

The provision of animal health care to smallholders in Africa: an analytical approach

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Summary

Many of the problems associated with the delivery of quality veterinary services to smallholders in Africa are attributed to the complexity of the provision of animal health care (AHC) in sub-Saharan Africa. In this region, a holistic and analytical approach is needed to determine area-specific requirements for sustainable, and thus quality, AHC. This study examines three components of the animal health care system in sub-Saharan Africa, namely, the structure, the process and the outcomes. It focuses particularly on the factors that contribute to the quality of the structure and the process. For this purpose, two measures of quality are used, i.e. availability (in relation to the structure) and acceptability (in relation to the process). The authors identify factors that affect the availability and acceptability of AHC and suggest ways in which they, and hence the quality of AHC provided to smallholders in Africa, can be improved.

Keywords

Africa – Basic animal health care – Smallholder – Veterinary Service.

Introduction

Animal health is important for all aspects of animal production. For many years, the provision of animal health care (AHC) in sub-Saharan Africa has been the responsibility of the State Veterinary Services. Private veterinary services were non-existent or, if present, located in more lucrative urban areas. The increasing demand for AHC and the economic crisis of the 1980s have had a significant impact on the public sector provision of various social services, including AHC. Budgetary allocations for veterinary departments decreased gradually until State Veterinary Services became almost dysfunctional. Through structural adjustment programmes, various attempts have been made to revive the provision of veterinary services by rationalising the tasks of the public Veterinary Service,

promoting the establishment of a private veterinary sector and involving paraprofessionals in AHC.

A large amount of literature is available describing the various successes and failures of this restructuring exercise. The aim of this study was to critically analyse the literature on the provision of animal and human health care and to obtain a picture of the factors that may determine the success and failure of AHC schemes. It was assumed that this approach would provide a better picture of the spatial and temporal variations in the supply and demand of AHC and the forces that distort the market for the delivery of AHC. Throughout the analysis, suggestions are made on how the provision of AHC can be improved.

The components of an animal health care system

In an analogy with human health care (4, 11) and in line with propositions made by Mlangwa and Kisauzi (22), an AHC system can be divided into three major components: structure, process and outcome (Fig. 1). The actions taken within these components are intended to improve the health and well-being of animals and humans (23). For the purposes of this study these three concepts relate specifically to the following:

- the structure: the environment that determines the demand for and supply of services
- the process: the interaction between the AHC provider and the person or organisation requesting the care (e.g. smallholders in Africa)
- the outcome: the consequence of AHC and its effect on the health of animals and humans.

Structure and processes can either directly or indirectly influence the outcome of an intervention.

What is quality animal health care?

A prerequisite for the development or improvement of an AHC system is to have a clear understanding of the factors that contribute to the quality of such a system. In veterinary medicine, the quality of AHC is usually evaluated by measuring the extent to which interventions result in healthy animals and humans. Such an 'outcome-based' evaluation of the performance gives little information on the quality of the two other components (i.e. structure and process) that contribute to that specific (often difficult to measure) outcome and thus to the quality of AHC. Two attributes can be used to assess the quality of each of these two components (4, 11). They are availability and acceptability. Availability of AHC is the extent to which the AHC system provides goods and services that meet the needs of livestock owners. Acceptability of AHC comprises two aspects: ability to pay (affordability) and willingness to pay (30). Ability to pay is a straightforward economic question; willingness to pay reflects the livestock keeper attitude to, or perception of, AHC and the related opportunity costs.

