Ministry of Agriculture and Rural Development
Federal Democratic Republic of Ethiopia

National Minimum Standards
and Guideline for
Design And Establishment of
Community-Based
Animal Health Workers System

2004
Preface

For many years the provision of veterinary services in our country has been the sole responsibility of government. However, we now acknowledge that there are crucial roles for many other actors in the provision of veterinary services. Indeed the future policy for animal health services shall emphasize partnerships between government, private sector and livestock keepers, with the aim of building a viable and self-sustaining animal health care delivery system. The key element to be embedded in the policy framework is the participation of livestock keepers themselves in service delivery. Such participation is an important factor for ensuring sustainability of service delivery.

Animal health service provision in the numerous inaccessible areas of Ethiopia is faced with a number of challenges and obstacles. The conventional veterinary services delivery system that is adapted to the high potential farming areas incapable to meet the needs of livestock keepers in the remote and low potential areas of the country. In order to address these fundamental constraints it has been found necessary to involve the livestock herders themselves in the control of animal diseases.

Consequently, during the past years various governmental and NGOs have been involved in the design and establishment of the community based animal health care delivery system. However, the result achieved greatly varies from one organization to the other. The success of the community-based animal health delivery system depends on various factors among which selection of an appropriate trainee; the training approach, regular monitoring and drug supply are some. Thus, the level of success among the different organizations is determined by the approaches followed.

I have understood that over the years various Community Animal Health Workers (CAHWs) training manuals have been developed by different agencies, and following different training approaches. The lack of harmonized and standard approach among the various organizations has greatly undermined the establishment of successful and sustainable Community - based Animal Health care delivery system in the country. Thus, it is high time that we need to harmonize and set a standard guideline for community-based animal health care delivery system in our country to ensure high quality and sustainability of the system. The National Minimum
Standards and guideline for Design and Establishment of Community-based Animal Health Care Delivery System lays down the minimum standards to be met by all governmental, non-governmental and private sector agencies involved in CAHW systems. Application of these standards will assist Ethiopia to strengthen veterinary service delivery and disease surveillance nationally, and ensure improved primary animal healthcare to millions of livestock keepers.

I would like to commend all the agencies, institutions and individuals who have participated in developing this guideline. The effort demonstrated to produce this guideline reflects the true spirit of collaboration, which must be upheld at all times.

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Federal Democratic Republic of Ethiopia

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## Acknowledgements

The Ministry of Agriculture and Rural Development would like to thank all agencies, institutions and individuals who have actively participated and contributed to the development of this minimum standard and guideline.

More specifically we would like to acknowledge the Community-based Animal health and Participatory Epidemiology Unit of the AU/IBAR for spearheading and facilitating the whole process of developing this document.
Introduction

Over 70% of Ethiopia is arid and semi-arid land that is occupied by pastoralist communities. These areas are homes to nearly 28% of cattle, 66% of goats, 26% of sheep and 100% of camels of the national livestock population. In the past, the delivery of animal health services was the mandate of the Government of Ethiopia, through the Veterinary Department. However, service provision has declined during the last two decades and in many pastoral areas professional veterinary services are restricted to urban centers. The limited professional services in pastoralist areas has not only had a negative impact on livestock production and productivity, but has also led to the emergence of a highly unethical trade in veterinary drug supply, and consequent risks of drug misuse and abuse.

Apart from the macroeconomic factors that have negatively impacted on veterinary services, provision of animal health services to pastoralist communities has been hampered by several factors, including the vastness of the area to be covered, poor infrastructure that leads to high delivery costs, the mobility of pastoralist communities and high levels of insecurity. There are also poor social amenities in these areas and many technical personnel are unwilling to work in the hostile pastoral environment. Due to the limited presence of professional veterinary staff in pastoralist areas, petty traders and untrained practitioners have stepped in to fill the gap. This is unacceptable from a legal and ethical perspective, and alternative systems that are veterinary supervised must be developed.

Recognising the gaps in an animal health delivery, the Federal Veterinary Team supports the introduction of veterinary-supervised community-based animal health care delivery system in remote areas of the country. New strategies that address the unique conditions of the pastoralist way of life need to be devised and implemented both in pastoralist areas and other areas where conventional animal health delivery is lacking or inadequate. Experiences from private veterinary practice in pastoralist areas indicate that CAHWs linked to private veterinarians or veterinary assistants are an efficient and sustainable approach to animal health service provision. However, the approach requires policy and regulatory support from Regional Governments.
Several government agencies and non-governmental organizations (NGOs) have initiated community-based animal health projects in the different agro-ecological zones of Ethiopia. Studies have shown that these projects are the only alternative to improve veterinary service delivery in the inaccessible areas of the country. However, each agency has used a different approach for the design, implementation and assessment of CAHW projects. As a result, there was no standard CAHW training course with regards course content and duration, indicating that CAHWs in different projects had very divergent levels of knowledge and skills. This state of affairs has caused great concern in Ethiopia.

The process of developing the National Minimum Standards for Design and Establishment of Community-based Animal Health Care Delivery System has involved contributions from veterinarians in federal and regional governments, NGOs and international livestock agencies. Use of standardised guidelines endorsed by government is an important step in developing quality control procedures for privatised and veterinariansupervised CAHW systems in Ethiopia.

The objective of the National Minimum Standards for Community-based Animal Health Care Delivery System is to provide a standard to be adopted by all agencies involved in the design and establishment of CAHW systems in Ethiopia. At regional level, Regional Bureaus are responsible for ensuring that relevant agencies are aware of the Minimum Standards and that these standards are implemented and monitored. It is intended that this first version of the Minimum Standards will be reviewed after three years.

