

The Challenges of Emergency Veterinary Voucher Schemes: Research into Operational Barriers to Applying LEGS



INTRODUCTION

The Livestock Emergency Guidelines and Standards (LEGS) chapter on technical standards for veterinary support highlights the role of the local private veterinary sector as essential in emergency response, and promotes the use of a community-based animal health-care (CBAH) system, including the use of voucher schemes where markets are working¹. The LEGS chapter also highlights the negative impacts that free distribution of veterinary pharmaceuticals can have on the private sector, and on the long-term livelihoods of livestock keepers. Anecdotal evidence has suggested however, that most donor requirements for quality and effectiveness pose a challenge for implementing veterinary voucher schemes that support existing private sector veterinary systems; specifically with regard to complying with donor procurement, storage and distribution regulations to maintain the quality of the veterinary pharmaceutical supply chain. To overcome this, USAID/OFDA provided funding for a two-year Operational Research project entitled, *Operational Barriers to Applying LEGS*, which was carried out by the LEGS Project between October 2017 and December 2019, the findings from which are presented in this Briefing Paper. The research question was given as: ‘*what are the potential models that will allow the application of the LEGS standards on the use of the local veterinary private sector within the quality assurance requirements of USAID/OFDA?*’

THE MODEL AND THE TESTS

Three partner projects were identified for the Operational Research, in Ethiopia (hereafter referred to as Test 1), in Zimbabwe (hereafter referred to as Test 2) and in Kenya (hereafter referred to as Test 3). In response to the research question, a research protocol was developed which drew from the USAID/OFDA pharmaceutical requirements and guidance², and the LEGS Handbook guidance on community-based animal health care and vouchers³. The Operational Research aimed to test a model of an animal health treatment voucher scheme, using community-based animal health workers (CAHWs) in Test 1 and Test 2, and animal health service providers (AHSPs) implementing an e-voucher scheme in Test 3 - as CAHWs are not legal in Kenya. The six elements of the research model together with key criteria for each are presented in Box 1.



BOX I: RESEARCH MODEL ELEMENTS AND KEY CRITERIA

1. Functioning private CBAH system:
a. Appropriate training curriculum for the local disease context, including cost recovery and business skills
b. CAHWs/AHSPs with skills to provide quality service appropriate to the local context based on a valid animal health provider-owner-animal relationship that includes taking a history, physical examination, diagnosis and treatment choice
c. CAHWs/AHSPs trained in drug protocols and maintaining quality of veterinary pharmaceuticals including dosage, withdrawal periods, storage and disposal
d. Appropriate CAHW/AHSP equipment
e. Effective links with public/private sector veterinary professionals for monitoring, referrals and support
f. Market-based system for service provision which includes service fee for providers
2. Veterinary pharmaceutical supply chain and quality:
a. USAID/OFDA approved veterinary pharmaceuticals supplied by USAID/OFDA approved wholesalers, and procured by nationally registered/licensed Private Veterinary Pharmacies (PVPs) identified by partners using selection criteria approved by USAID/OFDA
b. Approved wholesalers and registered/licensed PVPs able to procure, store and supply approved pharmaceuticals to project CAHWs/AHSPs
c. Memoranda of understanding (MOU) between key actors in the supply chain (where possible allowing market forces to drive the supply chain)
d. PVPs trained in drug protocols and maintaining quality (as defined above)
e. Quality supply chain not compromised, based on: quality pharmaceutical products, storage, distribution, dosage and disposal, according to USAID/OFDA requirements
f. Random selection of pharmaceuticals from PVPs and CAHWs/AHSPs tested to confirm active ingredients and purity/safety
3. Community awareness and behaviour:
a. Community engagement in planning activities including prioritisation of diseases
b. Community involvement in selection of CAHWs/AHSPs
c. Community involvement in selection of target beneficiaries
d. Community awareness on quality of drugs, value of services provided, and how cost recovery is calculated
e. Creation of community animal health committees or use of existing community structures to support the process
4. Voucher scheme:
a. Elements 1-3 above incorporated into a voucher scheme that ensures good coverage and targets vulnerable community members
b. Vouchers designed based on consultation with the private sector to determine the redemption period, and appropriate values for delivery of animal health services, including drug fronting vouchers and service vouchers where appropriate
c. All key stakeholders including government understand and are engaged in the scheme based on MoUs
d. Voucher redemption system established and working
e. Beneficiary satisfaction with scheme and positive impact on livestock
5. Monitoring system:
a. Checking batch numbers, packaging and source of drugs from CAHWs/AHSPs and PVPs
b. Random inspection of CAHW/AHSP kit contents and storage
c. Random laboratory drug quality testing where possible at both PVP and CAHW/AHSP levels
d. Random inspection of CAHWs and PVPs including: drug management, storage and distribution preferably based on Standard Operating Procedures, Good Supply Practices and Good Distribution Practices
e. Collection and tracing of used vouchers (or monitoring of electronic system) to ensure inclusion of only targeted beneficiaries and use of vouchers only for approved services
f. Baseline and endline studies of beneficiaries, CAHWs/AHSPs, PVPs and suppliers
6. Policy context:
a. Appropriate policies in place to support privatised CBAH system
b. Veterinary pharmaceutical regulatory policies, including licensing and inspection procedures for wholesalers and PVPs, ensure that quality pharmaceuticals are available for privatised community-based animal health services
c. Key actors, including wholesalers, PVPs, CAHWs/AHSPs and implementing partners are aware of and adhere to relevant regulations.

