

Client assessment of animal health care delivery in peri-urban Ghana

P.K. Turkson

Department of Animal Science, School of Agriculture, University of Cape Coast, Cape Coast, Ghana
E-mail: kobbiecc@yahoo.com

Submitted for publication: 3 December 2007

Accepted for publication: 30 July 2008

Summary

The study used a questionnaire to assess the delivery of veterinary services as perceived by users in four peri-urban areas in Ghana. Eight hundred and eighty nine respondents were interviewed: 10.7% were cattle farmers, 27.4% were small ruminant farmers, 14.2% were pig farmers, 45.1% were poultry farmers and 2.6% reared various animals on a part-time basis. Most of the animal health needs were either met by the owners (50.4%) or by veterinarians (41.6%). Veterinarians were mainly consulted for advice on animal health, disease diagnosis and treatments. Most respondents (65.7%) had no difficulty in getting help from government services. Higher proportions of interviewees perceived effectiveness, efficiency, service quality, staff attitude and technical competence as 'good' or 'very good'. However, equity and accessibility were thought to be 'fair' to 'very poor', and the cost of drugs was considered 'expensive' or 'very expensive'. The study identified strengths and weaknesses in the delivery of animal health services in peri-urban Ghana and this information could be used as a basis to improve the overall quality of these services in the future.

Keywords

Accessibility – Animal health delivery – Effectiveness – Efficiency – Ghana – Peri-urban livestock – Service quality – Veterinary services.

Introduction

Providing quality animal health care (AHC) is critical to the improvement of livestock production in sub-Saharan Africa (24). Animal health services help in sustaining the productivity and viability of the livestock sector, and the value of such services is that they contribute to the reduction of production losses, protection of society from zoonotic diseases and improvement in livestock productivity and product quality (23). Services are only effective when they meet real needs and when the client agrees that he/she has those needs (15). Identifying and

meeting customer needs is crucial to total quality management in veterinary health care delivery systems and involves achieving the desired animal health status (often termed clinical outcomes) and taking into consideration external customer perceptions of the care and related services that they receive (9).

One of the major challenges in the delivery of livestock services in Africa is the provision of adequate services of an acceptable standard or quality (2). A major constraint to successful livestock production in Ghana has been lack of support for animal health services (1, 17, 25). The government was the only service provider for years, but it

has recently been encouraging private practice as a policy; however, the Veterinary Services Directorate (VSD) of the Ministry of Food and Agriculture (MOFA) continues to be the dominant provider of animal health services.

There is widespread perception of inefficiencies in state services (6, 16). Very few reports, if any, exist on client perceptions or client assessments of the performance of state or private veterinary practices in developing economies. The perceptions of stakeholders, especially external clients, of the delivery of services may influence their use of such services. Perception describes a process whereby an individual puts a service to a 'personal value systems' test during which the service is evaluated according to what the recipient thinks he/she stands to gain, compared to other services and commitments and in the context of his/her socio-economic circumstances (13). Furthermore, while the perception of the individual is unique, perceptions tend to be similar within related and identifiably distinct social and economic groupings. Farmers are key clients of AHC delivery systems and, therefore, understanding their demand is critical to developing better systems (11).

The objective of the study was to discover user perceptions of the performance and quality of the structure and process of the AHC system and to identify steps to improve quality in peri-urban areas in four regions of Ghana. It was envisaged that such an exercise would reveal strengths and weaknesses which could provide opportunities for improvement in service delivery.

Methods

Study areas

Peri-urban areas in four regions of Ghana (Ashanti, Greater Accra, Central and Western regions) were chosen because of the high interest in urban/peri-urban livestock keeping. These areas are in and around the three largest urban areas in Ghana: Accra-Tema (Locations 2 and 4 on map in Fig. 1), Kumasi (Location 1 on map), and Sekondi-Takoradi (Location 3 on map), which are all found in the middle and southern parts of Ghana.