**Part I: General guidelines for the establishment of community-based animal health worker systems**

This section of the Minimum Standards provides an overview of the key features of CAHW systems. It is recommended that agencies are familiar with each of the main stages in the design and implementation of CAHW systems.

**Part II: National training curriculum for community-based animal health workers**

This section of the Minimum Standards provides a detailed training curriculum and course outline for CAHWs in Ethiopia.

**PART I**

**GENERAL GUIDELINES FOR THE ESTABLISHMENT OF COMMUNITY-BASED ANIMAL HEALTH WORKER SYSTEMS**

1. **Introduction**

Community-based animal health workers (CAHWs) are livestock keepers who are selected by their communities to receive basic training in primary animal health care. Where possible, CAHWs should be private workers who are supervised at field level by private veterinarians or animal health assistants (AHAs). Private veterinarians or AHAs should also be responsible for supplying veterinary medicines to CAHWs. The government veterinary service is responsible for the regulation of the private system and the licensing of each type of animal health service provider.

The establishment of an effective and sustainable CAHW system requires a number of key stages in systems design and implementation to be followed:

- communities that need CAHWs are identified
- a community dialogue and baseline survey that includes analysis of indigenous knowledge and gender roles in livestock production is undertaken
- in collaboration with the supervising veterinarian, the community selects candidates for training as CAHWs
- CAHWs are trained using a government-accredited trainer and the training follows the Minimum Standards
- CAHWs are evaluated by the government-accredited trainer
- CAHWs operate within their communities under the supervision of AHA.
- CAHWs undergo refresher courses and continuous follow-up to improve their knowledge and skills

Inspection of CAHW training and evaluation will be conducted by the government veterinary service to ensure maintenance of ethical and technical standards. CAHW systems shall be confined to pastoral and other inaccessible areas where conventional animal health delivery strategies are inadequate, and where the community has identified a need for their services.
2. First Steps in Developing a Community-based Animal Health Worker System

2.1 Baseline survey

The purpose of a baseline survey is to:

- Enable veterinary workers to become acquainted with a new working area, identify existing animal health service providers, gather information concerning existing conventional and indigenous veterinary knowledge, and the nature and extent of animal health problems in the area
- Provide information on animal diseases that can be used to identify CAHW training needs
- Provide baseline information that can be used to assess the impact of CAHW activities

It is recommended that interactive Participatory Rapid Appraisal approaches and methods are used during the baseline survey, and complemented with conventional data from government records previous surveys, or research studies.

Given the value of participatory methods in need assessment surveys in CAHW systems, it is beneficial for veterinarians to receive training in Participatory Rural Appraisal (PRA) before conducting a baseline survey. Once veterinarians have been trained in participatory approaches and methods, a participatory survey of animal health care and constraints in the proposed area should be designed and implemented. When designing a survey, the two key questions are: “What information do we need?” and “how are we going to obtain the information?”. The information required can normally be listed under headings.

Specific information needs are detailed below.

a. Livelihoods and social organization

It is important to obtain a good understanding of the livestock owning community including their way of life, their tactics of survival, their opinion leaders and their decision making processes.

b. Animal diseases

The diseases that are common in the area should be identified and ranked by the community members. The information sought should include:

- the most common diseases, the species affected, and incidence and mortality;
- a disease calendar for the area, showing seasonal trends in disease incidence and mortality;
- livestock numbers
- livestock movements

This information provides an insight into the perceived state of animal health problems and will assist the CAHW trainer to priorities different diseases during the training. Also, there may be a need to include diseases in the CAHW training which were not identified by the communities themselves, either because the diseases are unknown or have not occurred recently.

c. Animal health services

The baseline survey should collect information on:

- current methods of disease prevention or treatment, and the outcome of preventive or curative measures;
- the types of medicines kept and used by the livestock owners;
- existing animal health service providers and the relative accessibility, availability, affordability and acceptance of these providers.

d. Gender issues

During the baseline survey, it is important to discuss gender roles in livestock production within the community. In particular, it is important to discuss the roles that women play in the pastoralist society, as women look after the young stock and milking herd, and nurse the sick animals. Therefore, women are likely to detect mastitis and problems of young stock, including diarrhoea and pneumonia. Women in all cultures play important productive as well as domestic roles. All the players involved in livestock production including women and the youth should participate in the survey. Recruitment and involvement of female CAHWs would be valuable sources of
veterinary drugs and services especially when men travel with the adult livestock herds.

2.2 Community dialogue and selection of community-based animal health workers

a. Community dialogue

The purpose of community dialogue is to fully involve the community in both analysing animal health problems and identifying ways to improve veterinary services in their areas. Assuming that a CAHW system is identified as an appropriate intervention, community dialogue can also be used to select people for training as CAHWs. Community dialogue must be interactive if any CAHW system is to succeed.

Important issues to discuss and agree during community dialogue are summarised below.

- the roles of livestock keepers, CAHWs, animal health technicians (AHTs), and veterinarians
- the system for provision of the initial kit of equipment and drugs for the CAHWs, including community contributions
- the system of drug supply and concept of payment for services and financial incentives for CAHWs
- the system for referral of cases not handled by CAHWs
- the system for monitoring and evaluating CAHWs performance

Discussion on these issues may need to be repeated several times and with various sections of the community before the whole community can agree on the nature of a proposed CAHW system.

b. Roles of community-based animal health workers

Regarding the roles of CAHWs, the following roles are recommended:

**Primary roles [Minimum standards]**

- Identify and diagnose sick livestock
- Treat sick animals, record activities and make the necessary follow up of cases
- Refer difficult clinical or surgical cases to the supervising veterinarian or AHA
- Report livestock disease outbreaks (including notifiable diseases) to the government veterinary services or the supervising veterinarian or AHA
- Provide advice to livestock keepers on disease control and prevention, and veterinary public health

These primary roles of the CAHWs are the basis of the Minimum Standards required by all CAHWs in Ethiopia.