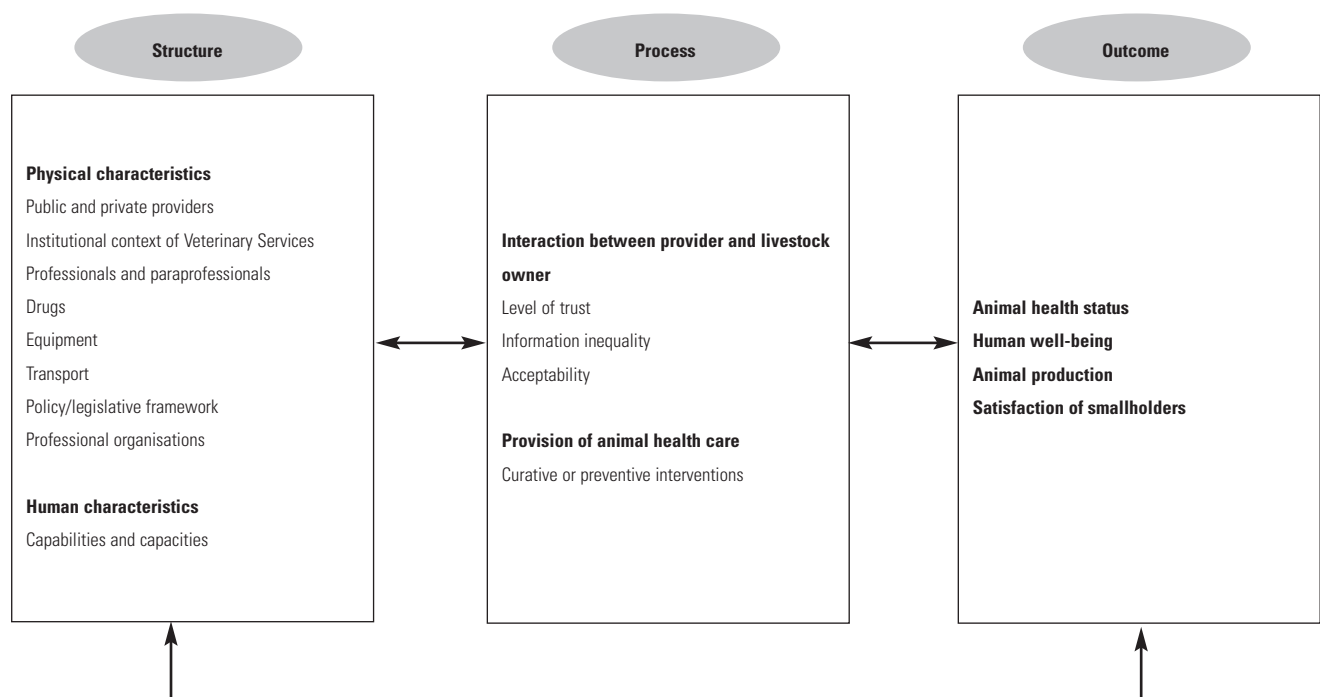


Fig. 1
Key areas affecting the structure, process and outcome of animal health care systems

Current characteristics of the structure – the availability of animal health care

Availability of AHC is determined by the demand for, and supply of, services.

What is the specific demand for animal health care?

An important factor contributing to the quality of AHC is its availability. Availability implies that ‘area-specific’ demands for AHC have been identified and have been taken into account (Fig. 2). Demand for AHC will, of course, be affected by the specific functions of livestock within the production systems of the various countries in sub-Saharan Africa. As the livestock production sector is part of the agricultural sector, and as such is influenced by macro-economics and evolves within a variety of ecological and socio-economic contexts and constraints, these functions vary considerably. However, even though demand for AHC will be affected by these variations, some general patterns in demand can be identified, as described below.

Factors affecting demand for animal health care

Objectives of the livestock production system

First and foremost, the objectives of the livestock production system will to a large extent determine the type and the quantity of AHC. Smallholder livestock production systems can be classified according to their degree of commercialisation or according to the extent to which livestock and crops are integrated, as outlined below:

- the degree of commercialisation or market economy integration: this varies substantially and is determined largely by the geographical location of the smallholder (26). Depending on the degree of commercialisation a distinction can be made between subsistence-orientated, semi-subsistence and commercial producers
- the degree to which livestock and crops are integrated: depending on the degree of integration, smallholder livestock production systems can be broadly divided into the following categories:
 - a) grazing production systems or pastoralism (a production system entirely based on livestock production with little or no integration with crops)
 - b) mixed sedentary production systems in which livestock and crops are integrated on the same farm
 - c) urban production systems (a range of landless livestock production systems from subsistence farming to commercial enterprises).

