RESTRUCTURING OF VETERINARY SERVICES THROUGH CONSOLIDATION OF PRIVATE VETERINARY PRACTICE AND INTRODUCTION OF NEW APPROACHES FOR INTEGRATION OF TARGET GROUPS IN THE MIDDLE EAST

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Summary: In most of the countries of the world, public veterinary services constitute the central body that deals with all activities concerning animal health care and disease control. The world trend is towards a reduced role for the State as a service provider. Hence, new models for service delivery are in strong demand by livestock herder communities.

In numerous countries, especially developing countries, the effectiveness of animal health activities is hampered by weakness in the overall organisation of Veterinary Services’ health activities, namely: a) the excessive administrative centralisation that characterises the analysis of health problems, in which the search for solutions depends solely on technicians; b) asymmetric relationship between the official services and the groupings concerned with livestock production, which sometimes leads to social isolation; c) the poor coordination with other sectors and institutions present in the rural areas; d) the low importance accorded to the health role of small scale producers.

Prior to embarking in the restructuring process, public veterinary services should undertake certain steps. These steps include: determining which tasks should be commercialised or made competitive, soliciting potential providers for these tasks, and further reconciling them with professional technical judgement and experience.

One of the most outstanding models of community participation is the active involvement of the community in the carrying out of vaccination and treatment of livestock. This form of involvement is mostly preceded by the organisation of the community and social members into social committees.

Veterinary services are poorly developed generally in many underdeveloped countries of Africa and Asia. The situation is particularly serious in more remote, dry land areas inhabited by pastoral and agro pastoral communities. These areas are characterised by their large size, harsh climate, poor infrastructure, and relatively small but mobile human populations. These factors are constraints to conventional fixed-point service delivery through facilities such as government or private, urban-based veterinary clinics.

In the late 1980s, decentralised animal health systems began to attract increasing interest from Non-Governmental Organisations (NGOs) working in marginalised areas of Africa, particularly dry land areas, inhabited by pastoralist communities. The concept of community participation and its role in animal health services was reviewed. Many NGOs were active in developing projects in pastoral areas of Kenya.

In most of the community animal health systems, workers are expected to treat a limited range of important animal health problems. These problems are identified via participatory assessments with livestock keepers and the project focuses on those ailments that are locally prioritised. Typical animal health problems covered by CBAHWs include worms, ticks, flukes, trypanosomias and various infectious diseases responsive to antibiotics. In addition, vaccination against the most important diseases also takes a major part of the CBAHWs' time. They also act as reporters for disease outbreaks. The message for notification of disease outbreak is usually communicated to the CBAHWs’ supervisor, NGO staff or local government veterinary officer.
1. INTRODUCTION

Official Veterinary Services were set up to prevent and combat epizootic diseases that threaten national economies and endanger world trade (3).

One of the most outstanding features of economic globalisation is the opening up of markets to international trade. Member countries of the World Trade Organization (WTO) undertake to avoid any trade barriers that are not scientifically justified, and to base their decisions on the assessment and management of health risks, in search of suitable ways of protection. One of the key new principles is to strengthen the Veterinary Services. Strengthening includes the establishment of infrastructures for applying measures of this type and ensuring the reliability of information on which risk assessment is based.

In most of the countries world-wide, public Veterinary Services constitute the central body that deals with all activities concerning animal health care and disease control. The world trend is towards a reduced role for the State as a service provider. Hence, new models for service delivery are in strong demand by livestock herder communities (1).

Strengthening Veterinary Services is a key element in the implementation of the Agreement on the Application of Sanitary and Phytosanitary Measures (SPS), which leads to a re-examination of the health principles governing trade in animals and animal products (1).

The delivery of veterinary services to remote areas requires designing systems specifically for their conditions. Among the methods discussed were: community-based services, private providers and public services (including innovative approaches, such as mobile units). Three major categories of economic, social and health activities cover thirty identified veterinary functions in the public sector of the governments in both developed and developing countries (3).

Official Veterinary Services, to meet the requirements imposed on them by the animal industry, they must redesign their organization and alter their style in planning, administration, and relations with environment.