**Secondary roles [Optional standards]**

- Advise livestock owners on improved livestock health, production and marketing issues (e.g. ethnoveterinary medicine, livestock marketing)
- Sensitise communities on policy and legislative issues relating to the livestock sector with particular emphasis on handling of veterinary drugs, quarantines and livestock movement and their relevance to disease control

These secondary roles are optional standards that can be incorporated into CAHW systems according to area-specific needs.

c. Selection of community-based animal health workers

The process of community selection of CAHWs requires the community to identify the required characteristics and qualities of a CAHW. These criteria should be agreed in public meetings. An example of selection criteria is presented below.

The candidate should:

- own livestock
- be a member of the community and well known to them
- be keen to be selected and be willing to learn
- livelihood should be based on livestock
- be hard working and self-motivated
- be physically fit to handle livestock
- be willing to travel to areas where the livestock are grazing
- be well behaved and trusted
- have good communication skills
be knowledgeable about traditional livestock management
be willing to devote time to delivery of animal health service to the community members
be willing to be supervised by the community, a veterinarian or AHA, and the delegated agent
some basic academic knowledge will be an advantage

Although it is very important that communities select people they know and trust to be CAHWs, it is also important that the selection should be done in consultation with the veterinarian or AHA who will be responsible for supervising and selling drugs to the CAHWs.

3. Training Community-based Animal Health Workers

Successful CAHW candidates should be trained. At the end of the training and with the necessary supervision they should be able to alleviate some of the major livestock health problems affecting their community.

3.1 Training Methodology

Participatory training techniques (PTT) are recommended as important tools for training CAHWs. To ensure good quality training, the training approach should limit the number of trainees and incorporate a great deal of practical work. It is recommended that one trainer train not more than 15 CAHW trainees during a training course.

As the trainees are already educated in their own way of life and have their own approaches to diagnosis, treatment and prevention of livestock diseases, their knowledge should form an important foundation for the training. The use of PTT should help build upon the existing knowledge and fill in any gaps in information and/or approach. The trainees should be encouraged to share their experiences in handling animal health issues.

It is recommended that the facilitators use a combination of PTT methods, such as:

- Question and answer sessions to assess existing knowledge
- Focused-group discussions and presentations
- Use of visual aids, pictures and live animals
- Role-plays

- Practical lessons and demonstrations, field visits, examination of clinical cases, practising drug administration
- Story telling
- Brainstorming
- Case studies

As some of the trainees may be illiterate or partly literate, trainers should adapt PTT methods to minimize use of written materials.

The training should be conducted in a language, which is well known by all the trainees. When translators are used, careful selection and orientation of translators is required. It is important to have translators who understand the local language and who do not introduce their own perspectives into the communication.

3.2 Trainers of community-based animal health workers

It is recommended that a Veterinarian or AHA conduct training of CAHWs. It is further strongly recommended that the trainer must be having received training in PTT and be accredited as a CAHW trainer by the relevant Regional Bureau of Agriculture. Any Veterinarian or AHA cannot be a CAHW trainer unless he/she has received a PTT for trainers.

3.3 Training course content and duration of training

A detailed guideline on the content of the CAHW training course is provided in Part II. It is recommended that an initial CAHW training course is conducted over a 15-day period.

The training should emphasize the primary roles of the CAHWs. The primary roles are the basis for the Minimum Standards and these standards are compulsory for all CAHWs, regardless of the area where the system is to be established.

As CAHWs are in close contact with livestock keepers, their secondary roles can include provision of advice on a range of livestock-related topics. The training for secondary roles can be regional or even community specific; as such roles do not constitute fundamental skills for the delivery of primary animal health services.
3.4 Training venue and timing

Training of CAHWs should take place close to the communities where the CAHWs will work. This requirement is to ensure that the environment and types of livestock used in the training are relevant to the areas where CAHWs will work.

It is important to plan the training in consultation with the community. The training should take place at a time which is convenient for the community and the trainees.

3.5 Evaluation and certification of community-based animal health workers

During CAHW training, the trainer should conduct continuous assessment of each trainee and address any identified problems or knowledge gaps.

At the end of the training, a final assessment of each trainee should be undertaken by the trainer and a representative of the government veterinary service (e.g. a regional veterinarian). Each trainee should be assessed on his/her level of knowledge and skills related to the various primary roles, including disease diagnosis, choice of medicines, administration and storage of drugs, handling of equipment, completion of disease recording forms, and community relations.

Trainees who pass the assessment shall be awarded a certificate of training, signed by the trainer and by the representative of the government veterinary service (e.g. a regional veterinarian). The certified CAHWs should be given a photo-identification card.

4. Monitoring and refresher training of community-based animal health workers

A CAHW system requires the supervising veterinarian or AHA to be involved in continuous follow-up, monitoring, evaluation and refresher training of CAHWs. Monitoring and evaluation can be based on three main sources of information:

- Activity reports produced by CAHWs and submitted to their supervisor (see Part II, Session 5)
- Interviews with CAHWs to test their knowledge and skills
- Interviews and discussion with community members

The photo-identification card can be withdrawn from CAHWs who are assessed to be under performing.