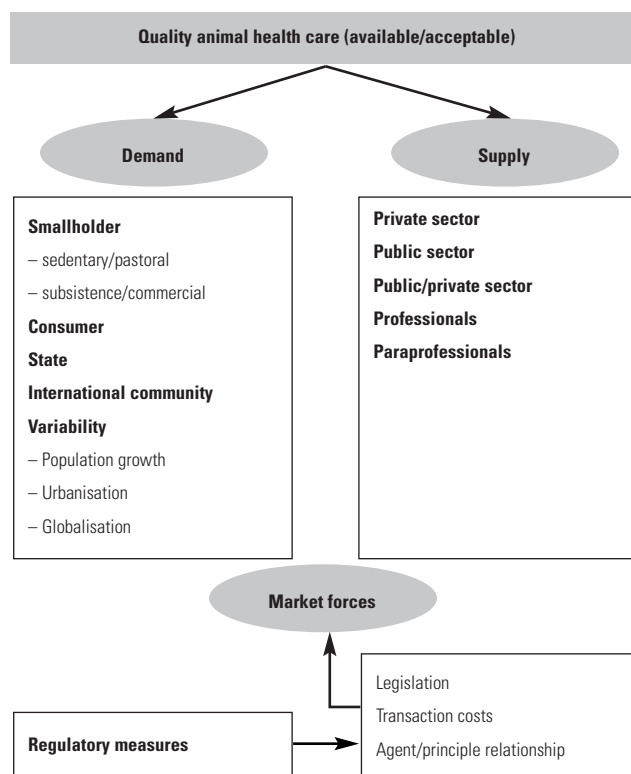


Fig. 2 Schematic representation of the various factors affecting the quality of animal health care provision to smallholders in Africa

The degree of commercialisation and the integration of livestock and crops (26) are likely to have a significant impact on the demand for AHC. An assessment of the economics of livestock keeping is thus likely to contribute to a better understanding of the attitude of smallholders towards livestock production and investments into livestock production, such as AHC.

Types of disease

The types of diseases that an AHC system has to manage, and the epidemiological characteristics of those diseases, will also determine the type of AHC that is required. Of particular importance in this respect are the differences in the type of livestock diseases and level of disease challenge (and hence demand for AHC) found in sedentary and mobile livestock production systems. They are a consequence of livestock production practices, but also of the characteristics of the agro-ecological zone in which both systems occur (29). In urban areas also, animal health problems and the demand for AHC have their own particularities.

Trends in the smallholder livestock sub-sector

Finally, demand is not a static entity and is subject to considerable change brought about by factors determining trends in the smallholder livestock sub-sector. Such factors include population growth, urbanisation and globalisation.

Who provides animal health care?

The provision of AHC is an issue that has been much debated. The discussions usually centred on the roles of the public/private sector and of professionals/paraprofessionals (Fig. 2). At the same time, the liberalisation of the veterinary drug market has had important repercussions for the provision of veterinary medicines.

Private or public sector

Many sub-Saharan African countries have been experiencing severe economic difficulties for several decades. The resulting fiscal and budgetary crisis has significantly reduced the financial allocations for the delivery of AHC by the State to below an acceptable level. This has led to a decline in the quantity and quality of services, which, in turn, has prompted the State, with the support of various donor organisations, to strengthen AHC by privatising and decentralising part of its provision (8, 9, 17, 37).

The economic theory behind privatisation was based on the assumption that the private sector can outperform the State in certain circumstances (17). However, this theory only applies under perfect market conditions, which, more often than not, do not exist. Indeed, a range of forces distorts the market for the delivery of AHC in developing countries (15). The New Institutional Economic theory takes those distorting forces into account and contends that, although in most service areas the private sector outperforms the State in virtually all areas of business, State interventions are warranted in the case of market failures (19). Most countries are currently dividing the responsibility for AHC between the public and private sectors. Public sector roles usually include the formulation of policy, licensing and certification, epidemiology and surveillance of livestock diseases and the control of epizootic diseases. Private sector roles include the provision of clinical services, the production of vaccines and veterinary drugs, the supply and distribution of veterinary drugs and diagnostic support.