2. CONSTRAINTS OF VETERINARY SERVICE DELIVERY IN PASTORAL AREAS

Veterinary services are generally poorly developed in many underdeveloped countries of Africa and Asia. The situation is particularly serious in more remote, dry land areas inhabited by pastoral and agro pastoral communities. These areas are characterized by their large size, harsh climate, poor infrastructure, and relatively small but mobile human populations. These factors are constraints to conventional fixed-point service delivery through facilities such as government or private, urban-based veterinary clinics (5).

The control of epizootics has been difficult in pastoral livestock due to the above-mentioned constraints, as well as the movement of stock across national boundaries. In certain areas, conflict and insecurity have adversely affected the implementation of large-scale vaccination campaigns.

In addition to the logistical difficulties of working in pastoral areas, there are important political and cultural barriers. Most pastoral ethnic groups in African countries have limited political power. Their reliance on livestock coupled with a mobile life style continues to be viewed by more urban and educated people as backward and wasteful. Most governments are inclined towards an opinion of sedentarisation as a solution to the problem of mobile system undertaken by the pastoral (18).

Professionals from non-pastoral ethnic groups are often reluctant to work in pastoral areas (22). This is due to language barriers between the professionals and the pastoral communities and less acknowledgement of understanding of the pastoral way of life. This might develop a degree of frustration and desperation, which adversely affect the performance and quality of delivered veterinary services.

Catley et al. (5) enumerated the problems facing veterinary services in some African countries to be: vastness of the pastoral area with harsh climatic and environmental conditions, low staffing percentage compared to number of livestock in the area (recommended staffing levels to be 240,000 veterinary livestock units (VLU) per veterinarian and 12,500 VLU per veterinary assistant), poor infrastructures, limited vaccination coverage, poor system of cost recovery.

In countries where privatisation was judged to be relatively successful, private veterinary pharmacies and clinics were concentrated around urban or peri-urban centers in mainly highland areas (24).
3. OIE INTERNATIONAL ANIMAL HEALTH CODE AND VETERINARY SERVICES QUALITY

The principal aim of the *International Animal Health Code (Code)* of the Office International des Epizooties (OIE) is to facilitate international trade in animals and animal products through the detailed definition of the minimum health guarantees to be required by trading partners so as to avoid the risk of spreading animal diseases inherent in such exchanges (4).

The above-mentioned health guarantees are health certificates issued by the authorised official national veterinary officer in the exporting country. The *Code* is one of the effective tools of international trade in livestock and livestock products. All countries should adopt the *Code* recommendations in order to avoid any risk or hazard to human and animal health from introducing into their territories an infectious agent through importation.

Because of the variation of the sanitary situation in exporting and importing countries, the *Code* offer importing countries widely selected options for sanitary requirements, but precisely based on scientific justification.

The *Code* also specifies the general sanitary requirement enforced by importing countries, which are almost always associated with the quality of Veterinary Services in the exporting country. An exporting country should be prepared to supply the importing country with information for the assessment of the Veterinary Services. The most important information package is the status of List 'A' and 'B' diseases. Moreover, information on the Veterinary Service structure, the distribution of services and the readiness to communicate the reports on disease outbreaks at any focus in the country in addition to the diagnostic capabilities existing in the exporting country, are all required information by the importing country.

The *Code* in article 1.3.2.1. emphasises the necessity of certification that should be based on scientific justification. Certification should be based on exact and concise conditions, already agreed upon between the veterinary authorities of both importing and exporting countries. It should be based on highly ethical standards and avoid including any doubtful sanitary conditions.

The *Code* in article 1.4.3.1. also offers OIE Member Countries the right to undertake an evaluation of another countries’ Veterinary Services where reasons exist concerning trade in animals, animal products, animal genetic material, biological products and animal feedstuff between the two countries. This evaluation should be concluded on a bilateral basis.

The *Code* in article 1.5.2.1. obliges the exporting countries to export from their territories animals for breeding, rearing or slaughter, which are correctly identified and which come from a farm or any agricultural establishment free from list 'A' diseases and not situated in an infected zone. This means that these animals should be kept under strict veterinary observation before being transported, i.e. through keeping these animals in quarantine for an appropriate time.