Monitoring requirements are categorised as 'post-training monitoring' and 'routine monitoring' as described below.

4.1 Post-training monitoring

Post-training monitoring of CAHWs requires a detailed assessment of the performance of all CAHWs three months after training. This assessment should involve a review of CAHW reports, interviews with CAHWs, and community dialogue to gauge community opinions on CAHW performance. Specific issues to investigate during this monitoring include:

- the integration of CAHWs into the overall animal health delivery system
- the problems encountered by CAHWs in the field (this includes technical as well as challenges encountered from the community in terms of paying for the services etc).
- expectations of the community and the strengths and weaknesses of the CAHWs
- technical competence of the CAHWs
- drug supply and financial issues

The results of the post-training monitoring should be presented during a feedback workshop for CAHWs and community representatives. If necessary, refresher training should be organised to address any outstanding technical issues related to CAHW roles and performance. Community representatives and elders should be encouraged to resolve non-technical problems encountered between the CAHWs and the community member.

4.2 Routine monitoring

Routine monitoring of CAHWs is the regular follow-up of CAHW activities by their supervisor and/or government veterinary service. This monitoring requires regular interaction between CAHWs and their supervisors, reports of CAHW activities and inspection of CAHW drugs and equipment. All CAHWs should report to their supervisors at least once a month.

The CAHWs should attend a refresher course at least once a year. Refresher training is intended to address any weaknesses identified during monitoring, and introduce new information or skills to CAHWs as required.
PART II
NATIONAL TRAINING CURRICULUM FOR COMMUNITY-BASED
ANIMAL HEALTH WORKERS IN ETHIOPIA

1. Introduction

1.1 Use of Participative Training Techniques

This section of the Minimum Standards details a training course for CAHWs. When using this training course, it is required that trainers themselves should be trained in Participative Training Techniques (PTT), as described in Part I, section 3.1 and 3.2.

The training should emphasize the animal health problems in the respective communities of CAHWs in particular locations.

1.2 Content of the CAHW training course

The content of the training course is based on the primary and secondary roles of CAHWs as follows:

Primary roles of CAHWs and Minimum Standards

The primary roles of CAHWs are required by all CAHWs regardless of their location or specific ecological zone.

- Identify and diagnose sick livestock
- Treat sick animals, record treatments (the type and dosage of drug used) and make the necessary follow up of the case
- Refer difficult clinical or surgical cases to the supervising veterinarian or AHA
- Report livestock disease outbreaks to the government veterinary services, or the supervising veterinarian or AHA
- Provide advice to livestock keepers on disease control and prevention

These primary roles are the Minimum standards that are required by every CAHW.

Secondary roles of CAHWs and Optional Standards

The secondary roles of CAHWs are not mandatory and can be included in CAHW training course according to area-specific needs. These roles do not constitute fundamental skills for delivery of animal health services.

Advise livestock owners on marketing of livestock and livestock products
Promote ethnoveterinary usage and conservation of biological sources of ethnoveterinary products
Advise communities on public health issues including meat and milk hygiene to avoid zoonotic diseases
Sensitise communities on policy and legislative issues relating to the livestock sector with particular emphasis on handling of veterinary drugs, quarantines and livestock movement and their relevance to disease control

These secondary roles are Optional standards that can be included in CAHW training courses according to area-specific needs.

Table 1. Outline of CAHW training course according to the required Minimum Standards

<table>
<thead>
<tr>
<th>Topic/activity</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Session 1. General introduction: expectations, goals, rules, familiarisation and started</td>
<td>getting 5 hours/1 day</td>
</tr>
<tr>
<td>Session 2. Livestock diseases: diagnosis, prevention and treatment</td>
<td>10 hours/2 days</td>
</tr>
<tr>
<td>Session 3. Use of veterinary drugs and vaccines</td>
<td>10 hours/2 days</td>
</tr>
<tr>
<td>Session 4. Minor surgical procedures and use of veterinary equipment</td>
<td>5 hours/1 day</td>
</tr>
<tr>
<td>Session 5. Disease surveillance, monitoring and record keeping</td>
<td>5 hours/1 day</td>
</tr>
<tr>
<td>Session 6. Financial issues and business management</td>
<td>5 hours/1 day</td>
</tr>
<tr>
<td>Session 7. Advising livestock keepers</td>
<td>5 hours/1 day</td>
</tr>
<tr>
<td>Session 8. Field practice and discussions</td>
<td>15 hours/3 days</td>
</tr>
<tr>
<td>Session 9. Reviews and problem solving</td>
<td>10 hours/2 days</td>
</tr>
<tr>
<td>Session 10. Training assessment and certification/Total time</td>
<td>5 hours/1 day 15 days</td>
</tr>
</tbody>
</table>

Note: time allowed is actual hours and does not include traveling to a farm or market. Hours are given for an overall topic but not for the individual components of that topic. The time spent on each component should be left up to the trainer who can assess the level of skill and adjust the time accordingly.

2. Details of training session objectives and content

Session 1. General introduction to the training programme

The Objectives of the community-based animal health project and the roles of CAHWs should be explained to and discussed with the trainees. The trainees should be given an opportunity to get to know each other, share their experiences, express their expectations and fears and contribute to the
training process. The trainer and the trainees should set rules and code of conduct for the training course.

Session 2: Livestock diseases: diagnosis, prevention and treatment [Minimum standard]

Session 2.1: Animal body, organs, system and function

Objective: At the end of the session the participant will be able to understand basic body systems organs, their location and function.

Understanding location and function of body organs (external and internal) and basic systems will enable CAHWs to identify and appreciate health problems and disorders associated to the specific organ and body system.