The research methodology was based on the following multi-method research approach, using both quantitative and qualitative data collection methods, with checklists and tools developed for each:

1. Knowledge, Attitudes, Practice baseline and endline studies through 46 Focus Group Discussions with community members (220 women and 210 men in total)
2. Key Informant Interviews on animal health service delivery with CAHWs (33), AHSPs (8), Private Veterinary Pharmacies (PVPs) (19), government staff (8), and Test partner project staff (16)
3. Observational site visits and spot checks to review veterinary pharmaceutical quality with PVPs (9) and CAHWs/AHSPs (33)
4. Laboratory tests to check the stability of the active ingredients and the sterility of the veterinary pharmaceuticals in use (78 samples tested)
5. A global online stakeholder survey administered via the LEGS website and mailing list to consult practitioners and policy makers around the world about their experiences of providing veterinary support in emergencies (85 responses)
6. USAID/OFDA also carried out field visits to the three Test sites during the research period.

CONTEXT

The locations of all three Test sites were in rural and remote areas, where livestock is the main livelihood strategy and public animal health services are stretched very thinly due to the vastness of the area and widely dispersed populations.

In Ethiopia, the location of the 1st research Test, CAHWs have long been established as a key vehicle for CBAH service provision, including in emergency situations, based on a government-certified standardised training curriculum. The Test 1 partner project was implemented in Jarar Zone of Somali National Regional State, and aimed to provide support to pastoral and agro-pastoral livestock production as the main livelihood system for the residents of this arid and semi-arid zone. Humanitarian responses in the region have included commodity vouchers and cash transfers, with some previous experience of animal health voucher schemes.

Test 2 was implemented within smallholder farming communities in southern Zimbabwe's semi-arid Chiredzi District, where CAHWs, although not common and not part of the formal animal health service structure, are informally supported by the government. The project area is remote with limited services and low access to public veterinary specialists. Seed voucher schemes are known but there is little experience of veterinary voucher schemes.

Test 3 was implemented in the semi-arid Marsabit County in northern Kenya, where pastoralism is the main livelihood option. In contrast to the Test 1 and Test 2 sites, CAHWs are not legal in Kenya and animal health services are provided by public and private sector veterinarians supported by trained animal health service providers. As with Tests 1 and 2, these services are spread very thinly across a vast area. The project partner had previously implemented an animal health electronic voucher scheme, which was then adapted for the purposes of the Operational Research – in particular to shift control of the e-voucher from the beneficiaries to the AHSPs in order to ensure that the veterinary pharmaceuticals were administered by trained AHSPs following appropriate examination and diagnosis, rather than by the livestock owners themselves.

