legislated component of veterinary services ... Although numerous NGO projects use government staff to assist with CAHW monitoring and supervision, in general government has limited capacity to conduct these activities on a long-term sustainable basis”.

Fifteen years later in 2013, OFDA commissioned a follow-up evaluation of CAHW projects which aimed to look again at the impacts and performance of CAHWs and take stock of issues and experiences since 1998.^{viii} The evaluation covered areas of Ethiopia, Kenya and South Sudan and asked questions such as:

- Were CAHWs still performing well?
- What had changed over 15 years in terms of policy support and supervision of CAHWs in pastoralist areas?
- Were CAHW being used in humanitarian response and if so, how?

Findings from the 2014 OFDA evaluation: The positives

Community-level

- At community level, CAHWs were compared with government services, PVPs and private traders, and traditional healers. In general CAHWs were highly valued because of their relatively better accessibility, quality, availability to provide advice, and acceptance.
- More than 70% of CAHWs were judged by the evaluators to be technically competent in terms of disease diagnosis, animal handling and general administration of medicines; there were no notable differences in technical competence between men and women CAHWs, or between illiterate and literate CAHWs.
- Quality and technical competence of CAHWs translated into positive livelihood impacts, which local people associated with livestock disease prevention or treatment.
- PVPs were particularly well-established in the Somali Region of Ethiopia.

Policy-level

- Substantial pro-CAHW policy and legislative reform was evident in Ethiopia, plus government minimum standards and guidelines for private CAHWs, and government guidelines for the use of CAHWs in drought response in pastoralist areas (Table 1); but also see the caveats below.
- The new South Sudan government had taken important steps to support CAHWs. The first policy framework of the Ministry of Animal Resources and Fisheries in 2006 endorsed CAHWs, as did later policies. The country has a standardized curriculum for CAHW training.

Humanitarian response

- In Ethiopia there had been good progress in piloting **veterinary voucher schemes** as a way to support PVPs and CAHWs during drought response, as recommended by the *Livestock Emergency Guidelines and Standards*.^{ix}
- In South Sudan, CAHWs are used to support emergency vaccination campaigns of the government.
- In Kenya, CAHWs were supporting drought response in Turkana District, despite their informal legal status.

Findings from the 2014 OFDA evaluation: The challenges

Community-level

- Across all three countries there were major problems with veterinary supplies to CAHWs due to factors such as conflict and lack of privatization strategy (South Sudan), continued government provision of medicines with hidden subsidies (Ethiopia), and the illegality of CAHWs in Kenya. At community-level, people were willing to pay for

CAHW services, but CAHWs had few or no medicines to hand. In turn, because the income of CAHWs was largely derived from mark ups on medicines and/or a service charge, CAHW incomes were declining. In South Sudan, about 70% of CAHWs were reported to be no longer working compared to the situation in 2004.

Policy level

- Ethiopia and South Sudan had supportive CAHW policy, but limited supervision and active support to CAHWs was taking place; neither country had a veterinary statutory body.
- In Kenya, veterinary legislation did not recognize CAHWs thereby making them illegal. At the same time, weak government capacity to monitor or control veterinary activities in pastoralist areas indicated that CAHWs were still operating to some degree, and even involved in government drought response programs.

Table 1. Trends in policy and institutional support to CAHWs

Indicators of policy and institutional support	Ethiopia		Kenya		South Sudan	
	1998	2013	1998	2013	1998	2013
National legislation to support private CAHWs	-	+++	-	-	-	++
National minimum standards and guidelines CAHWs	-	+++	-	-	++	++
Government quality control of CAHWs	-	+	-	-	+	-
Government quality control of veterinary medicines	+	++	+	+	-	+
CAHWs used for disease surveillance	++	+	++	-	+++	+
CAHWs used for veterinary public health tasks	-	-	+	-	+	-
CAHWs used for humanitarian response	+	+++	++	+	++	+
Government guideline for CAHW in emergencies	-	+++	-	-	-	-

+++ high; ++ moderate; + low; - not present

- In all three countries, the quality control of veterinary medicines was weak, raising concerns that fake or poor quality medicines were being imported. This not only affected CAHWs, but all veterinary workers. Linking PVPs and CAHWs to government-endorsed veterinary products does not guarantee product quality.
- In South Sudan and Ethiopia, government recognizes the potential of CAHWs to contribute to national disease surveillance systems. However, in common with CAHW supervision and other types of support, government has limited capacity to incentivize CAHW surveillance e.g. due to weak response to reports of disease outbreaks. Similarly, CAHWs are not really involved in veterinary public health.
- In Kenya, the illegality of CAHWs prevents their official inclusion in disease surveillance systems. The government seems to expect former CAHWs to act as reporters of disease outbreaks, but with few or no incentives in place. Overall, national animal disease surveillance systems are weak in Kenya. Similarly, the legal position of CAHWs prevents their formal inclusion in drought response activities.



Where are we now with CAHWs?

At community-level, CAHWs are seen as valuable service providers and outperform other types of animal health care in most aspects of service provision. The main constraint is the supply of veterinary medicines in contexts of mixed policy support to veterinary privatization and limited government capacity to ensure the quality of imported or locally-manufactured medicines. In Kenya, these issues are compounded by a lack of policy or legislative support to CAHWs, combined with weak service provision by other providers in pastoralist areas.