Professionals or paraprofessionals

The veterinary profession consists of a whole range of service providers with varying technical qualifications. Much of the discussion on the provision of AHC to smallholders in Africa revolves around the specific roles, responsibilities and required qualifications of these different providers. The term paraprofessional is used for people who lack university level qualifications. They usually lack autonomy, as their work is supposed to be controlled by members of the profession, if one is present (23).

Veterinary drugs

Nearly all veterinary-related activities are highly dependent on the availability of drug supplies. The import and distribution of veterinary drugs has for a long time been the responsibility, indeed, the monopoly, of veterinary departments. At the moment, the market for the importation, distribution and sales of veterinary drugs has been liberalised substantially. This has led to increased availability of veterinary inputs and has avoided the problems associated with Government monopolies and revolving funds. Nevertheless, the underlying motive for free market enterprise is profit. This sometimes favours the sales of veterinary inputs with high turnovers, such as antibiotics, trypanocides or anthelmintics, whereas other essential but slow-moving drugs, such as those drugs required by veterinary emergencies, may be less available (16, 35).

Current characteristics of the process – the acceptability of animal health care

Another key issue to consider when assessing the quality of the process of an AHC system is acceptability. Acceptability is determined largely by the attitude of the smallholder towards the AHC provider and his evaluation of the cost of an intervention.

The smallholder/animal health care provider relationship and adverse selection

Many of the problems encountered in the provision of AHC are due to the particularities of the relationship between the livestock owner (e.g. the smallholder) and the AHC provider, generally referred to as the 'agent-principle relationship' (Fig. 2). An agent-principle relationship occurs when an individual, the principle (e.g. the smallholder), delegates authority to another individual, the agent (e.g. the AHC provider), to take action(s) on his or her behalf (12). Under ideal circumstances, the relationship between the smallholder and the AHC provider should be based on mutual understanding and trust. Under such conditions, the market for the provision of AHC would meet the conditions of neoclassical economics. In practice, however, the relationship is often subject to incomplete information or information asymmetries. The resulting uncertainty usually affects the willingness of smallholders to pay for such services (i.e. accept such services) and, thus, will reduce the demand for AHC. Information asymmetry often results in adverse selection. Adverse selection occurs when providers of quality AHC cannot be distinguished from providers of

inferior quality or when quality veterinary drugs cannot be distinguished from substandard or counterfeit drugs. Because of these uncertainties the livestock owner is unlikely to pay extra for services or goods that are of good quality. Under such conditions, the bad performers can drive out the not-so-bad ('The market for lemons' [1]). The primary losers are not the animal owners but the AHC providers that offer quality services. As animal owners cannot know that the service being offered is superior to that offered by other AHC providers, they are reluctant to pay a higher price and, therefore, the good providers receive less than their services are worth.

Transaction costs

The process of the provision of AHC is also affected by transaction costs (Fig. 2). Transaction costs are the costs (time, labour, money, etc.) in the exchange of goods or services that do not benefit either of the parties to the transaction (19). They are associated with making the transaction, both *ex ante* (e.g. seeking out a suitable AHC provider or travelling in an area to meet the smallholder) and *ex post* (e.g. monitoring the AHC provider) and make the demand and supply of animal health services more difficult and/or less attractive. The transaction costs related to the provision of AHC by government in sub-Saharan Africa have increased significantly and have made the private sector an attractive alternative for the provision of AHC. In some African countries, for example, personnel costs constituted the major part of the veterinary budget, leaving insufficient funds for field activities. However, not all transaction costs are linked to the provision of AHC by the public sector. Many transaction costs are inherent in the service itself. They can be due to the large distance between the AHC provider and the rural smallholder or pastoralist, the often high costs of transport, the difficulties in obtaining quality veterinary drugs, inappropriate use of drugs and the impact of the socio-cultural environment on the decision of the smallholder.