Animal health care was provided officially in all these areas by graduate veterinarians and veterinary technical officers who were staff of the VSD. The technical officers were graduates of the Pong Tamale Animal Health and Production College with certificates in animal health. In addition, in Greater Accra Region, services were provided by the staff of seven private practices, and in Ashanti Region two private practices provided services. In all these areas it was commonly acknowledged that VSD staff were 'moonlighting', that is, providing private services unofficially (21).

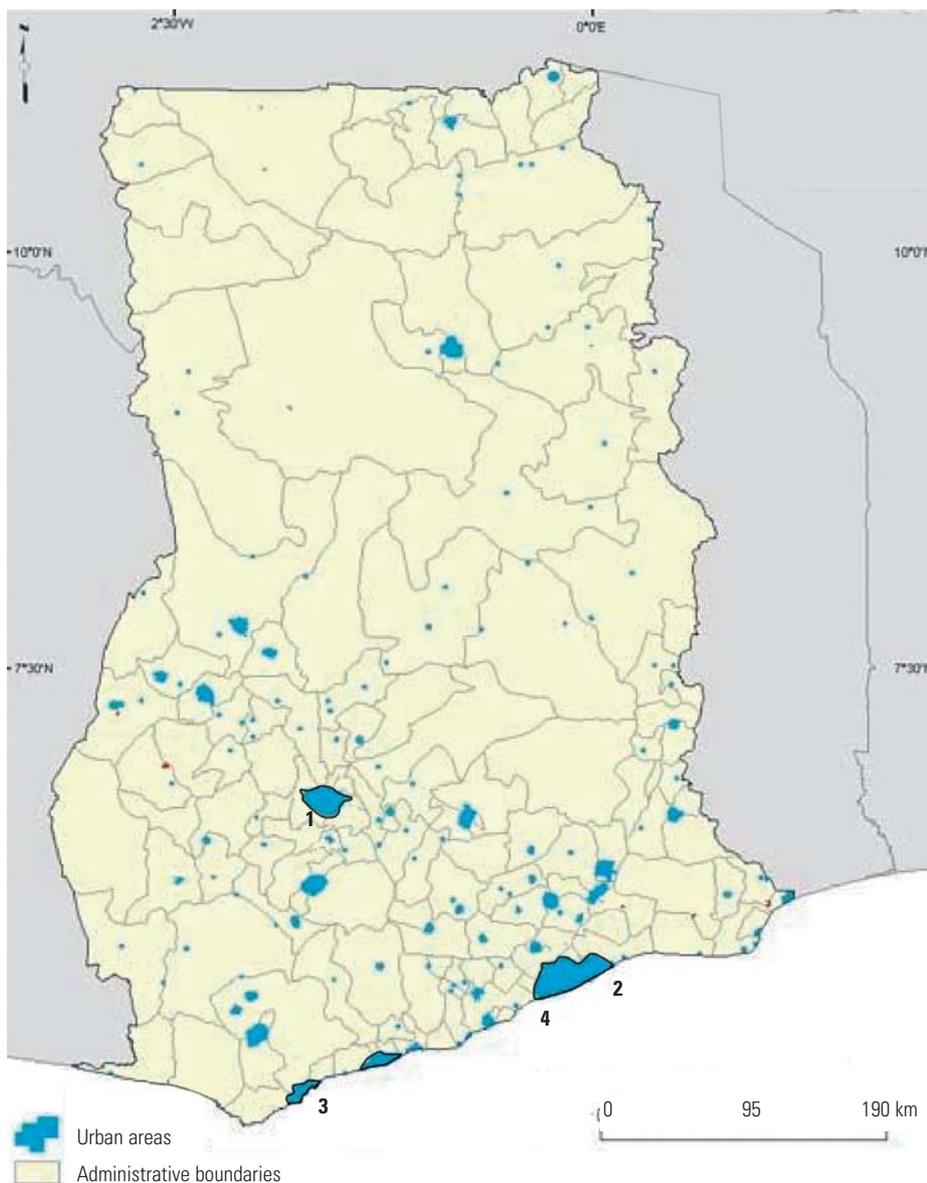
Sampling procedure

The sample group of interviewees consisted of animal owners who were visited on their farms (identified with the help of MOFA in the chosen areas) and livestock or poultry keepers who visited government or private veterinary clinics for assistance or to purchase vaccines. In all cases the criterion for inclusion was that a respondent kept livestock or poultry or both. The snowball technique was adopted where farmers who were visited on their farms identified other livestock or poultry keepers in the area, who were then visited and interviewed. The targeted numbers were 150 each for Ashanti and Western Regions and 300 each for Greater Accra and Central Regions based on the availability of enumerators (one each for Ashanti and Western Regions and two each for Greater Accra and Central Regions, each targeting 150 respondents).

Survey instrument and administration

The instrument used was a questionnaire developed and tested in Cape Coast on 15 livestock and poultry keepers. The questionnaire had 25 questions (14 closed-ended, 11 open-ended) covering the socio-economic profile of respondents, animal demographics and management, services used and the providers, and certain indicators of the quality of AHC services (effectiveness, efficiency, accessibility, service quality [does it meet client expectations?], equity, affordability and availability of services, staff attitude, technical competence of staff, charges for services, availability of drugs and vaccines and cost of drugs). 'Effectiveness' was defined as how effective veterinary services were in reducing mortality, disease, discomfort and dissatisfaction. 'Efficiency' was defined as how well the available resources were used to achieve desirable results. 'Accessibility' was defined as the ability of the individual to reach and obtain services. 