FINDINGS AND CONCLUSIONS

The key findings and conclusions from the Operational Research are presented here according to the six elements of the research model.

Element 1: Functioning Community-based Animal Health System

In all three Test contexts animal health services existed, however, in each case the services in these remote and rural areas were characterised by a chronic lack of staff, limited veterinary supplies and poor logistical support. The low numbers of public sector veterinary professionals, coupled with the reluctance of private sector veterinarians to work in such remote areas, means that community-based systems such as CAHWs are vital for reaching and supporting rural pastoral/farming communities. Such systems need to be integrated with the private sector for referrals and technical support so that they are sustainable in the longer term beyond any emergency response, and so that they are connected to the public sector for regulatory monitoring.

In Test 1, 50 existing CAHWs were recruited and 36 more were trained under the implementing partner project based on a government-certified national curriculum. Further data could not be collected from Test 1 because implementation of the project was delayed until after data collection for the Operational Research had ended.

In Test 2, 50 CAHWs (29 men and 21 women) were selected and trained by the partner using a five-day commissioned course, which was appreciated by both the trainees and the community, but which was considered to be too short by the community members interviewed. The voucher scheme ran for three months and the research results confirmed that: the CAHWs were significantly more accessible and available than other service providers; that they carried out appropriate examinations and recorded case histories before diagnosis and drug administration; and that there was a positive impact on livestock body condition and mortality as a result of their work. The selection of the CAHWs could have been improved through greater community engagement in the process and the incorporation of community priorities regarding age and gender (including more women).

In Test 3, in the absence of any legal status for CAHWs, eight recently graduated government AHSP interns were contracted by the implementing partner to provide animal health services to the target beneficiaries for the duration of the project. They were therefore technically trained but were not acting as private sector service providers, and hence the sustainability of their services was compromised. The research found that the availability, accessibility and quality of the service they provided was valued by the community, and that most of them carried out appropriate examinations and recorded case histories before diagnosis and drug administration. Due to initial delays the project was only able to run for 3 weeks, with the short implementation period significantly limiting the impact of the AHSPs' work.



Element 2: Veterinary Pharmaceutical Supply Chain and Quality

The second element of the research model related to the supply chain for veterinary pharmaceuticals—which runs from the wholesaler; to the PVPs and finally to the CAHWs/AHSPs - and involves maintaining quality throughout the transport, storage and distribution of the medicines. In order to implement the voucher schemes the three implementing partners had to obtain approval from USAID/OFDA for the selected wholesaler who would supply the agreed veterinary pharmaceuticals (which were also submitted to USAID/OFDA for approval). This approval process is intended to ensure that the supplier of the pharmaceuticals meets minimum standards for quality assurance. The partners also selected PVPs based on quality assurance criteria approved by USAID/OFDA.

In Test 1 the selected wholesaler and PVPs could not maintain USAID/OFDA required standards regarding documentation and storage facilities, although they had good disposal and expiry date management. The six selected PVPs' storage challenges were exacerbated by the high ambient temperatures. A lack of regulatory monitoring and enforcement at all levels led to poor handling, recording, transportation and storage of veterinary drugs within this project.

In Test 2, one of the two selected wholesalers could not maintain all USAID/OFDA quality requirements, including temperature and pest control. Drug quality was well maintained by the selected PVP and the CAHWS, with good storage and record keeping. This was confirmed by two spot check laboratory analysis tests of a sample of veterinary drugs (64 drugs were sampled from the PVP stores and from 36 of the 50 CAHWs); however the relatively short implementation time of this project meant that these findings cannot be considered conclusive in terms of confirming the quality of the supply chain on a sustainable basis.

In Test 3 the wholesaler and PVPs could not maintain USAID/OFDA good practice requirements with regard to temperature regulation, amongst other criteria. The quality of the supply chain could therefore not be confirmed, in spite of positive laboratory tests from 14 sampled drugs.