Possible ways to improve the quality of the structure and the process of animal health care

Defining demand

A mechanism should be put in place that makes a regular assessment of the type and quantity of AHC that is required. This would ensure that the AHC system is adapted to local and international requirements and, at the same time, has the necessary flexibility to respond to changing demands. For such an assessment to take place,

the necessary international epidemiological and socio-economic information must be available (28). Traditionally, such information has been obtained through passive or active surveillance, observational studies, experimental studies and models (13, 26). Past experiences have shown that such formal data-collection methods are usually expensive and sometimes fail to produce the required information. Alternative methods of data collection or participatory appraisal have been proposed. These methods include rapid rural appraisal and participatory rural appraisal (5, 7, 27) and they have been used to determine the prevalence of animal diseases, understand epidemiology, determine their impact on agricultural development and assess AHC requirements (6, 20, 31). The participatory appraisal techniques make it possible to interact with local people (e.g. smallholders), to jointly define and analyse their problems, to assess the quality of the current structure and process of the AHC system and to identify steps to improve the quality (33).

Improving the availability of animal health care services and veterinary drugs

Availability of veterinarians

Veterinarians in Africa are usually hesitant to become private. Suggested reasons for the low number of private practices and, hence low availability, include the expected low demand from livestock owners for specialised services and the high start-up and operating costs (34, 36). Furthermore, the availability of a veterinarian is often affected by the physical distance between him/her and the smallholder (40). The physical distance is the major factor impeding the delivery of veterinary services by a veterinarian in rural and pastoral communities. However, simple solutions, such as offering professional AHC services on market days, at the time of dipping or along pre-set (clinical) routes that veterinarians travel at regular intervals, reduce the cost of transport and exploit economies of scale and have proved to increase the availability of veterinarians and thus the quality of AHC (14, 19, 36). Nevertheless, it remains to be seen whether or not the provision of specialised services in remote areas by (private) veterinarians will become profitable under the current livestock production systems.

Basic animal health care

Notwithstanding possible ways of increasing the availability of veterinarians, the majority of the AHC that is requested by the smallholder in a subsistence or semi-subsistence mixed livestock production or pastoral system is being provided successfully by paraprofessionals (10). This type of care is called basic animal health care (BAHC). The paraprofessionals who provide BAHC are

usually the first point of contact for smallholders with sick animals, and the services they provide are continuous and comprehensive (i.e. a range of services that is broad enough to meet the common needs of all livestock owners) (32). In various smallholder livestock production systems of sub-Saharan Africa, BAHC is only one of several AHC systems. Basic Animal Health Care is extremely important and contributes substantially to the quality of AHC by increasing its availability. The role of the BAHC providers can be twofold. Firstly, they have an important veterinary function and, secondly, they may also function as a gatekeeper by referring special cases or uncommon problems to those with more specialised or higher levels of competence, such as a veterinarian. This referral function rationalises the provision of AHC by veterinarians, who are expensive and not always readily available. Unfortunately, referral networks for the provision of specialised AHC do not yet function effectively in Africa. In view of the increasing numbers of private veterinarians and paraprofessionals, it is likely that referral networks will, in future, contribute greatly to the improved availability of AHC to smallholders at an acceptable cost.

Despite the successful outcome of numerous BAHC schemes (21, 33), their sustainability is often questionable. This is due partly to the lack of objectively verifiable outcomes, especially in areas that are difficult to access. Furthermore, many of the BAHC schemes were, and still are, managed by non-governmental organisations. As a result, Government Veterinary Services are usually not actively involved in their implementation and so have little control and feel little ownership (25). To improve sustainability, BAHC schemes could be made an integral part of the structure of a national AHC system (Fig. 1). Achieving such integration while adapting BAHC to area-specific needs could become a government responsibility.

Unfortunately, there is often no legal framework in the structure of an AHC system setting out the relationships between the paraprofessional, the veterinarian and the public Veterinary Service. Much of the confusion surrounding the role of paraprofessionals in AHC systems has arisen because their role within the structure has not been clearly defined and because there is no clear agreement on minimal training requirements. They are, therefore, often perceived as a threat to the livelihood of veterinarians. Ultimately, the role of paraprofessionals, and their responsibilities and minimal training requirements, must be recognised by law and incorporated into the legislative framework governing the provision of AHC.