'Service quality' was defined as the degree to which services met the client's expectations. 'Equity' was the fairness of distribution of services. 'Staff attitude' dealt with the interpersonal skills shown by staff. 'Technical competence' was defined as the knowledge, skills and actual performance of professionals. 'Affordability' was the ability of clients to pay for services, whilst 'availability' of services was defined as services being provided when needed. Other indicators were having client needs met and getting help when needed. Likert-scale types of answers (i.e. respondents specify their level of agreement to a statement) were adopted for the indicators.

Six enumerators were trained to administer the questionnaire. Pre-testing was done in Cape Coast after which two questions were dropped for lack of clarity. The questionnaires were administered in English or in the local languages (Twi, Fante or Ga-Adangme) for those with

**Fig. 1**

Location of the peri-urban areas in which animal owners were questioned about their perception of animal health service quality

- 1 – Kumasi Metropolitan Area and surrounding districts in Ashanti Region
- 2 – Accra and Tema Metropolitan Areas and surrounding districts in Greater Accra Region
- 3 – Shama-Ahanta East Metropolitan Area (capital city: Sekondi-Takoradi) in Western Region
- 4 – Awutu-Effutu-Senya District (principal towns: Winneba and Kasoa) in Central Region

Source: Center for International Earth Science Information Network (<http://www.ciesin.columbia.edu>)

difficulties in the English language. The questionnaires were administered between July and August 2005. Each questionnaire took on average 45 minutes to administer.

Data analysis

The responses to the closed questions were coded and stored using Microsoft Excel software. These were imported into Statistix® software (version 3.5, Analytical

Software Inc., St Paul, Minnesota, United States of America) and analysed using descriptive statistics.

Results

In all, 889 people were interviewed out of a target of 900, giving a response proportion of 98.8%. The respondents identified themselves as cattle farmers (10.7%), small ruminant farmers (27.4%), pig farmers (14.2%), poultry farmers (45.1%) and others (people with other jobs and

rearing animals on a part-time basis, 2.6%). The management systems used were extensive (1.5%), semi-intensive (39.4%) or intensive (59.1%).

