

Major Constraints of Veterinary Service Delivery in Ethiopia

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Abstract: The livestock sector in Ethiopia faces complex challenges. One of the main constraints is poor veterinary service delivery. This article aimed to review the major constraints of veterinary service delivery and of intervention areas with the ultimate goal of improving the service across the country. The major challenges of animal health services delivery of the country are insufficient and unpredictable budgets, weak legislation, exclusion of technical staff from decision-making process and policy illogicality. The occurrence of livestock diseases, lack of effective drug control system, limited number of well-trained and skilled professionals, poor chain of command, remoteness of animal health centers, lockdown of service centers during weekends and public holidays, non-conducive working environment of officers in terms of incentives and inadequate supply of drugs are highly. Furthermore, absence of laboratories, quarantine centers, poor disease reporting system, few private service providers, poor communication system between stakeholders and many others contribute more for the service delivery problem.

Key words: Constraints • Veterinary • Service • Delivery • Ethiopia

INTRODUCTION

Livestock are essential assets for livelihoods, which help to move out of poverty, as a way into lucrative markets, as a source of foreign exchange, as important socio-economic resources and as means of saving. The Ethiopian livestock sub-sector is the largest source of foreign exchange earning which contributes much to the total national economy. Even though the livestock sub-sector is an important contributor to the national economy, its development is hampered by different constraints [1]. Poor veterinary services remain one of the main constraints to livestock production in Ethiopia [2].

The threat to livestock production that emerges due to lack of animal health service includes animal diseases [3]. Livestock health sector is faced with complex challenges including limited availability of well-trained and skilled animal health professionals, lack of appropriate veterinary medical inputs and poor regulation and management problem of the sector [2, 4]. Other key challenges that undermine the veterinary service delivery includes poor private service, drug resistance; weak veterinary drug quality control and weak disease reporting system, unorganized research and community

services, weak education delivery system and biased qualification stream of assistant animal health professionals are common [1].

However, reduced availability and access to communal grazing and natural pasture; insufficient access to forage, forage seeds and feed supply; and low livestock genetic make-up also affects livestock production beside to poor animal health service [5]. Technical, institutional, infrastructural and environmental and policy challenges are another crisis to the sector [6]. These challenges lead to insufficient animal health extension advice; inefficient animal health services; inadequate supply of drugs; Poor quality control of drugs and supplies; and lack of a bio-security system in place [7].

The persistent limitation of financial resources to carry out routine clinical activities, livestock emergencies and epidemiological surveillance mostly affected public veterinary services in the country. The budget allocation decisions that are done by the leaders who are not independent and immune for political pressures are seriously crushed the veterinary service delivery. Furthermore, considerable external influence on technical decisions; weak chain of command; limited interaction

among concerned stakeholders; and the absence of public awareness about animal welfare are the identified weaknesses to effective administration of veterinary services [8].

Currently, the delivery of animal health services is inadequate in terms of both coverage and quality. Only 45% of the country is served by animal health delivery systems. Field services are constrained by lack of input supply, high operational cost and lack of transport. Budgets do not allow drug purchasers to cover more than a part of the annual needs [9]. The yearly budget allocation does not match the requirements for resources to spend on trained personnel, equipment, facilities and drug price inflation. These indicate there is the need of improving management-related constraints in resource allocation, shortage of the required tools and facilities and a lack of awareness and perception of the government bodies that lead the sector [2].

In general, the range of endemic diseases and the severity of their impact on livestock production reduce income and affect livelihoods of livestock keepers and jeopardize food security at local and national level. They cause huge economic loss to producers and livestock exporters [10]. Inefficient delivery of animal health service to smallholder and pastoralist livestock keepers is the main challenge to minimize the impact of diseases [6]. Therefore, the objective of this paper is to review the major constraints of veterinary service delivery in Ethiopia and provide due exhortation.

General Importance of Veterinary Service: Veterinary service addresses the health and welfare needs of every species of animal and is important to protection of environment, research, food safety and public health. It protects public and animals against health disasters or emergencies emanating from animals; ensure animal welfare and food safety; provide law and order in the livestock sector; regulate the veterinary profession and provide a level and fair playing field for livestock related trade [11].