The evaluation criteria include the type of trade, the animals, or products involved, the animal production system existing in the respective country, the animal health status, and veterinary public health standards (17).

The *Code* realises that the importation of animals and animal products may involve a degree of risk to the importing country. The OIE thus developed a system of risk assessment. This indicates the process of identifying and estimating the risks associated with the importation of a commodity and evaluating the consequences of taking those risks. There are many factors involved in the estimation of risk assessment. The most important of these risk probabilities are the probability of causative agent entry and the probability of exposure of susceptible species in the importing country. Multiplication of both these factors would result in unrestricted risk estimation. This constitutes the quantitative risk assessment model.

The *Code* defines the procedure of risk estimation through interpretation of all the factors involved in the model. It defines the agent entry factor because of simple multiplication of country and commodity factors. The country factor is the estimation of the prevalence of disease (product of the number of outbreaks that occurred in the previous 12 months) in the exporting country, the average herd or flock size, and the average duration of infection over the denominator of the number of animals in the population. Principally, this information could be extracted from OIE statistics. The country factor could be further modified by the result of evaluation of the Veterinary Services in the exporting country.
The commodity factor is an estimation of the probability of the agent being present in the commodity at the time of import. This is affected by the survival rate of the agent. There are many determinants that should be considered in the calculation of this factor. These determinants include species age and breed, characteristic features of the agent, physical and environmental conditions prevailing in the country. Information on the agent could be collected from scientific literature.

The number of animal import units influences the probability of agent entry. A single animal of any species represents an animal import unit. Animal products should be given a kilogram weight equivalency for one animal import unit.

The probability of exposure of the importing country to risk from importation of any commodity is estimated by considering that any imported commodity is exposed to animals and humans in the importing country. This exposure depends on many factors: nature of the commodity, type of agent, human and animal demography, mode of transmission of the agent, animal health legislation, and customs and cultural practices.

Both importing and exporting countries, whenever there is any intention of importation, should embark on serious negotiations to select the best way to establish bilateral agreement, which might facilitate selection of the appropriate scenario for developing proper risk assessment.

The OIE encourages Member Countries to establish bilateral agreements based on scientific justification to facilitate flow of international trade.

4. RESTRUCTURING OF VETERINARY SERVICES

Schreuder et al. (21), reported beneficial animal health, and financial effects resulting from access to basic animal health service in southern Afghanistan. These authors concluded that mortality was reduced on an average of 26% and 43% in young and adult ruminants, respectively. 'Restructuring' means, giving new structure or arrangement. In relation to Veterinary Services, the statement refers to reorganising the Veterinary Services in a new set-up, in order to cope with the new national and international community requirements.

The FAO (6) reported that before public Veterinary Services could embark on the restructuring process, some steps should be undertaken. These steps include: determining which tasks should be commercialised or made competitive, soliciting potential providers of these tasks, and further reconciling them with professional technical judgement and experience. Subsequently, the public Veterinary Service needs to concentrate on the following:

Focus on monitoring delivery of commercialised tasks to ensure that public interest is fairly served, thus calling for skilled well-paid, non-corruptible civil service able to take on a regulatory role to ensure quality;

Marketing and delivery of effectively specific professional services;

Deliver high quality and effective services and maintain public support and funding;

Historically, the public Veterinary Service is responsible for the main activities of disease control and rendering field veterinary services. However, due to the new demands of international trade, the World Trade Organization (WTO) member countries should undertake very strict procedures to avoid trade barriers that impede the flow of livestock and its products to international markets. These barriers are mainly sanitary ones associated with diseases and chemicals.

One of the key activities to improve livestock health status is the strengthening and upgrading of Veterinary Services. Since the existing structure of Veterinary Services does not fulfil the international trade standards, all countries adopted new ideas and approaches for restructuring. It was admitted that privatisation and community participation are the most effective tools of restructuring. These approaches were known to increase the efficiency and quality of rendered veterinary services.