Contracting-out of services

Suggested ways of improving the availability of the services provided by the public sector include competitive contracting with the private sector and sanitary mandates.

Sanitary mandates were used in Central and West African countries during the Pan African Rinderpest Campaign as a means of encouraging private sector involvement in AHC delivery and improving accessibility of services to smallholders. However, contracting out requires effective government structures to manage the process. Furthermore, contracting out does not always result in improved quality of service. Sometimes contractors are able to deliver services at a lower cost, but the quality of the service is compromised. Such situations can be avoided through good contract design.

Regulating drug sales

Despite the obvious advantages of liberalising the veterinary drug market, the sale of certain drugs (controlled drugs) is best left in the hands of professionals. These are drugs where:

- a) improper use could create drug resistance (an externality issue)
- b) misuse is dangerous
- c) a cold chain needs to be maintained
- d) there is a risk of confusing symptoms of mild and serious infections and the advice of those competent to tell the difference is, therefore, essential (18).

However, experiences have shown that, under certain conditions, even controlled drugs can be distributed and administered efficiently by paraprofessionals. A good example is the ongoing East Coast fever (ECF) vaccination scheme that uses heat-sensitive local parasite strains. Private paraprofessionals are entirely responsible for the maintenance of a cold chain and for the distribution and administration of the vaccine. The success of this scheme is attributed to the high level of training given to the paraprofessionals involved. Furthermore, this type of vaccination has a verifiable outcome (i.e. vaccinated animals survive ECF outbreaks), which increases the incentive for the vaccine provider to ensure that the vaccine is of optimal quality.

The remainder of veterinary drugs (uncontrolled drugs) could be made widely available and subject to less stringent controls. Uncontrolled drugs can be sold in rural shops or by paraprofessionals. Allowing shopkeepers to sell non-controlled veterinary drugs has significant advantages as it is a quick way of distributing drugs over a wide area, thus increasing availability. However, sales at local shops break the link with professional advice at the moment of the sale. Hence, advice on appropriate drug use may be missing and the incentive to sell quality drugs is lower. Finally, shops are difficult to control, especially by a weak State, and may lead to the creation of monopolies. Liberalisation of drug sales is thus not a straightforward matter and requires a careful analysis of the advantages and disadvantages and an appropriate regulatory mechanism to

guide its implementation. The role of professionals and paraprofessionals in extension/education with relation to drug use should be fully acknowledged.

The availability of veterinary drugs to smallholders would be greatly improved by research into new forms of existing drugs. In recent years, there has been a renewed interest in the part that traditional veterinary practices can play in animal disease control (3). Nevertheless, despite the increasing interest in, and recognition of, the importance of ethnoveterinary medicine and alternative approaches to disease control, the incorporation of these approaches into animal disease control programmes remains limited.

Ensuring appropriate use of veterinary drugs

Veterinary drugs or chemicals will only be effective when they are applied in accordance with clinical needs. In many developing countries, the volume of sales of a particular drug often exceeds the incidence of the disease which the drug treats. This can be the result of the lack of a diagnosis, the absence of information on appropriate drug use or the limited and sometimes inappropriate range of veterinary drugs available. In eastern Zambia, for example, the control of tsetse, in the absence of diagnostic tools, did not result in a reduction in the application rate of trypanocidal drugs (38).

A key feature of a control strategy of any animal disease is a rapid, simple and accurate diagnostic tool. Usually, however, accurate diagnosis requires sophisticated equipment that is not readily available. Research could therefore focus on the development of rapid, simple, inexpensive and reliable tests that can be performed on the farm or in a field veterinary laboratory. An excellent example of such a test is the recently developed rapid chromatographic strip-test for the detection of rinderpest antigen (39).