The educational backgrounds and proportions in each category were: no education, 12.0%; basic (primary, middle or junior secondary school), 34.5%; secondary (secondary, senior secondary, technical or vocational schools), 34.1%; and tertiary (post-secondary, polytechnic or university), 19.3%.

Details of the animal holdings of the respondents are shown in Table I.

Feeding animals was identified as the major problem by 44.4% of respondents. The others (in decreasing proportions) were diseases (16.4%), housing (16.3%), animals destroying other peoples' crops (6.6%), high mortality (3.6%), lack of drugs to treat animals/birds (2.6%), lack of knowledge about management of animals/birds (1.4%) and non-specific or no problem (8.7%).

The animal health services used by the respondents and the providers of these services are shown in Table II.

Table I
Descriptive statistics of the animal holdings of interview respondents (n = 889) surveyed in peri-urban Ghana

Type of animal	Number of animals per holding				
	Mean	SD	Median	Range	95% CI
Cattle	6.4	23.4	0	0-230	4.9-8.0
Goats	6.2	12.0	0	0-120	5.4-7.0
Sheep	7.3	15.6	0	0-160	6.2-8.3
Pigs	11.6	139.6	0	0-4000	2.5-20.8
Poultry	2260.0	1277.0	12	0-250,000	1420-3101
Dogs	1.8	2.7	0	0-20	1.6-2.0
Cats	0.5	1.3	0	0-12	0.4-0.6

CI: confidence interval
SD: standard deviation

Table II
Services used and providers in peri-urban Ghana (n = 889)

Services	Advice	Castration/surgery	Deworming	Diagnosis	Meat inspection	Medicine	Spraying/bathing	Treatment	Vaccination
% using service	83.6	40.9	94.4	80.5	8.8	92.2	76.6	89.5	80.0
Provider									
Not done (%)	16.4	59.1	5.6	19.5	91.2	7.8	23.4	10.5	20.0
Farmer (%)	19.6	26.1	75.5	41.5	6.2	4.5	67.4	60.9	37.6
Veterinarian (%)	56.6	13.2	16.9	36.7	2.2	27.7	8.2	25.8	39.8
Vet. staff (%)	1.6	0.2	0.2	0.6	0.3	0.2	0	0.3	0.7
Vet. shop (%)	0.3	0	0.6	0.2	0	31.0	0.3	0.4	0.3
Chemical seller (%)	0.1	0	0.4	0.6	0	26.8	0.1	0.8	0.1
Others ^(a) (%)	5.4	1.5	0.8	1.0	0	2.0	0	1.3	0.6

a) Others include other farmers, community livestock workers, farmer associations and wanzams (traditional specialists in castrations both for humans and animals)

Table III shows the frequency with which veterinarians, veterinary staff, laboratories, or clinics were consulted by respondents over a six-month period.

Table III
The frequency with which survey respondents (n = 889) made use of veterinary services over a six-month period in peri-urban Ghana

Service	Percentage of respondents who used the service				
	Never	1-5 times	6-10 times	11-15 times	> 15 times
Advice	37.7	39.3	5.1	9.6	8.4
Spraying/ bathing	90.8	7.8	0.7	0.3	0.4
Castration	91.8	7.5	0.4	0.1	0.1
Diagnosis	59.8	34.6	3.8	0.7	1.0
Meat inspection	97.5	2.0	0.2	0	0.2
Post mortem	81.3	16.8	1.1	0.4	0.3
Purchase of vaccines	27.2	60.4	7.3	0.9	4.2
Medicine	27.7	28.6	6.2	8.0	29.6
Surgery	98.2	1.8	0	0	0
Vaccination	37.4	54.8	5.6	1.0	1.1

Asked who treated most of the sick animals in the community, 40.4% of the respondents said it was the owner, 26.4% said veterinarians, 24.0% said nobody in particular, with the rest (9.1%) mentioning community livestock workers (CLW), extension agents or technical officers, or non-governmental organisation staff. The majority of the needs of the respondents for AHC were perceived to have been met by the owners (self-medication, 50.4%), by veterinarians or veterinary technical officers (43.6%), by CLW (2.5%), by other livestock farmers (2.0%), by veterinary drug sellers (0.7%) and by no one in particular (0.8%).