In both Test 2 and Test 3, the research found that livestock keepers perceived the drugs supplied through the voucher schemes to be of higher quality than those available on the market prior to the project (including counterfeit drugs). For all three Tests, although the research results suggest that the integrity of the quality supply chain (based on the criteria in the model) was compromised to a certain extent in each area, the Operational Research provided an opportunity for the implementing partners and other stakeholders to learn more about the steps involved in maintaining the quality of the drug supply chain, and to build their understanding and future capacity in this area with support from the research team.

Element 3: Community Awareness and Engagement

The research model highlighted the importance of community awareness and engagement in the success of voucher schemes. In Test 1 the partner worked with the community together with the local authorities to select and train the CAHWs (but data is not available for the remaining criteria for Test 1). For Test 2 communities were consulted regarding the initiation of the project but were not involved in the process of CAHW selection, which the research revealed led to some dissatisfaction with some of the candidates on the part of the community. However, other aspects of the project were discussed and planned through community meetings established by the partner. In Test 3 the partner was already involved in a community dialogue platform, and this, together with the local FM radio station, greatly facilitated community awareness and engagement in the project.

Element 4: Veterinary Voucher Scheme

In Test 1, two types of paper value vouchers were designed—a fronting voucher for the CAHWs' start-up drug supply⁴, and a community voucher to be distributed to the target beneficiaries⁵. A total of 39,900 community vouchers with a total value of 1,330,000 ETB (US\$ 41,802) were distributed to 6,650 beneficiaries. It was envisaged that the CAHWs would retain 20% of the drug value as a mark-up and professional fee, while the PVP was to retain a 15% mark-up as profit. The scheme began in October 2019 with drugs being distributed to the CAHWs by the PVPs based on signed agreements. The PVPs would collect the empty bottles from the CAHWs to allow for cross checking that the drugs supplied from the PVP were utilised. The vouchers collected from beneficiaries by the CAHWs were also to be submitted to the PVPs, who would in turn claim their costs from the partner.

In Test 2, two types of vouchers were developed (in response to community demand for additional non-treatment services, such as dehorning and castrations) and were issued to the selected beneficiaries.

Each beneficiary received treatment vouchers valued at US\$7, which were broken into seven US\$1 denominations, and non-treatment/service vouchers valued at US\$2, again broken into two US\$1 denominations. A drug fronting voucher worth US\$100 was also issued to each of the 50 CAHWs which enabled them to acquire their first consignment of drugs, syringes and needles, and with which they could initiate their first voucher-based treatments. The beneficiaries also paid the CAHWs 40% of the value of the service they provided in local currency. The voucher scheme achieved 96% treatment voucher redemption and 100% service voucher redemption. A total of 2,444 beneficiaries (94% of the planned total) were able to access CAHWs services and 40,041 livestock were treated. The research confirmed community satisfaction with the scheme, noting reduced livestock mortality and improved livestock body condition as the results ascribed to the intervention.

In Test 3, the scheme was based on AHSPs using an e-voucher to purchase the approved veterinary pharmaceuticals and to treat the livestock of the

selected beneficiaries. The e-voucher was essentially a debit card linked to Point of Sale – POS – machines in the participating PVP stores, each card having been loaded with funds that had been deposited with the bank by the partner organisation. On average each card was loaded with KSh 292,600 (US\$ 2,883), with which the AHSP was expected to serve around 3,750 animals⁶. The specific amount was based on the target number of beneficiaries the AHSP would serve and only covered the actual cost of drugs, with no mark-up to cover time, transport or equipment repair. In Test 3 the implementing partner gave the AHSPs a work contract to deliver the service and a vehicle for transport, which meant that the AHSPs were not engaged as business partners, but as individual contractors to the implementing partner. Therefore in this location the e-voucher scheme had significant drawbacks in that it did not support the existing market-system linkages and processes, which is usually the goal of voucher interventions. The short implementation period of the project in Test 3 limited the scheme's coverage, but nonetheless the AHSPs managed to reach 56% of the 3,000 planned beneficiaries as well as 298 non-beneficiaries who received the service for free. Over 64,000 animals were treated and 71% of the drug consignment was used. The research found that more than half of the focus group discussion participants were satisfied with the scheme, citing improved livestock body condition and recovery from disease as key benefits.