Improving the acceptability of animal health care services and veterinary drugs

Acceptability of service provider

Because of the information asymmetry, the smallholder often has problems assessing the appropriateness of an AHC intervention. The appropriateness of an intervention is affected by the capability or capacity of the AHC provider. In principle, official qualifications obtained through education and training should offer a guarantee of the appropriateness of the services provided. Unfortunately, there is no systematic policy for training veterinary personnel in sub-Saharan Africa.

Technical capacity does not guarantee that the AHC provider puts the necessary effort into the intervention. It

is important, therefore, that the smallholder can quantify these efforts, which can be observable or unobservable (36). The availability of, for example, instruments, diagnostic material and veterinary drugs can be observed by the livestock producer and be used to appreciate the level of effort (18). The 'clinical behaviour' of the AHC provider can also be used by the livestock owner to quantify efforts. The acceptability of AHC is likely to increase substantially when the evaluation of the level of care is based entirely on verifiable outcomes. In such a case, the majority of the payment, or the whole payment, can be made after the veterinary intervention has been successful and it greatly increases the incentive for the AHC provider to exert maximum effort. Retrospective payments do occur in private veterinary practice (18), but their success relies on the fact that the outcome of an intervention is really verifiable and as such acknowledged by the livestock owner. The situation becomes complicated when concurrent diseases or reinfections interfere with the outcome. Furthermore, retrospective payment requires frequent contact between AHC provider and smallholder.

In most veterinary transactions, however, efforts are, unfortunately, not observable and outcomes cannot be verified easily. Two mechanisms could be applied to increase acceptability of such services. They are repeated interaction and professional organisations. Repeated interactions between a livestock owner and an AHC provider are likely to serve as an incentive for the provision of appropriate services even when observable efforts are absent. They are an essential tool in the creation of relationships between smallholders and AHC providers that are based on mutual trust and that are not subject to the adverse selection problem. Hence the success of many paraprofessional schemes where AHC providers are members of the community and can thus be contacted easily and repeatedly. Some measures taken by AHC providers do result in repeated interactions and thus increase the acceptability of their services. An excellent example is the fixed (clinical) route system where the same veterinarian or paraprofessional meets livestock owners at preset times and places. Similarly, the close interaction between veterinarians and paraprofessionals through an official collaboration or a referral network may also reduce the moral hazard problems.

The incentive to provide appropriate AHC services can also be independent of the interaction between smallholder and AHC provider. This is, for example, the case when a professional organisation supervises the performance of animal health practitioners and the penalty of poor performance is revocation of the right to practice. Such an institutional setting (structure) does, to a large extent, transfer the responsibility of monitoring the quality of service provision from the livestock owner to an institution of professionals/paraprofessionals (i.e. professional association) and as such increases the acceptability of care.

Acceptability of veterinary drugs

Recent years have seen an increase in the number of counterfeit and substandard veterinary drugs on the African market (24, 35). Such a trade may, in the long term, have important consequences for the development of resistance in parasites to the active ingredient. In the short term, such practices are likely to result in adverse selection. Indeed, smallholders in Africa have difficulty in distinguishing between cheaper counterfeit or substandard veterinary drugs and the more expensive quality drugs. To address this adverse selection problem and increase the acceptability of quality products there is a need for appropriate legislation to systematically evaluate the quality of new and existing drugs available on the market. Such a task is expensive and is therefore best co-ordinated between countries and delegated to institutions that have the necessary integrity and technical skills. Countries would benefit greatly from a regional or international, rather than national, approach to drug registration. Propositions have been made to develop regional organisations for drug registration, e.g. the proposed 'Comité du Médicament Vétérinaire pour l'Afrique Francophone', which will clearly facilitate drug registration in francophone West and Central Africa (2). Such a committee would be composed of representatives from each member country and would have the task of defining a legal and institutional environment under which member countries could sanction all those who broke the laws governing the sale and marketing of existing and new veterinary drugs.

Conclusions

The provision of quality animal health care is vital for the improvement of livestock production in sub-Saharan Africa. Over the past decade, much of the discussion on the provision of AHC has focused on the roles that the public and private sectors should play in the provision of services. This debate was initiated by the rapid deterioration of the services provided by government departments in the 1980s. It was guided by the general principle that, depending on the private or public good characteristic of goods or services, they are best provided by either the private or public sector.