The distances covered and times used in seeking AHC are given in Table IV.

Table IV
Distances covered and time taken in seeking animal health care in peri-urban Ghana

(number of survey respondents: 889)

Distance to/Time to	Mean	SD	Median	Range	95% CI
Veterinary clinic (km)	9.1	9.8	5.0	0-64	8.4-9.7
Technical Officer (km)	5.4	12.1	2.5	0-200	4.6-6.2
Get medicine (km)	7.0	10.1	3.0	0-75	6.3-7.7
Get help* (h)	12.5	20.5	4.0	0-232	11.1-13.9
Get medicine (h)	1.1	2.9	1.0	0-72	0.9-1.3

* The number of people questioned in this case was 861, not 889
 CI: confidence interval
 SD: standard deviation

Asked if they were willing to use a private provider in the event that a private clinic was set up in a location close by, the majority (89.5%) said 'yes'.

The ease of getting help is presented in Table V, which also shows the proportions of interviewees who chose certain categories of response (e.g. 'poor', 'very good', 'reasonable') to reflect their assessment of the quality of veterinary services.

Table V
Survey respondents' assessment of the quality of service delivery in peri-urban Ghana (n = 889)

Quality indicator	Percentage of questionnaire respondents using the following terms in their assessment of animal health care					
	Very poor	Poor	Fair	Good	Very good	No idea
Effectiveness	3.6	6.6	35.4	42.5	8.9	2.9
Efficiency	1.0	8.1	34.1	43.5	9.3	3.9
Accessibility	3.9	15.2	39.7	30.1	8.7	2.3
Service quality *	1.8	6.2	31.5	45.0	11.7	3.8
Equity	14.5	35.1	25.2	17.1	2.7	5.4
Staff attitude	0.9	2.4	13.2	55.3	21.9	6.3
Technical competence	1.4	2.6	17.8	55.7	17.4	5.2
	Fair	Reasonable	Expensive	Very expensive	No idea	
Charges for services rendered	6.7	54.3	27.9	6.5	4.5	
Cost of drugs	2.4	24.9	47.9	22.4	2.4	
	Unavailable	Sometimes available	Available	Always available	No response	
Availability of veterinary drugs	4.4	36.7	47.0	9.5	2.4	
Availability of vaccine	6.6	34.7	40.5	15.1	3.0	
Availability of services	8.4	38.4	49.3	3.9		
	Unaffordable	Fairly affordable	Affordable	No idea		
Affordability of services by farmers	5.2	45.9	44.0	4.9		
	Poorly met	Somehow met	Fairly met	Met	Very much met	No idea
Meeting client needs	4.2	14.6	27.9	44.6	6.8	1.9
	Very difficult	Difficult	Easy	Very easy		
Getting help	5.2	24.1	61.8	8.9		

* The degree to which services met the client's expectations

Discussion

A people-oriented approach has been recommended in AHC studies (10). This study was done from the perspective of beneficiaries because the perceptions of clients may influence the use of services. Also, client surveys are rare in veterinary research in developing countries.

The response proportion was high because an interview approach using a questionnaire was adopted; it can be difficult to retrieve questionnaires if respondents are asked to complete and return them themselves.

The majority of respondents identified themselves as poultry farmers (45%). This might influence aggregated results by skewing certain responses towards poultry production issues. For example, the intensive system of management was found to be more prevalent. Poultry farming and use of intensive management are common in peri-urban livestock keeping (14). The mean herd/flock sizes for ruminants (Table I) were similar or lower than those reported by others in Ghana (17, 25). The means were skewed in some cases by a few outliers, especially for pigs and poultry (Table I).