Anti-mortum and post-mortum demonstration of the body organs (external and internal) on healthy animal should be carried out to identify each organs and their function. Emphasis should be given to vital organs such as Lung, Heart, Liver, Gall bladder, Stomach, Intestine and Reproductive organs.

Session 2.2: The signs of health and disease in livestock [Minimum standard]

Objective: At the end of the training the trainees should be able to describe a healthy animal and the main clinical signs of disease in sick animals.

There is a need to reinforce existing knowledge on signs of good health and of illness, and to enable the trainees to differentiate between the two states in different species of livestock. The trainees should be able to describe the features of a healthy animal and those of an unhealthy animal, and also able to distinguish between normal and abnormal characteristics of the body organs and systems.

This training session should include the use of the clinical thermometer.

Session 2.3: Causes, transmission and prevention of disease [Minimum standard]

Objective: At the end of the training the trainees should be able to describe common causes of illness in livestock, modes of disease transmission and simple disease prevention measures.

Trainees should understand the causes of disease in livestock such as malnutrition, physical injury, and infection with disease agents and poor management. Various modes of disease transmission can be presented, including direct contact between sick and healthy animals, contact with contaminated items and disease spread via biting flies or snails.

Understanding of the causes and spread of disease can lead to training on the principles of disease prevention and control. It is important to relate the medical understanding of the causes of the disease to the local understanding of the causes of the disease, and to discuss the differences. It is also important to describe microscopic pathogens in simple terms; the term 'microbe' or 'germ' (or the local translation of such terms) may be sufficient to cover non-visible disease agents such as protozoa, bacteria and viruses. Problems such as poor breeding and abortion should be mentioned if livestock owners perceive these to be problem in their area.

During this part of the training it is not necessary to describe specific diseases in detail, but to use diseases as examples to illustrate different causes of disease and types of disease transmission.

Session 2.4: Disease diagnosis [Minimum standard]

Objective: At the end of the training the trainees should be able to clinically diagnose a range of locally important livestock diseases.
The training approach is to assess and reinforce the trainees' existing knowledge of diseases in different livestock species. This knowledge includes clinical signs, seasonal occurrence, mode of transmission and other factors.

As the relative importance of different diseases varies from place to place, and since different communities may keep different livestock species, this part of the training should vary from place to place. The aim is to ensure that all the local problems that can be practically addressed by CAHWs are emphasized and taught. CAHWs should be able to assess cases and decide to intervene directly or seek help from a veterinarian or AHA.

Diseases are categorised according to either the main presenting clinical signs observed in the areas concerned, or the method of prevention/treatment.

### Categorisation according to clinical signs

<table>
<thead>
<tr>
<th>Problems of the skin</th>
<th>Diseases that cause diarrhoea</th>
<th>Eye problems</th>
<th>Diseases that cause coughing and difficult breathing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mange</td>
<td>Non specific diarrhoea</td>
<td>Pink eye</td>
<td>CBPP</td>
</tr>
<tr>
<td>Pox diseases</td>
<td>Neonatal diarrhoea</td>
<td>Eye worms</td>
<td>CCP</td>
</tr>
<tr>
<td>Lumpy skin disease</td>
<td></td>
<td></td>
<td>Pasteurelosis</td>
</tr>
<tr>
<td>Tick infestation</td>
<td></td>
<td></td>
<td>Non-specific coughing</td>
</tr>
<tr>
<td>Fieal and lice infestation</td>
<td></td>
<td></td>
<td>Lungworm</td>
</tr>
<tr>
<td>Ringworm</td>
<td></td>
<td></td>
<td>Tuberculosis</td>
</tr>
<tr>
<td>Streptothricosis</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wounds and abscesses</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Foot rot</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Diseases that cause multiple clinical signs

<table>
<thead>
<tr>
<th>'Sudden' or acute diseases</th>
<th>'Prolonged' or chronic diseases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foot and mouth disease</td>
<td>Foot and mouth disease</td>
</tr>
<tr>
<td>Peste des petits ruminants</td>
<td>Peste des petits ruminants</td>
</tr>
<tr>
<td>Anthrax</td>
<td>Anthrax</td>
</tr>
<tr>
<td>Blackleg</td>
<td>Blackleg</td>
</tr>
<tr>
<td>Tick borne diseases</td>
<td>Tick borne diseases</td>
</tr>
<tr>
<td>Abnormalities of reproduction</td>
<td>Abnormalities of reproduction</td>
</tr>
<tr>
<td>Dystocia</td>
<td>Dystocia</td>
</tr>
<tr>
<td>Retained placenta</td>
<td>Retained placenta</td>
</tr>
</tbody>
</table>

### Categorisation according to treatment or prevention

<table>
<thead>
<tr>
<th>Problems treated or prevented with anthelmintics</th>
<th>Problems treated or prevented with acaricides</th>
<th>Problems treated with antibiotics</th>
<th>Problems treated with antiprotozoals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liver fluke</td>
<td>Tick infestation</td>
<td>Pink eye</td>
<td>Trypanosomosis</td>
</tr>
<tr>
<td>Gastrointestinal worms</td>
<td>Tick-borne diseases</td>
<td>Foot rot</td>
<td>Tick borne diseases</td>
</tr>
<tr>
<td>Lungworm</td>
<td>Mange (only some)</td>
<td>Wounds and abscesses</td>
<td></td>
</tr>
<tr>
<td>Eye worms</td>
<td>Lice and flea infestation</td>
<td>Strepothricosis</td>
<td></td>
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<td></td>
<td></td>
<td>CBPP</td>
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<td></td>
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<td>CCP</td>
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<td></td>
<td></td>
<td>Pasteurelosis</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Non-specific coughing</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Lungworm</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tuberculosis</td>
<td></td>
</tr>
</tbody>
</table>