The restructuring of the AHC sector has been, and sometimes still is, initiated and encouraged by external organisations such as donor agencies. As a consequence, the approach taken has often been paradigmatic, ignoring the geographical and temporal specificities that are so crucial for a quality AHC system. Unfortunately, there is no generic recipe for a quality AHC system. Improving the quality of AHC requires a multifactorial approach. Any intervention that limits itself to improving a particular aspect of the system is unlikely to result in a sustainable improvement in quality. Hence, instead of focusing on a particular paradigm, our study suggests that a holistic approach towards AHC, concentrating on certain aspects of quality, is perhaps desirable (Fig. 2). Helpful concepts to use when measuring quality are 'availability' and 'acceptability', referring to the structure and the process of the AHC system, respectively. Such an analytical approach requires a thorough analysis of the current demand for, and supply of, AHC and it makes it possible to identify the market forces affecting the development of an equilibrium between demand and supply (Fig. 2). The forces distorting the market for AHC in sub-Saharan Africa are generally well-known. They are a consequence of the high transaction costs and the particularities of the relationship between the AHC provider and the smallholder. They should be counteracted by regulatory measures (Fig. 2). However, the type of transaction costs and the intensity of the agent/principle relationship, as well as the solutions implemented to counteract the various market distortions, vary considerably in place and in time. Appropriate solutions can only be proposed after a thorough analysis of the local environment.

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Les soins de santé animale dans les petits élevages africains : une démarche analytique

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Résumé

Un grand nombre des problèmes liés à l'offre de services vétérinaires de qualité aux petits exploitants d'Afrique subsaharienne trouvent leur origine dans la complexité du dispositif de prestation des soins de santé animale. La région requiert une démarche holistique et analytique qui lui permettrait de définir les besoins spécifiques de chaque zone et de proposer des soins de santé animale durables, et par conséquent, de qualité. Les auteurs étudient trois composantes du dispositif de prestation de soins de santé animale en Afrique subsaharienne, à savoir sa structure, son processus et ses résultats. Ils se concentrent sur les facteurs qui contribuent à la qualité de la structure et du processus. Deux critères de mesure de la qualité ont été retenus à cette fin : la disponibilité (par rapport à la structure) et l'acceptabilité (par rapport au processus). Après avoir recensé les facteurs qui influent sur la disponibilité et l'acceptabilité des soins de santé animale, les auteurs proposent plusieurs mesures qui, en agissant sur ces facteurs, contribueront à améliorer la qualité des soins de santé animale prodigués dans les petits élevages africains.

Mots-clés

Afrique – Petit exploitant – Service vétérinaire – Soins de base de santé animale.



Estudio analítico de la prestación de atención zoonosanitaria a los minifundistas africanos

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Resumen

Muchos de los problemas relacionados con la calidad de los servicios veterinarios prestados a los pequeños ganaderos africanos suelen atribuirse a lo complejo que resulta prestar atención zoonosanitaria en el África subsahariana. En esta región se requiere un planteamiento holístico y analítico para determinar las necesidades específicas en cada terreno con vistas a instituir una atención zoonosanitaria sostenible, y por lo tanto de calidad. Los autores examinan tres aspectos del sistema de sanidad animal en el África subsahariana: la estructura, el proceso y los resultados, centrándose especialmente en los factores que contribuyen a elevar la calidad de la estructura y el proceso. Para ello utilizan dos parámetros que miden la calidad de un sistema: la disponibilidad (en relación con la estructura) y la aceptabilidad (en relación con el proceso) de la atención zoonosanitaria. Tras señalar los factores que influyen en esos dos parámetros, los autores proponen formas de mejorarlos, o lo que es lo mismo, de mejorar la calidad de los servicios veterinarios que se dispensan a los minifundistas africanos.

Palabras clave

África – Atención zoonosanitaria básica – Minifundista – Servicio veterinario.



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