Animal health service plays a key role in the investigation of and response to food borne disease outbreaks including the implementation of control measures. It also ensures that animals are healthy and kept under good sanitary and hygienic conditions to keep food safety. The strong veterinary service provide direction to farmers on practices that prevent or minimize physical and chemical hazards in primary production, ensure the responsible and prudent use of veterinary

medicinal products to minimize the likelihood of veterinary drug residues in food of animal origin and minimize the development of antimicrobial resistance. Furthermore, it help in meat inspection to minimize food borne risks to public health and assure and certify food of animal origin for international trade [12].

The services make the farmer aware of livestock management in terms of prevention and control of animal diseases. In addition, the contributions of veterinary service make the owner of animals to gain the happiness, health and safety of society from small animal care, to education, to research and disease prevention, to food animal, agricultural and environmental protection. Therefore, veterinary services are of public goods and to be offered to the public in a mandatory or obligatory way [11].

Limitations of Effective Veterinary Service Delivery in

Ethiopia: There is inadequate delivery of animal health services both in terms of coverage and quality in Ethiopia as a result of very few private veterinary service providers, absence of an enabling policy, inexistence of sanitary mandates, few private veterinary pharmacies, poor skilled and few community animal health workers (CAHWs). Lack of continuous training for field veterinarians, animal health assistants and CAHWs are contributed the role on failure of animal health service. Over and above that, the livestock sector is neglected and has no its own link to political leaders to prepare enabling policy for good leadership [1, 13].

The scarcity of budget, lack of laboratory and staff capacity and a quality management system, poor import quarantine and inspection systems, lack of sound and cost-effective disease control strategy, absence of well-developed, adequately funded and coordinated emergency preparedness and contingency plans for exotic, emerging and re-emerging diseases are listed as limitations. The lack of good management for the sector, inability to retain field veterinary personnel especially in the more remote pastoral areas because of lack of input supply, high operational cost and lack of transport are also top listed constraints of veterinary service delivery [9].

Veterinary Drug Administration, Control and Usage Related Challenges:

The regulatory activities in respect of veterinary drugs, feed and veterinary drug professionals are conducted by Ethiopian Agricultural authority that was established as a regulatory agency

through Proclamation number 728/2011 and council of Minister's regulation number 272/2012 as an autonomous federal government organ having its own legal personality. However, both legal and illegal marketing systems are operating at different magnitudes in the country [14]. Drugs are obtained from illegal drug vendors [15].

The open market environment prevailing in Ethiopia seems to be much in favor of the generic drug suppliers. It increased a wide range of drugs at affordable prices for livestock farmers. There is lack of credible drug control authority with a strong veterinary department, which anticipates on controls before importation or eventually upon entrance in the country [13]. The quality, safety and efficacy of veterinary drugs and biologicals locally produced, imported, distributed and used in the country are not properly regulated and controlled [9].

Farmers treat their sick animals personally from traditional and herbal medicines [16]. There is lack of awareness among food animal owners about the correct use of antibiotics and anthelmintics since most of them are illiterate and therefore unable to read and understand the instructions. The widespread misuse and improper drug dispensing and handling practices can affect drug quality and contribute to the development of drug resistance. Mostly, the farmers administered the drugs without getting advice from animal health professionals and by using improper and simple dose estimations based on age and body weight of the animals. Farmers buy drugs based on color identification and use them without diagnosis, prescription, dose, frequency, duration and routes of administration [15].

The National Veterinary Institute (NVI) is producing a wide range of vaccines. However, some essential vaccines are not produced or are not produced in sufficient quantity and quality [9]. The problem of drug quality and therefore drug resistance become more and more damaging to livestock production [13].

Current Status of Veterinary Service Delivery and its Constraints: Full livestock productivity is highly dependent on the availability and provision of high quality and appropriate animal health services. However, poor animal health service is a major constraint to increasing livestock production in the country [17]. The existing service delivery under the current animal health service is unsatisfactory, both in the private and public service systems, in terms of both quality and range of veterinary services [8].

Absence of veterinary service is one of the major constraints of livestock development in pastoral area of Ethiopia, which caused poor performance across the production system. Many of the problems result from the interaction among the technical and nontechnical constraints [14]. There are very few private veterinary service providers and pharmacies and very few community animal health workers. There is problem in retaining field veterinary personnel, especially in remote pastoral areas because of lack of input supply, high operational cost and lack of transport. In addition, a system of sanitary mandates does not exist. Low budget to purchase drugs and treatment equipment, lack of vehicles for professional's transportation and lack of good leadership to the sector are the main constraints [9].