5. PRIVATISATION OF VETERINARY SERVICES

Privatisation is the transfer of assets of service delivery from the government to the private sector. Privatisation runs a very broad range, sometimes leaving very little government involvement, and other times creating partnership between government and the private service providers, while the government is still the dominant player. Another definition: any process aimed at shifting functions and responsibilities, in whole or in part, from the government to the private sector.
Privatisation is the process of privatising enterprise, that is, of transferring a business from a state to private ownership. Relevant to veterinary practice, privatisation can be defined as the "process whereby activities carried out by government are transferred to the private sector."

Since the early eighties, many governments in the area have deliberately pursued a policy of market liberalisation and privatisation. Solutions that involve giving access to new social players, especially from the private sector appear to be very attractive. However, these players have the capacity to mobilise social, political and financial resources. Moreover, the new models transfer animal health activities to a geographical micro-area consisting of local communities in which the community shares the problems and interests of the livestock sector (Privatization Database, 2001).

Henry Gibbon (7) answered the question "why privatise?" He justified it as follows:

- To promote efficiency by exposing business and services to greater possible competition, to the benefit of the consumer.
- To spread share ownership of the wealth as widely as possible among the population.
- To obtain the best value for each industry or service the government sells.

The private veterinary sector is to deliver preventive, curative and promotive services that largely benefit individual animals and their owners, i.e. to deliver private goods and services (12). This means that a private veterinarian should debit livestock owners the full cost of examination and diagnosis, medicines, economically motivated preventive vaccinations, surgery, husbandry advice, and other services provided, together with his or her time and transportation cost (6). In such cases, the public budget can cover part of the costs of the services.

Private veterinary services have been in operation in many Least Developed Countries (LDC) for the last 10 years. The appropriate roles of the private services would be: the implementation of sanitary measures; provision of curative services; and training and guidance on preventive health care and production diseases to individuals or to community animal health workers (23).

Although private veterinary activities are now allowed in many countries throughout the world, the lack of appropriate legislation stands as a real constraint. Thus, the PARC privatisation scheme had limited success for the above-mentioned reason.

The identification of functions already enjoying a high degree of commercialisation, for example, clinical diagnosis and treatment, leads to a consideration of their potential economic viability when implemented by the private sector (6).

6. MANAGEMENT OF PRIVATISATION

Once tasks to be commercialised had been identified, further steps in the implementation process are to carry out a macro economic assessment of the public versus the private nature of each task. The public sector should also identify potential economies of scale in delivering the task and look for the presence of externalities and benefits from experiences of other countries to classify tasks to be commercialised (6).

Sound professional technical assessment of the epidemiological status of disease based on biological characteristics of diseases, is the prerequisite step before the country embarks on the privatisation process. This assessment will definitely enable the veterinarians to learn a great deal on the disease agents and their control strategies, and can serve as a model of veterinary professional association.

7. COMMUNITY PARTICIPATION

In many countries in Africa, Veterinary Services use trained livestock herders as vaccinators or reporters of disease outbreaks. These workers are given basic training, which enables them to carry out primary health care associated with vaccination and curative activities (10).

The idea of using primary veterinary workers in Africa was resurrected in 1976 when a rangelands project in Ethiopia used veterinary scouts to provide a limited range of vaccination and treatment services (19). Veterinarians in Sudan also began to promote the 'paravet', barefoot vets or similar type of workers (22), and in Somalia, 'Nomadic Animal Health Auxiliaries NAHAs' were used to good effect in the central rangeland (2). The experience coincided with the development of decentralised animal health projects in Nepal and India (9, 16). The common feature of these projects
was greater use of local people to identify key problems, select people for training as animal health workers, and support these workers via schemes such as surcharges on veterinary medicines. Hence, communities began to participate more fully in the design and delivery of veterinary services. In some of the projects, paravet workers were regarded as independent operators.