Another bias might have been introduced by the differences in the numbers of respondents from the various regions. The perceptions of those regions with a higher number of respondents (300) were more likely to influence the general view in the aggregated presentation than those regions with smaller numbers. This will have to be considered in any interpretations.

The AHC services used by the respondents as reported in Table II were similar to other reports from Ghana (20, 22). Most respondents did not use meat inspection services, because birds or animals are sold live for home slaughter or are sold to middlemen who in turn sell them to butchers. The farmer is, therefore, not obliged to use this service. Respondents opted to deworm, vaccinate or treat some common problems themselves as cost-saving measures. The high proportion of respondents doing vaccinations on their own may be as a result of the use of water-administered poultry vaccines in Ghana. Even though about 45% of respondents described themselves as poultry farmers, other respondents also kept poultry and were likely to practice vaccinations. The common livestock vaccinations in Ghana are against anthrax in cattle and peste des petits ruminants in sheep and goats; these vaccines are usually administered by VSD staff.

Veterinarians were mainly consulted for advice on animal health, diagnosis of diseases, some vaccinations and treatments (Table II). An earlier study (18) reported that veterinarians in Ghana were mainly involved in prevention and treatment of worms (deworming), surgery and giving advice. The common surgical procedures reported by veterinarians in Ghana in a study in 1996 were castrations, especially of ruminants and dogs, and spaying of pet animals (18). Since most respondents in the present study were in poultry and livestock production, they did not need castration services.

The high proportion of respondents who depended on chemical shops (licensed shops selling agrochemicals as well as veterinary drugs) and veterinary shops to buy medicine may be attributed to the policy of liberalising the veterinary drug market, allowing the involvement of the private sector. Nevertheless, about 28% of the respondents got their drugs from veterinarians. Although the sale of veterinary drugs at chemical or local shops leads to quicker distribution of drugs over a wider area and thus increases availability, it breaks the link with professional advice at the point of sale, hence advice on appropriate drug use may be missing and the incentive to sell quality drugs may be lower (24).

The evidence for limited use of veterinary staff for many services is provided in Table II. Even in cases where veterinary personnel and facilities were used, these were infrequent (fewer than five times over a six-month period). There are reports that inadequate operating budgets,

coupled with lack of field personnel and transport generally resulted in a reduction in local field services and inability to deliver essential services, leading to lack of contact with clients (4).

Self-medication was the commonest method used by the respondents to meet their animal health needs. Self-medication is a practice whereby clients purchase drugs and vaccines and administer these to their animals without consulting veterinary staff (19). There are reports of high proportions of self-medication in the treatment of small ruminants in three districts in southern Ghana (17). There are concerns that high charges for veterinary services, especially those provided by private providers, might encourage such practice (17).

A major constraint to livestock production identified in Ghana has been accessibility to veterinary services (1, 5, 17). Our study, however, revealed that distances to veterinary clinics, personnel and sources of medicine and time spent in getting help or medicine were reasonable (Table IV), suggesting that accessibility was reasonably good. When asked about ease of getting help, about 71% of the respondents said it was 'easy' or 'very easy', implying that accessibility to services was not a major problem. Physical distance is said to limit accessibility in rural areas (24), however, the peri-urban nature of the study area might have improved accessibility considerably, introducing some bias. Distance to veterinary agents is a decisive factor in determining the degree to which farmers rely on veterinary services (3).

The willingness to use private providers was high (90%) and suggests lack of satisfaction with the present system of AHC delivery. This proportion was significantly higher than those reported for three districts in Northern Ghana (19, 22) and for part of the Ashanti Region (20). The expectation of higher efficiency in the private sector compared to the public sector (8) might help explain this. It is said that structural adjustment programmes were introduced to privatise AHC services in developing countries on the assumption that private providers would be more efficient than AHC systems run publicly (7). However, uptake of private practice is very low: there are only ten private practices established in Ghana, with most concentrated in Accra and a few in Kumasi.