Private Veterinary Service Providers and Infrastructure Related Limitations: Veterinary service in Ethiopia is primarily provided by the public sector. However, effective service to the livestock keepers is not satisfactory. Participation of the private sector is highly low owing to the limited policy support [6]. There are very few private veterinary service providers, few private veterinary pharmacies and very few community animal health workers [9].

The privatization of veterinary service is recognized and official in the country. However, it has not been included in any development strategy, prior to implementation. Consequently, to that, the initiatives have been only from the private operating individuals, without any support from the Government. Veterinarians in private exercise can operate in urban and rural areas either in pure veterinary clinic activities, pure veterinary pharmacy or a combination of both [13]. There is significant difference between the urban, peri-urban and rural subsystem in the proximity towards clinics, which are concentrated in urban areas [18]. The nearest distance to veterinary service, delivery center ranges from one kilometer to beyond ten kilometers [16]. Shortage of veterinary drug at pharmacies, closing during weekends and public holidays and distance are the main constraints of the public veterinary service [18].

Low Budget Allotment: Even though government veterinary institutions provide basic animal health services, they generally encounter financial shortfalls limiting their ability to deliver sustainable animal health services [17]. The public veterinary services are hampered most importantly by persistent limitation of financial

resources to carry out routine clinical activities, livestock emergencies and epidemiological surveillance [8]. Budget allocation is insufficient to provide quality service delivery that is accessible to the whole community. The yearly budget allocation does not match the requirements for resources to spend on trained personnel, equipment, facilities and drug price inflation [2].

Qualified Manpower: Effective delivery of national veterinary services for the protection of animal and public health requires a well-trained cadre of veterinarians [19]. It is well known that for proper delivery of veterinary services, adequate manpower should be available. According to the FAO recommendation, a veterinarian could manage 30, 000 - 50, 000 animals as preventive measures and 5, 000 for curative services. The current 'mess' in provision of animal health clinical services and supply of veterinary drugs is getting worse and if this situation persists, will become increasingly difficult to control [8].

The successful delivery of food-producing-animal practice will depend on the ability of the veterinarian to provide those services that the producer needs and wants at a price that is profitable to both the producer and veterinarian [20]. The country lacks advanced veterinary laboratory technologists, veterinary pharmacists, meat inspectors, veterinary bio-medical engineers, animal health economists, poultry health specialists, wildlife veterinarians, hide and skin health and quality experts, apiculture and health experts, fishery health experts and PhD holders to fully discharge the responsibilities of the veterinary services at all levels and in its entirety [21].

Customer Satisfaction/Preference: Most farmers prefer the government service. This is due to Government services are cheaper (less costly), more effective, have more qualified professionals; possess better quality drugs and diagnostic services. In addition, the government clinics are available nearby and the farmers have trust on the services. Farmers who prefer the private service attributed their preference to the availability of service whenever it is needed [2, 8].

Impact of Poor Veterinary Service Delivery in Ethiopia
Uncontrolled Spread of Livestock Diseases: Ethiopia is endemic to a number of livestock diseases, which continue to deter livestock productivity and agricultural development. There are poor communication lines between the different levels of veterinary services for the control of trans-boundary animal diseases. Disease

surveillance and reporting is poor and irregular; sensitivity, specificity and timeliness of the reports are very low [9]. Animal diseases, which are widespread in all agroecological zones of Ethiopia, cause major economic and social losses to the livestock owners [1]. Livestock diseases are significant challenges to the livestock production sub-sector in Ethiopia. Burden and endemicity of livestock diseases are substantially higher. Among the major disease constraints, parasite infestation, lumpy skin disease, trypanosomiasis, bovine pasteurolosis, mastitis, sheep and goat pox [16]. Blackleg, foot and mouth disease, lumpy skin disease, anthrax and bovine pasteurolosis are the top five diseases affecting cattle in the highlands of Ethiopia [10].

Public Health Impact: Animal diseases cause significant, unpredictable negative impacts on the livelihoods of communities. More than 60% of animal diseases are zoonotic (transmissible to humans), making animal health and public health closely related. Therefore, the failure on delivery of veterinary service affects the human health by promoting antimicrobial resistance and food safety crises and thus, ensuring animal health and its service delivery is a global public good requiring sustainable attention and investment [22].

Economic and Social Impact: Animals and the health systems, which ensure their protection, play a vital role in the security and the economic and social well-being of humanity. Beyond income generation, food security and nutrition, animals are a valuable asset to the rural poor, serving as a store of wealth, collateral for credit and an essential safety net during times of crisis. Poor financial resources and inadequately staffed and organized veterinary Services result in high animal losses [22].