### Secondary infection problems prevented with antibiotic

<table>
<thead>
<tr>
<th>Problems prevented by vaccination</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rinderpest</td>
</tr>
<tr>
<td>Blackleg</td>
</tr>
<tr>
<td>Anthrax</td>
</tr>
<tr>
<td>Contagious Bovine Pleuropneumonia</td>
</tr>
<tr>
<td>Contagious Caprine Pleuropneumonia</td>
</tr>
<tr>
<td>Peste des petits ruminants</td>
</tr>
<tr>
<td>Lumpy skin disease</td>
</tr>
<tr>
<td>Pox diseases</td>
</tr>
</tbody>
</table>

The training should include the principles of clinical disease diagnosis, including the importance of history of the case, observation of the environment and clinical examination of sick animals.

At this stage of the training, drugs or vaccines used to treat or prevent specific diseases can be mentioned but not discussed in detail. Detailed use of drugs and vaccines is covered in Session 3 (see later).
Practical examination of sick animals by all CAHW trainees is a crucial component of this training.

Session 2.5: Recognition and reporting of notifiable diseases [Minimum standard]

Objective: At the end of the training the trainees should be able to clinically diagnose notifiable diseases and know what action to take when notifiable diseases are suspected.

All CAHWs should be able to distinguish between notifiable and non-notifiable diseases, as far as clinical diagnosis allow. The trainees should obtain basic knowledge on how to recognize or suspect the notifiable diseases relevant to the area they work in, and as required of all livestock owners by the draft Animal Diseases Act, report such outbreaks or suspect cases to their supervisor or government veterinary service.

Sample/specimen collection [Optional standard]

This is an optional training session and can be used to complement topics 2.3 and 2.4.

Objective: At the end of the training the trainees should be able to collect and submit appropriate samples from sick animals for laboratory examination

Trainees should be able to collect and submit appropriate samples from sick animals, and provide all the necessary information (type of sample, animal species, age, owner, location, clinical signs and status of disease in the herd or flock) to the veterinarian or AHA.

It is not recommended that CAHWs collect samples from suspect cases of zoonotic diseases.

The specific samples to be collected will depend on local disease priorities, the proximity of the clinic or laboratory that will handle the samples and government policy on disease control.

The incentives paid to CAHWs for sampling should be agreed in advance and in accordance with government policy. To minimise operational costs of sampling, the samples should be collected from animals that are affected with the disease in question (outbreak) or upon the request of an investigating authority.

Practical sessions for all CAHWs are a crucial component of this training.

Session 3: Use of veterinary drugs and vaccines [Minimum standard]

Session 3.1: General principles of veterinary treatments and the characteristics of good quality veterinary drugs [Minimum standard]

Objective: At the end of the training the trainees should be able to explain the basic principles of treatment with modern veterinary drugs and describe the characteristics of good quality veterinary drugs.

The specific topics to be covered in the session include:

The principles of drug treatment and the importance of correct diagnosis; the limitations of drug treatment
- The message that ‘animal drugs are for animals and human drugs are for humans’
- Safe storage of veterinary drugs
- The dangers of using poor quality drugs, under dosage and drug misuse; the principles of drug resistance
- Identification of good quality drugs according to packaging, method of storage, labelling, expiry date and appearance of the drug (e.g. colour, viscosity, visible contamination)
- Source of good quality drugs and sources of poor quality drugs; action that CAHWs should take if poor quality drugs are observed in markets, shops or other outlets
- The concept of drug concentration

This session should include examination of good quality and poor quality veterinary drugs by all CAHW trainees.
Session 3.2: Administration of veterinary drugs [Minimum standard]

Objective: At the end of the training the trainees should be able to demonstrate the correct use of selected oral, topical and parenterally-administered veterinary drugs.

The specific topics to be covered in the session include:

- Routes of drug administration: oral, topical and parenteral administration
- Calculation of drug dosage according to the bodyweight of different livestock species, and ages and types of animal within a species
- The concept of withdrawal periods and the need to advise livestock keepers on milk and meat withdrawal periods

This session should include practical sessions for all CAHW trainees on the estimation of livestock bodyweights and calculation of drug dosages.

Session 3.3: Treatment of locally important animal health problems [Minimum standard]

Objective: At the end of the training the trainees should be able to correctly use veterinary drugs to treat a range of locally important livestock diseases.

This session covers the veterinary drugs required to treat the livestock diseases discussed in Session 2.3. The training should cover each of these diseases and describe the use of drugs required to treat the diseases. The choice of drugs will be depend on the specific products that are available in the location.

The training will cover drugs that are administered orally, topically and parenterally.

For drugs that are administered parenterally, particular attention should be paid to the handling of needles and syringes, correct and aseptic withdrawal of drugs from bottles, the need to clean and sterilize needles and syringes, and the correct sites of injection. For drugs that require reconstitution, emphasis on correct procedures and use of sterile water or other diluents will be required.

For acaricides, the training will depend on the specific acaricides that are recommended for use in the location. Training should cover the correct dilution of acaricide and safety measures such as the use of protective clothing and proper disposal of unused drug.

This session should include practical training, handling of different drugs and equipment, and practice sessions for the administration of drugs. All CAHWs should have the opportunity to handle drugs and equipment, and practice correct drug administration techniques under the supervision of the trainer.