A challenge to AHC delivery is to identify indicators and methods that can be used by different players to assess and improve performance of the system (11). Accessibility, affordability, acceptability, sustainability and availability have been proposed (12, 24). Our study used 15 indicators (Table V) which were easy for the respondents to understand and score. The indicators covered the process, structure and outcome of AHC as described by other authors (24).

Apart from equity (and to a limited extent accessibility), the majority of respondents scored those indicators for which the range of answers ranged from 'very poor' to 'very good' (effectiveness, efficiency, service quality, staff attitude and technical competence) as 'good' or 'very good'. The organisation of veterinary services relates to both the availability of veterinary personnel and their technical competence, which determines the cost of interventions (3). Accessibility, promptness of services and ready availability of personnel are critical to good customer relationships, and livestock farmers expect an efficient delivery system (19). However, an efficient system requires facilities and well-motivated personnel. These are challenges that the VSD have been facing for many years (21).

The high cost of drugs has been identified as a deterrent to livestock production in Ghana (25). A high proportion of respondents (about 70%) found the cost of drugs to be 'expensive' or 'very expensive'. Generally, veterinary drugs, vaccines and services were available, but not always. The wide availability of drugs and vaccines has been attributed to the liberalisation of the importation, distribution and sales of drugs, which has also prevented the problems associated with government monopolies and revolving funds (24). The VSD has no control over the availability and cost of veterinary drugs as it is no longer involved in veterinary drug marketing.

Charges for services were perceived by the majority (60%) to be 'fair' or 'reasonable'. Similarly, a significantly high proportion (86%) found services to be 'affordable' or 'fairly affordable'. Charges could therefore not be cited as reasons for limited use of services.

The aim of any service delivery system is to be able to meet the needs of the client (15). Only about 50% of the respondents in this study said their needs were either 'met' or 'very much met' by the AHC system, indicating that this is an area for improvement. Improving the quality of AHC requires a multi-factorial approach while recognising demand, supply and market forces (24). Demand involves small holders (subsistence or commercial), consumers, the State, and the international community and depends on the variability of a number of factors (population growth, urbanisation, globalisation). Supply involves the private sector, the public sector, private-public partnerships, professionals and paraprofessionals, while market forces involve legislation, transaction costs and agent/principle relationships. It has been suggested that government services should identify more clearly the objectives of their

services, prioritise their activities accordingly and identify the resources needed to fulfil these objectives (16). One way to identify the objectives of government services is to find out from the clients what their perceptions on service delivery are. By presenting the perceived performance of AHC, this study has highlighted ways in which services could be improved and contributed to identifying the objectives of AHC delivery.

Conclusion

In conclusion, the study revealed that effectiveness, efficiency, service quality, staff attitude and technical competence were perceived as 'good' or 'very good', and could be considered as the strengths of the AHC delivery system. These could be consolidated and even made stronger by providing efficient means of transport, supplying adequate quantities of drugs, equipment and logistics, adequately financing the animal health services, and adequately motivating the staff with good pay and allowances. On the other hand, client needs were marginally met, equity and accessibility were poor or worse and the costs of drugs were expensive or worse, which indicate weaknesses and areas needing improvement. These could be used as starting points to improve the quality of service delivery by VSD, creating avenues for frequent interactions with clients through farmers' fora and workshops to be able to identify their needs and then meet them. Also, services should be made more equitable and accessible by opening more clinics and training more staff to man such offices. However, this has to be done judiciously and expediently.

Acknowledgements

We are indebted to Ms Afua Frimpong-Apau, Ms Shirley Obromah, Ms Mary Ehuray, Ms Maame Esi Inkoom, and Messrs Imoro Awudu and Seth Arthur of the University of Cape Coast for collecting the data from the field. A six-month Commonwealth Academic Fellowship spent in the Epidemiology Division of the Royal Veterinary College, University of London from January to July 2007 provided an opportunity for extensive literature search, for which I am grateful. I thank the Center for International Earth Science Information Network at Columbia University for permission to use the map in Figure 1.