Ways to Improve Veterinary Service Delivery

Assessing the Constraints: Improved livestock productivity is largely a function of high quality, efficient and sustainable provision as well as strong governance of veterinary services. Veterinary services, in turn, are influenced by a multitude of determinants/factors stemming from the farmers behavior toward the demanded veterinary services. Therefore, identifying the constraints is essential to improve poor animal health service delivery, which is largely the domain of the public sector, as the major limitation to improving animal health and productivity [10]. Some scholars conducted researches on the identification of constraints and the reports are listed on the table below (Table 1).

Table 1: Veterinary service delivery Constraints identified by researchers in Ethiopia.

No	Constraints identified	Reporters
1	Veterinary cost recovery scheme	Woldemariam <i>et al.</i> [17]
2	Violation of the drug handling and storage recommendations given by WHO, misuse and improper drug dispensing	Beyene <i>et al.</i> [15]
3	Veterinary professionals and paraprofessionals development strategy limitations	Tekle <i>et al.</i> [21]
4	High cost of service, poor quality and limited sustainability of services, persistent limitation of financial resources, external influence on technical decisions; weak chain of command; limited interaction among concerned stakeholders; and the absence of public awareness	Mulugeta <i>et al.</i> [8]
5	Burden of animal health service ailments and management practices	Mebrahtu <i>et al.</i> [16]
6	Lack of awareness, shortage of budget, the minimal attention given to the sector.	Kebede <i>et al.</i> 2014
7	Inadequate budget, logistic problems, shortage of manpower and working hours in the public veterinary clinics and black market-drug sell	Jibat <i>et al.</i> [18]
8	Problems such as highland based veterinary services, poor private service, drug resistance; weak veterinary drug quality control and weak disease reporting system, unorganized research and community services	Hadush, [1]
9	Livestock diseases and its epidemiology	Gizaw <i>et al.</i> [10]
10	Limitations on policy, strategies and regulations, Poor sectoral and institutional coordination, Limited capacity of both professional and paraprofessional service providers and laboratory diagnostic services, Poor access to services and inputs, policy challenges, low private sector participation	Gizaw and Berhanu, [6]
11	Limited availability of well-trained and skilled animal health professionals, lack of facilities, equipment and resources	Alafiatayo <i>et al.</i> [4]

Options to Tackle the Identified Constraints: Privatized service could be a solution to the future sustainable management of the animal health service [2]. Encouraging privatization of the services, community-based animal health programs, promoting mobile veterinary clinic and organizing research works and implementing community services in collaborative way at regional level [1]. In addition, improving the skills of animal health professionals in Ethiopia is the best option to tackle knowledge gap. The preferred format for delivery of training should be by workshops, face-to-face lectures and external training or training held outside a participant's usual place of work. The constraints within the veterinary sector including lack of facilities, equipment and resources must be considered by leaders of the sector in order to provide both the knowledge and the means for a better delivery of veterinary services. Providing adequate laboratory facilities and materials should also be included in future interventional strategies [4].

CONCLUSION AND RECOMMENDATION

The effective delivery of animal health services is essential for disease control. A number of factors contribute to poor veterinary service delivery in Ethiopia. For instance, Staff scarcity, insufficient and unpredictable budgets (shortage of drug supply, lack of materials, absence of laboratories, logistic/transport problem, lack of quarantine centers), weak legislation, exclusion of technical staff from decision making process, policy illegality (poor communication within stakeholders, exclusion of veterinarians in decision making process, absence of competent drug control authority) are the

major problems veterinary service delivery. Furthermore, the widespread occurrence of livestock diseases, lack of sound and cost-effective disease control strategies, veterinary professional gap (skill, limit number, favor of incentives), infrastructural problems (remoteness, low service quality, few private sectors) are common limitations. Based on the above conclusion, the following recommendations are made:

- The livestock sub-sector should be supported with adequate annual budget to improve the overall service delivery that wipes the tears of Ethiopian livestock producers
- Even though limited resource is allocated to public animal health services, concerned officers and other stakeholders could make veterinary services more effective by establishing partnerships with private sectors and improve the working environment of animal health service.
- Veterinarians should take part in the decision-making processes of the sector.
- There should be strong national as well as regional veterinary drug control strategy to avoid illegal drug trade and thus ensure veterinary drug quality.
- Concerned key stakeholders in veterinary service delivery should play their roles to deliver quality animal health service.

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