Schillhorn (20) mentioned that in numerous countries, especially developing countries, the effectiveness of animal health activities is hampered by weakness in the overall organisation of veterinary services’ health activities, namely: a) the excessive administrative centralisation that characterises the analysis of health problems, in which the search for solutions depends solely on technicians); b) the asymmetric relationship between the official services and the groupings concerned with livestock production which sometimes leads to social isolation; c) poor coordination with other sectors and institutions present in the rural areas; d) the low importance accorded to the health role of small-scale producers.

In view of these prevailing conditions, many countries started restructuring of their Veterinary Services. One of the most appropriate models found to be suitable for proper delivery of veterinary services is community/social participation.

Some social players in the livestock sector in most of countries are: livestock raisers, herd owners, private sector veterinarians, animal industry and trade representatives, livestock transporters, producers and sellers of livestock products, representatives from other ministries and services working in the rural environment, consumers and all members of society whose activities are linked to livestock production and animal health (1).

The community could actively participate in many forms in animal health matters. Livestock owners associate themselves in official programmes adopted by the government. Moreover, the community can contribute to the accomplishment of the work through financing or actively involve themselves in the physical work.

One of the most outstanding models of community participation is the active involvement of the community in conducting vaccination and treatment of livestock. This form of involvement is mostly preceded by the organisation of the community and social members into social committees.

8. COMMUNITY-BASED PARTICIPATION APPROACHES AND ANIMAL HEALTH SERVICES DELIVERY

In the late 1980s, decentralised animal health systems started attracting increased interest from Non-Governmental Organisations (NGOs) working in marginalised areas of Africa, particularly dry land areas, inhabited by pastoralists communities. The concept of community participation and its role in animal health services was reviewed (13). Many NGOs were active in developing projects in pastoral areas of Kenya (8).

In the early 1990s, the persistence of rinderpest in endemic, remote areas of Eastern Africa was a serious threat to the eradication of the disease. For many years, conventional government vaccination teams had been unable to access these areas or create local working relations with local herders (15).

Considering the successful use of Community Based Animal Health Workers (CBAHWs) for rinderpest vaccination, some lessons were learned from this experience. These lessons were clearly outlined by Leyland (14) in a comprehensive report. He concluded his report with the following seven principles:

1. Community Animal Health Workers (CAHWs) should be building on what local people already know.
2. Use and develop people’s abilities and skills to analyze and evaluate their situation.
3. Help people to analyze their individual situation and see how their activities may be altered in a beneficial manner, thus setting local priorities.
4. Reveal whether human or material resources are being used efficiently and effectively.
5. Enable people to study their own methods of organization and management.
6. Increase the sense of effective responsibility for program development, implementation, monitoring, and evaluation.
7. Draw-up community action plans or ‘social contracts’ which detail priority actions to be taken, use of materials and labor, and roles and responsibilities for different players.

9. ACTIVITIES OF CAHWS

In most of the community animal health systems, workers are expected to treat a limited range of important animal health problems. These problems are identified via participatory assessments with livestock keepers and the project focuses on those ailments that are locally prioritised. Typical animal health problems covered by CBAHWs include worms, ticks, flukes, trypanosomias, and various infectious diseases responsive to antibiotics. In addition, vaccination against the most important diseases also take up a major part of the CAHWs’ time. They also act as reporters for disease outbreaks. The message for notification of disease outbreak is usually communicated to CAHW supervisor, NGO staff, or local government veterinary officer (11).

10. INSTITUTIONS AND POLICIES OF CBAHWS

It is well known that in most countries, livestock services receive less attention from the government. Within veterinary departments, pastoral areas have received less attention than areas occupied by sedentary farmers. This situation is evidenced by poor development of private veterinary services in pastoral areas despite the fact that pastoralists are willing to pay for basic preventive and clinical services.

Veterinarians in many countries are relatively conservative about the ability of CAHWs to undertake disease diagnosis or treatment. This might affect the smooth implementation and progress of the CAHWs’ system approach. Veterinary institutions, including universities, associations and trade unions have resisted some aspects of change, particularly the expanded role/registration of paraveterinarians. This is due to fears that these will erode employment opportunities for veterinarians. Such ideas should be countered if the government is seriously acknowledging the institutionalisation of CAHWs and its intention to offer the system a formal acceptance.