Element 5: Monitoring System

The research model proposed a monitoring system to record implementation and allow for course correction based on random spot-checks and kit monitoring, drug sample collections, checks on used packages and vials, community surveys and random checks on drug chain suppliers. With the exception of Test 1, where only baseline data could be collected due to the delayed implementation of the voucher scheme, the research team was able to collect most of the planned data and confirmed that the model's key criteria for monitoring did form the minimum monitoring required for a successful voucher scheme that would ensure the quality of the veterinary pharmaceutical supply chain.

Element 6: Policy Context

The final element in the research model considered the policy environment regarding animal health service provision and drug control, and how these policies and institutions are known and have an impact on the stakeholders.

In Test 1 the national policy context is very positive, with official recognition of CAHWs through a certified training curriculum, and a rigorous certification and licensing process for drugs and suppliers. The drug import standards however fail to address the challenges of high ambient temperatures in many pastoral areas, and the implementation of these policies including inspections is only partially applied.

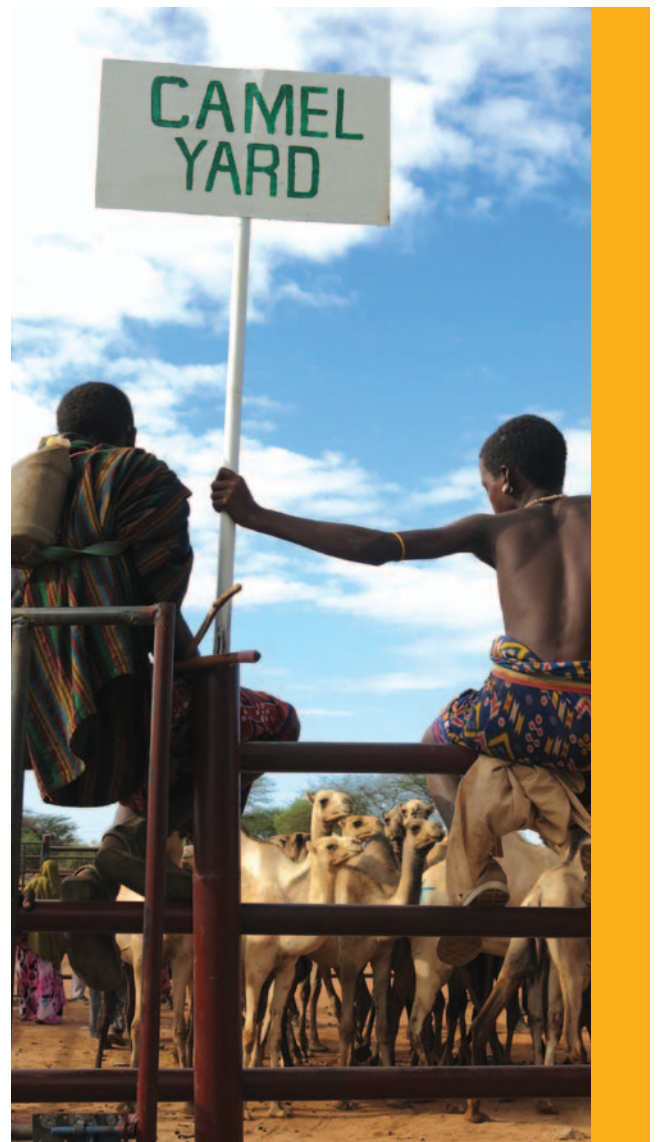
In Test 2 the certification and licensing process is rigorous and is well applied, although there are no laws formally recognising CAHWs, and non-certified drugs are available in local markets. Key stakeholders have good knowledge of the relevant policies which are generally well adhered to by PVPs and wholesalers. In Test 3, as in Test 1, the legislation exists but the required inspections do not always take place, which has an impact on the quality of the supply chain.