Session 3.4: Vaccination and vaccine handling [Minimum standard]

Objective: At the end of the training the trainees should be able to explain the basic principles of vaccination and demonstrate correct vaccination of livestock for locally-important diseases.

The first stage of this training should include explanation of the protective function of vaccines, and that vaccines are disease-specific. The correct age to vaccinate young animals should also be well explained.

Emphasis should be given to vaccines that are in common use in the area of operation. However, all trainees should learn about the proper handling and storage of vaccines. This includes reconstitution of vaccines, dosages, aseptic withdrawal, route of administration and prompt use of reconstituted vaccine. Special procedures associated with vaccination, such as ear notching of animals vaccinated against rinderpest, should also be taught.

Examples of such diseases that CAHW can vaccinate against include:

- Pasteurellosis
- Foot and mouth disease
- Contagious caprine pleuropneumonia
- Contagious bovine pleuropneumonia
- Blackquarter
- Anthrax
- Lumpy skin disease
- Sheep pox
Session 4 Minor surgical procedures and use of veterinary equipment [Minimum standard]

Objective: At the end of the training the trainees will be able to demonstrate minor surgical and first aid procedures on livestock.

Training should cover correct restraint of different livestock species and the following basic procedures:
- Closed (bloodless) castration
- Wound treatment and dressing
- Lancing of abscesses
- Management of simple fractures and dislocation
- Management of haemorrhage

The CAHW trainees are required to know how to handle and maintain specified items of veterinary equipment and use them appropriately. Aseptic techniques, sterilization of equipment and simple repair should be covered in the training. The list of veterinary equipment to be used by CAHWS is as follows:
- Syringes and needles (also covered in Session 3.3)
- Drenching and balling guns (also covered in Session 3.3)
- Vaccination syringes and needles (also covered in Session 3.4)
- Clinical thermometer (also covered in Session 2.1)
- Burdizzo castrator
- Spray pumps (also covered in Session 3.4)
- Thumb forceps

Session 5 Disease surveillance, monitoring and recording [Minimum standard]

Objective: At the end of the training the trainees should be able to demonstrate correct recording of disease information and use of veterinary drugs and vaccines.

Information recorded by CAHWS has two main functions:
- It is a record of disease events that can contribute to the official disease surveillance system.
- It is a record of the location, timing and cost of treatments or vaccination that can be used to access the accessibility and affordability of the delivery system during monitoring and evaluation.

Information recorded by CAHWS is collected by the supervising veterinarian or AHA. A standardised recording format should be developed that is relevant to the area in question and taking into account the literacy level of the CAHWS. The recording format should be as much as possible pictorial and include the following minimum information:
- Location and name of livestock keeper
- Signs of disease
- Disease suspected or diagnosed
- Source of the drug or vaccine used (to facilitate follow-up if a problem arises)
- Species, dosage and number of animals treated
- Cost of treatment or vaccination

During the training the trainees should learn how to fill out the recording format and know the procedure for submitting the completed format to their supervisor.

Session 6 Financial issues and business management [Minimum standard]

Objective: At the end of the training the trainees will be able to describe the importance of appropriate pricing and financial incentives in CAHW systems.
This training session covers financial issues related to the sustainability of CAHW systems. A veterinary supervised, community-based programme should be based on sound business management that includes:

- Operation of CAHWs in the private sector; CAHWs are not government or NGO employees
- Charging the livestock owners for the services rendered by the CAHWs
- Provision of a defined financial incentive for CAHWs

The training should focus on appropriate pricing of CAHW services to ensure a fair price to the livestock keeper while also generating sufficient financial incentives for CAHWs. The exact pricing system will vary from area to area.

The fees charged on treatments should be made in a way that the livestock owners will see an obvious benefit and refrain from purchasing drugs from the illicit traders (who may be sources of drugs of doubtful quality).

Although the CAHWs will be operating in a liberalized market, it is prudent that they are given guidelines or recommended retail prices for costing their drugs and services based on procurement costs and technical services. For smooth operations, all the players in the provision of animal health services including NGOs, veterinarians and AHAAs in private practice or in the civil service, and the drug industry in a given region/district should have good knowledge of fixing costs.

Trainees should be taught about basic stock management, replenishment of stock using income from drug sales and provision of services, and the problems of credit to livestock keepers.

**Session 7: Advising livestock keepers**

It is recognized that CAHWs interact with community members on a regular basis and they may be the only accessible source of information on issues relating to animal health, livestock production, public policy and legislation, and veterinary public health. This interaction is an opportunity for CAHWs to pass on important messages to the community.

Training of CAHWs should include basic communication techniques plus specific advisory message for livestock keepers.

Information that is required by every CAHW trainee is detailed in Session 7.1. Information that is optional and which may vary between areas is detailed in Session 7.2.

**Session 7.1: Advice on disease prevention and control, and veterinary public health [Minimum standard]**

**Objective:** At the end of the training the trainees will be able to provide clear advice to livestock keepers on disease prevention and control, care of neonates and veterinary public health issues.

The main topics to be covered in the training are as follows:

**Disease prevention and control**

- Role of proper nutrition and housing for ensuring healthy livestock
- Preventive use of vaccines, anthelmintics and acaricides
- Animal movement and the risk of disease spread
- Isolation of sick livestock
- The need for mobilization of livestock owners during vaccination campaigns and field days
- The need for reporting of disease outbreaks and reporting notifiable diseases (Animal Diseases Act)

**Care of neonates**

- Care of neonates
- Care and management of young stock

**Veterinary public health**

- Hygiene measures when dealing with livestock
- Zoonotic diseases: milk-borne zoonoses; disposal of anthrax carcases; rabies

**Session 7.2: Advice on other livestock-related topics [Optional standard]**

**Objective:** At the end of the training the trainees will be able to provide livestock-related advice to livestock keepers according to area-specific requirements.
This session is optional and should only be included in CAHW training when all other training objectives have been achieved. The topics to be included in this session will be area-specific, and should be of interest to both the animal health service providers (private and government veterinarians, AHAs and CAHWs) and livestock keepers. Examples of possible topics are detailed below.