Relative to the findings of the 1998 OFDA review, there have been notable policy changes in Ethiopia and South Sudan to support CAHWs. However, despite the very different contexts in these two countries, government capacity to supervise and regulate CAHWs – and other types of veterinary worker – remains weak. CAHWs are allowed to work but not actively supported through activities such as refresher training, or contracted for work such as disease surveillance. In both countries, the absence of an independent veterinary statutory body is a serious constraint to licencing and quality control of CAHWs and other para-veterinary professional workers, as well as veterinarians.

Ethiopia is making progress, has legislation to enable the creation of a statutory body, and has on-going programs to support a new veterinary council. However, these gains are offset by apparently contradictory activities for service delivery on the ground. On the one hand, Ethiopia supports CAHWs linked to PVPs in pastoralist areas, whereas on the other hand, it also continues to construct public veterinary facilities such as animal health posts for clinical services, to be staffed by government para-veterinary workers. These facilities have a long history of poor performance and are relatively expensive to operate. Ethiopia is also training increasing numbers of veterinarians, but few new graduates will want to work in remote pastoralist areas. These issues illustrate the need for a coherent policy on veterinary services in pastoralist areas, which clearly defines the roles of public and private sectors. In South Sudan, the context is very different to Ethiopia and the continuing humanitarian crisis will likely lead to a focus on using CAHWs for emergency veterinary



Government quality control of veterinary medicines affects all veterinary workers, not only CAHWs. One-off testing of medicines needs to be replaced by repeat testing.

interventions such as those recommended by LEGS. Should the political situation become more stable, draft legislation in South Sudan is supportive of CAHWs but there also needs to be a clear policy and strategy for veterinary privatization.

Much of the evidence on the impact and economics of CAHWs was conducted in Kenya, but here a supportive policy or legislation is still not in place after more than 20 years of experience, and lobbying by civil society, international NGOs, FAO and the African Union. At the same time, Kenya still lacks a feasible strategy for providing veterinary services to dryland areas, and preventable livestock losses remain high despite the policy aspiration of increasing livestock exports. Notably, Ethiopia legislated to recognize CAHWs in 2002 and has seen dramatic increases in formal live animal and meat exports since then, with most animals sourced from pastoralist areas. More positively, recent constitutional change in Kenya may provide opportunities for local governments and people in dryland provinces to have a greater say in how veterinary services are provided.

Across the region, trends in the importation of veterinary medicines by government and private sector indicate a growing need to build national capacities to conduct regular testing *and re-testing* of veterinary medicines to ensure quality. More research is needed to assess the scale of the problem of sub-standard medicines e.g. by combining pastoralist's observations on the efficacy of medicines with laboratory assessment. This issue is not confined to CAHWs in pastoralist areas, but affects all veterinary services across the region.

Disclaimer

The views expressed in this policy brief do not necessarily reflect the views of USAID or the United States Government.

Endnotes

ⁱ For example, see: Catley et al. (2014), Livestock mortality in pastoralist herds in Ethiopia during drought and implications for drought response. *Disasters* 38(3), 500-516; McPeak et al (2012) *Risk and Social Change in an African Rural Economy: Livelihoods in Pastoralist Communities*. Routledge, London and New York

ⁱⁱ National Bank of Ethiopia livestock meat and exports figures as cited in Aklilu, Y. and Catley, A. (2014). Pastoral Livestock Trade and Growth in Ethiopia. Policy Brief 72, May 2014. Future Agricultures Consortium, <http://www.future-agricultures.org/publications/research-and-analysis/policy-briefs/1880-pastoral-livestock-trade-and-growth-in-ethiopia?highlight=WyJha2xpbHUjXQ==> (accessed February 2015)

ⁱⁱⁱ The term "paravet" is potentially confusing. Veterinary legislation typically defines a para-veterinary worker as any veterinary worker with a recognized qualification who works under the supervision of a veterinarian. Therefore, a "paravet" could be a veterinary technician, animal health assistant or one of various other kinds of para-veterinary worker.

^{iv} Formerly the Organization of African Unity/Interafrican Bureau for Animal Resources. The UNICEF and AU/IBAR programs with CAHWs were coordinated by staff seconded from Tufts University, working closely with national and sub-national coordinators in partner governments.

^v Admassu, B. (2003). Primary animal healthcare in Ethiopia: the experience so far. In: *Primary Animal Health Care in the 21st Century: Shaping the rules, policies and institutions*. Proceedings of an international conference, 15-18 October 2002, Mombasa. AU/IBAR, Nairobi <http://sites.tufts.edu/capeipst/files/2011/03/Admassu-Mombasa.pdf> (accessed February 2015)

^{vi} Leyland, T. (1996). The world without rinderpest: outreach to the inaccessible areas. The case for a community-based approach, with reference to southern Sudan. In: *The World Without Rinderpest*. FAO Animal Production and Health Paper 129, FAO Rome. pp. 109-120

^{vii} Catley, A., McCauley, H.M and Delaney, P.D. (1998). *Community-based Animal Health Services in the Greater Horn of Africa: An Assessment for USAID - Office of Foreign Disaster Assistance in cooperation with the USDA - Famine Mitigation Activity*. April - May 1998. OFDA/USAID, Washington D.C. http://www.eldis.org/go/topics&id=29806&type=Document#_UjtjRKymBpgU (accessed February 2015)

^{viii} Leyland, T., Lotira, R., Abebe, D., Bekele, G. and Catley, A. (2014). *Community-based Animal Health Care in the Horn of Africa: An evaluation for the US Office for Foreign Disaster Assistance*. Feinstein International Center, Tufts University, Addis Ababa and Vetwork UK, Great Holland <http://fic.tufts.edu/publication-item/community-based-animal-health-workers-in-the-horn-of-africa/>

^{ix} <http://www.livestock-emergency.net>

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