In Tests 2 and 3, non-certified and counterfeit drugs are available in local markets. The key policy issues for Test 3 are the fact that CAHWs are not permitted by national law, and that there is no effective service provider able to work sustainably at community level to fill the gap.

Conclusions on the Research Model

The conclusions of the research findings regarding the proof of concept for the model, are that the six elements, and all the related criteria, are essential for the effective implementation of a quality emergency veterinary voucher scheme.

Although none of the Tests fully met all the criteria for each element, the overall conclusion of the research is that, despite time constraints and some variations in the design, veterinary structures and enabling environment, the model effectively proved the concept regarding market-based approaches for the inclusion of veterinary pharmaceuticals in emergency animal health programmes.



Specific recommendations, based on the research model elements, include:

Element 1: Functioning Community-based Animal Health System

Based on the research findings, the following recommendations are proposed to support voucher-based animal health schemes:

- Veterinary voucher schemes offer a means to support market actors during an emergency response whilst providing direct assistance to vulnerable beneficiaries. They depend, however, on an available cadre of existing or newly recruited CAHWs, or other AHSPs, who should be fully trained in service provision and business management so that by the end of the project they can continue to provide services in the target community in a sustainable manner.
- In line with LEGS, partners should always seek to work through the local market-based system of service provision and avoid contracting CAHWs/AHSPs to deliver services as this can create a precedent and disincentive for future service providers in a voucher scheme or front-line community based service delivery. The PVPs should be involved from the beginning in voucher design and the redemption process. Vouchers should be set at an amount to allow vulnerable livestock owners to meet CAHWs/AHSPs' operating costs such as income/fees, transport, pharmaceutical resupply and equipment repair.
- Training should be provided to new CAHWs/AHSPs so that they understand the costs of running a business, can calculate service fees accordingly, and understand whether and how voucher values contribute to these fees. Communities should be adequately informed as to what costs the voucher covers, and therefore what beneficiaries and non-beneficiaries need to pay in order to receive services.

- CAHWs should ideally be under the supervision of a private veterinarian, with both under national veterinary legislation enforced and monitored by public services. However, where private vets are few or absent, as is often the case in remote and harsh areas, public veterinary services may have to take on this role with the support of implementing agencies, or implementing agencies may have to lead this process themselves.

Element 2: Veterinary Pharmaceutical Supply Chain and Quality

- Capacity building is required at all levels of the supply chain in many countries to improve drug storage, distribution and management; and implementing partners have a key role to play in this, through for example, the development of guidelines on quality standards and related training.
- There is also a need to work closely with government agencies responsible for setting quality standards to ensure that they are appropriate for the end-use environment, for example, ensuring that drug import standards regarding temperature and stability are appropriate for the environment where the drugs will be used.
- Key areas where the supply chain comes under pressure are often linked to the distribution of drugs from the wholesaler to the PVPs, and then to the front-line service provider; including temperature and relative humidity monitoring, packaging, storage and record keeping.
- Working with a small number of wholesalers rather than just one can help to broaden the access to drugs and improve distribution, although this can be more time-consuming for implementing partners as additional paperwork will be required to obtain USAID/OFDA approval of each.

Element 3: Community Awareness and Behaviour

- Where existing community platforms are not already in place, the model proposes setting up Livestock Committees to act as a means for the partner to engage with the target communities. It is therefore recommended that mapping of community platforms and committees is undertaken prior to developing a voucher scheme.
- Communities must always be engaged from the start of the scheme and throughout the project period, including in the selection of CAHWs, selection of beneficiaries, identifying of priority diseases to ensure that the correct drugs are supplied, and for discussions about any service fee to be paid.