Évaluation des prestations de services de santé animale dans les zones périurbaines du Ghana par les utilisateurs de ces services

P.K. Turkson

Résumé

Un questionnaire a été distribué aux utilisateurs de services vétérinaires dans quatre zones périurbaines du Ghana afin d'évaluer leur perception des prestations fournies. Au total, 889 éleveurs ont été interrogés : 10,7 % étaient des éleveurs de bovins, 27,4 % des éleveurs de petits ruminants, 14,2 % des éleveurs de porcs, 45,1 % des éleveurs de volaille et 2,6 % élevaient quelques animaux en tant que complément d'activité. La plupart des problèmes de santé étaient résolus soit par les éleveurs eux-mêmes (50,4 %), soit par des vétérinaires (41,6 %). Les vétérinaires étaient surtout consultés pour des conseils en santé animale, pour poser un diagnostic et pour les actes thérapeutiques. La plupart des personnes interrogées (65,7 %) s'adressait sans difficulté aux services publics pour obtenir de l'aide. L'efficacité, l'efficience, la qualité du service rendu, l'attitude des intervenants et les compétences techniques de ces services ont été qualifiées de « bonnes », voire de « très bonnes » par une proportion encore plus élevée de répondants. Toutefois, l'équité et l'accessibilité ont été jugées seulement « correctes », voire « très insatisfaisantes », tandis que le prix des médicaments était qualifié d'« élevé » ou de « très élevé ». Cette étude a fait ressortir les points forts et les points faibles du système de prestation des services vétérinaires dans les zones périurbaines du Ghana ; cette information pourra servir de point de départ pour améliorer la qualité globale de ces services à l'avenir.

Mots-clés

Accessibilité – Efficacité – Efficience – Élevage en zone périurbaine – Ghana – Prestation de services vétérinaires – Qualité du service rendu – Services vétérinaires.



Valoración por los clientes de la prestación de servicios zoonosanitarios en zonas periurbanas de Ghana

P.K. Turkson

Resumen

El autor describe un estudio realizado mediante cuestionario para evaluar la percepción de los servicios veterinarios por parte de sus usuarios en cuatro zonas periurbanas de Ghana. Respondieron al cuestionario 889 personas: un 10,7% criaban ganado vacuno, un 27,4% pequeños rumiantes, un 14,2% cerdos, un 45,1% aves de corral y un 2,6% trabajaban a tiempo parcial con varios tipos de animales. De cubrir sus necesidades en materia zoonosanitaria se ocupaban principalmente los mismos propietarios (50,4%) o los veterinarios (41,6%). Éstos eran consultados sobre todo con fines de asesoramiento o diagnóstico y tratamiento de enfermedades. En la mayoría de los casos (65,7%), los encuestados no tenían problemas para obtener ayuda de los servicios públicos.

En una proporción aún más elevada, la eficacia, eficiencia y calidad del servicio, así como la actitud y competencia técnica del personal, merecieron los calificativos de “buenas” o “muy buenas” por parte de los encuestados. En cambio, la equidad y la accesibilidad fueron juzgadas de “correctas” a “muy deficientes”, y el coste de los medicamentos de “caro” a “muy caro”. El estudio sirvió para determinar los puntos fuertes y débiles de la prestación de servicios zoonosanitarios en las zonas periurbanas de Ghana, información que cabría utilizar como punto de partida para mejorar la calidad general de dichos servicios en el futuro.

Palabras clave

Accesibilidad – Calidad del servicio – Eficacia – Eficiencia – Ganado periurbano – Ghana – Prestación de servicios de sanidad animal – Servicios veterinarios.



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