Ethnoveterinary medicine
During interaction with community, CAHWs can obtain information on ethnoveterinary knowledge and practices for possible transfer to livestock keepers. Specific ethnoveterinary knowledge and practice should only be promoted after an assessment by a veterinarian. Similarly, harmful ethnoveterinary practices should also be discouraged after an assessment by a veterinarian.

Marketing of livestock and livestock products
The CAHW should be able to provide information on:
- Pricing of livestock and livestock products
- Proper branding of livestock to maintain high quality of hides and skins (cf. cultural branding)

Other topics
To provide information on relevant policy and legislation related to the livestock health and production.

Session 8 Field practical and discussion
Objective: By the end of the session the trainee will be able to describe diseases, diagnose, causes, transmission and treatment (identify appropriate medicine, correct dose rate, route of administration and administer the medicine).

Beyond its advantage to attain the above objective, field practicals, since it is carried out among the community and under the supervision of the trainers, will enhance the confidence of both the trainee and the livestock herders on the skills and knowledge acquired by the trainee.

Thus, the trainee should be taken to a near by cattle camp or a grazing area and let them to handle one case each and practice:

- History taking
- Disease description and diagnosis
- Describe cause, transmission and prevention of diseases
- Treatment (this should include: to be able to identify the appropriate medicine, dosage and administration).

This exercise should not take more than half a day and thus the livestock owners should be informed well in advance and the activity should start as early as possible. After the field practical the trainees should be assembled back to the class and each of the participants recite their experiences and problems encountered to the rest of the group, and at the same time, the other participants will be given a chance to ask questions and correct errors that may have occurred during the field practical. This exercise will provide an opportunity for the participants to learn from one another and also develop confidence and sense of computation among each other.

Session 9 Review and problem solving
Objective: At the end of this session the trainees will have reviewed and recap all the theoretical and practical lessons covered in the sessions covered above.

This session is meant to consolidate skills and knowledge learnt, and to build confidence among the participants. The trainer should facilitate each of the participants to review specific skills and knowledge he/she has learnt to class, the rest of the group should be encouraged to ask questions, make a comment and correct mistakes. This process will provide an opportunity for the participants to learn from each other, and also will encourage them to consult each other at the latter stage when they encounter a problem while operating in the field.

Session 10 Trainee assessment and certification
The training must be assessed to determine whether the course objectives have been met and how much the participants have learnt. If the training is not assessed then the trainers cannot be sure that the participants have learnt the skills, knowledge, behaviour and attitudes to a sufficient standard necessary to do the work being asked of them.
How to assess the training

When embarking on an assessment of CAHW training, two key questions can be asked:

- What do I want to know about the training from the assessment?
- How will the information from the assessment feed into the course, and help me to improve the training?

It is important that the assessment of the training is carried out in a sensitive and participative manner so that the participants do not feel that they are being examined.

The training should be assessed with reference to the CAHW course and session objectives. The trainer should continuously monitor the progress of trainees during the course by asking questions, and assessing how well each individual answers questions, carries out exercises and tasks, and performs skills. For this reason it is important to ensure that each participant takes part in the training sessions. Avoid allowing a few introvert people to answer all the questions, while the other participants remain quiet. At the end of the course, the trainer can organize a brief assessment where participants are asked questions about key learning points such as signs of important diseases, dosage rates for medicines and which medicine to use for which disease. If a practical day is organized towards the end of the course (where participants practice treating animals using all the skills and knowledge they have learnt on the course), then the trainer can assess skill levels by observation and asking questions each individual CAHW.

Certification and Handing over of CAHWs to their respective community.

CAHWs often ask for a certificate after completing the course. The advantage of issuing certificates is that it provides a formal record of the skills and knowledge the CAHWs have acquired on the course. This can be reassuring for the community, government and the CAHWs themselves that they are qualified to do the work for which they have been selected. Certificates can provide CAHWs with credibility and standing in the community. For certificates to have value, the trainer must make sure that each CAHW reaches the required standard and those who are not given a certificate. One danger with certificates is that some people may agree to become CAHWs for the sole purpose of gaining a qualification, so that they can then move on to another job. However, these situations can be avoided if CAHWs are carefully selected in the first place.

It is crucial that CAHWs certification and handing over to their respective community carried out in an official traditional closing ceremony. Community representatives/Elders from where each of the CAHWs came from, local government veterinary office representatives, private veterinarians, representatives of other stakeholders (NGOs, CBOs etc) should be invited to the closing ceremony. This would enable to:

- Enhance the recognition and acceptance of the CAHW by the community.
- Facilitate establishment of linkages between CAHWs and Government veterinary department, private veterinarian and other stakeholders

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**Resource materials**


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**Community-based Animal Healthcare: The How-To-Do-It Videos**

These 'How-To-Do-It' videos describe the key issues to consider when setting up a community-based animal health system. The videos are targeted at veterinarians who work for government, NGOs or the private sector who want to establish a community-based project, or improve an existing project.

- **Video 1:** Community Participation, Sustainability and The Role of Vets.
- **Video 2:** Participatory Approaches to Adult Learning, Project Monitoring and Evaluation, and How to Influence Policy.