Element 4: Veterinary Voucher Scheme Development and Implementation

- Preparedness, including engagement with all key stakeholders, is important to ensure that the appropriate modalities are put in place, for example technical input from wholesalers, and that all are agreed on respective roles and responsibilities. This could also include working closely with the target beneficiary communities to increase their knowledge of quality service including drugs.
- The research found that community contributions to the cost of the service were an important factor in the future sustainability of the delivery system; for example in Test 2 beneficiaries were willing to pay at least part of the full cost of service provision. In the same Test, the addition of a service voucher to provide dehorning and castration proved to be popular with livestock owners and may be a way of developing a strong relationship between the frontline service providers and the community. It also shows that voucher schemes can be adapted to the local context depending on the needs of the community.
- The development of standard operating procedures by one partner proved to be very effective in identifying the key steps, roles and responsibilities of the various actors in the chain, and the appropriate voucher redemption period. This can facilitate a more rapid response from implementing agencies in the event of any future emergencies and serve as an entry point for discussing voucher delivery modalities with stakeholders.
- The need for livestock feed and water vouchers should also be assessed, particularly in drought emergencies, as animals are generally more likely to die of hunger and dehydration than disease. Feed and water voucher schemes are also more common and easier to manage as they require fewer quality control measures.
- Further areas for voucher model research could include use of new and developing technologies such as e-vouchers and mobile phone banking, which could reduce the need for paperwork and allow for a simpler delivery system. Appropriate technology for drug storage and transport in hot climates, for example the use of concrete shelving for drugs to help limit high temperatures, would also be of value.

Element 5: Monitoring

- The research shows that there is a minimum level of monitoring required for a successful voucher scheme that maintains a non-compromised quality supply chain based on: baseline and end-line studies with communities; spot check visits to PVPs and CAHWs/AHSPs that include checking kit, approved drugs stocked, drug storage and transport, drug batch number and expiry dates, record keeping, observations of storage and documentation; and interviews with PVPs and CAHWs/AHSPs.
- Implementing partners will often have to develop a record keeping system specific to the project that allows traceability of batch numbers based on wholesaler invoices to PVPs and onward to CAHWs. Handbooks and good practice guidance for voucher programming are already available ⁷. As referenced above, the use of e-vouchers and other technologies may further streamline voucher monitoring and reporting.
- Given the time and funds required, random laboratory tests on sample drugs are a recommended but not essential part of the monitoring scheme.
- It is important that a detailed monitoring plan is drawn up before the project begins, and that sufficient time, resources and staff are allocated for the implementation of the plan.

Element 6: Policy Context

- Appropriate licensing and regulations are frequently present at national level but the implementation at lower/local levels is often poor, with very limited oversight by the relevant government bodies. This is likely to have an effect on the quality of both the drug supply chain and the service provided to the livestock owners. In these contexts implementing partners need to understand the need for oversight, have the required technical capacity, and be prepared to take an active role in monitoring the various stages of the chain to ensure quality is not compromised.

¹ Livestock Emergency Guidelines and Standards (LEGS) (2014). – Livestock Emergency Guidelines and Standards, 2nd Edition. Rugby, UK: Practical Action Publishing. Available at: www.livestock-emergency.net/wp-content/uploads/2012/01/LEGS-Handbook-2nd-edition-web-version-1.pdf

² USAID/OFDA Proposal Guidelines Pharmaceutical & Medical Commodity Guidance, January 2019

³ See LEGS (2014), in particular: page 119 on community animal health workers; pages 65 and 66 on veterinary vouchers; Clinical Veterinary Services Standard 1: Service design, Key Actions and Guidance Note 4 on pharmaceutical quality; Core Standard 2 on preparedness; and Core Standard 3 on competencies.

⁴ Fronting vouchers with a value of 675 ETB (US\$22) were provided to 86 CAHWS

⁵ The community vouchers were in denominations of 20 ETB, 30 ETB and 50 ETB. A total of 200 ETB (US\$ 6.25) worth of vouchers (two x 20 ETB, two x 30 ETB, and two x 50 ETB), were provided to each beneficiary.

⁶ Based on an initial target of 10 animals per beneficiary and a total of 3,000 beneficiaries, served by eight AHSPs.

⁷ For example, existing voucher best practices from other sectors can be adapted, such as from the Cash Learning Partnership's Programme Quality Toolbox at pqtoolbox.cashlearning.org.





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