It is clearly observed that the process of bringing policy and legislative changes to accommodate the CAHWs approach is relatively slow and weak. The involvement of lawyers and other legislators in the process of drafting regulatory measures, discussions and dialogues with different community factions is essential.

There are many constraints facing adoption of the CAHWs approach. These include that the pastoral areas are usually characterised by poor infrastructures, lack of communication means, and continuous movement of pastoralists. In addition, difficulty in accessing credit for CAHWs is one of the constraints. However, the difficult situation of war and tribal conflicts affect the smooth delivery of veterinary services to the beneficiaries.

11. FEEDBACK FROM THE QUESTIONNAIRE

The questionnaire was designed and distributed to the 19 OIE Member Countries of the Regional Commission for the Middle East. Only 6 (31.6%) replies were received from the countries, namely: Cyprus, Egypt, Kuwait, Saudi Arabia, Sudan and Turkey.

Regarding the organisation of national Veterinary Services, in 5 (83.3%) countries, Veterinary Services are integrated in the Ministry of Agriculture. Sudan is an exception where Veterinary Services are the integral responsibility of the Federal Ministry of Animal Resources. The role of the central ministry in the management of field veterinary services is common in all the countries. It is mainly concentrated on: planning, supervision, and coordination of disease control and animal health management activities. Types of livestock keeping patterns range between nomadic, pastoralist in some countries and intensive and semi-intensive in most of the countries. The national Veterinary Services’ mandate in all the countries is mainly focused on disease control, export/import of livestock and its products, management activities and veterinary drug registration and supervision.

The main constraints of control and eradication of livestock diseases are generally summarised by the countries as: budgetary shortages, uncontrolled extensive livestock movement in vast areas of the country and lack of adequate working facilities. Some countries attributed the introduction of diseases in their territories to the large number of annually imported livestock. In addition, harsh climatic conditions are mentioned by some countries as one of the constraints to livestock disease control and eradication.
The economic impact of livestock on the national economy is of considerable importance in all countries. This impact is expressed in the form of support to the national treasury and provision of food for the people, hence avoidance of any attempts for import of livestock and its products.

Over 50% of the total veterinarians in most of the countries are involved in private veterinary practice. They are mainly distributed between private veterinary clinics and pharmacies, the drug industry, animal production, slaughterhouses, and national disease control campaigns. The majority of private veterinarians obtain funding from personal resources. Few private veterinarians are supported by bank loans. With the exception of a few countries, private veterinary service is an integral part of the general national policy. In countries where professional organisations are well developed, the latter to a large extent control and regulate private veterinary practice. Few countries have regulatory laws and rules for this purpose. A public veterinary service has the upper hand in controlling and supervising private veterinary practice.

Community participation in the field of animal health and disease control is not satisfactorily developed in many countries. Even those countries experiencing this approach of community participation, are at their initial stage of trial.

12. CONCLUSION

In most of the countries of the world, public Veterinary Services constitute the central body that deals with all activities concerning animal health care and disease control. The world trend is towards a reduced role for the State as a service provider. Hence, new models for service delivery are in strong demand by livestock herder communities.

The problems facing Veterinary Services in some African countries are exemplified to be: vastness of the pastoral area with harsh climatic and environmental conditions, low staffing percentage compared to the number of livestock in the area.

The principal aim of the International Animal Health Code (Code) of the Office International des Epizooties (OIE) is to facilitate international trade in animals and animal products through the detailed definition of the minimum health guarantees to be required by trading partners so as to avoid the risk of spreading animal diseases inherent in such exchanges.

The Code in article 1.5.2.1. obliges the exporting countries to export from their territories animals for breeding, rearing or slaughter, which are correctly identified and which come from a farm or any agricultural establishment free from list “A” diseases and not situated in an infected zone. This means that these animals should be kept under strict veterinary observation before being transported, i.e. through keeping these animals in quarantine for an appropriate time.

One of the key activities to improve the livestock health status is the strengthening and upgrading of veterinary services. Since the existing structure of veterinary services does not fulfil international trade standards, all countries adopted new ideas and approaches for restructuring. It was admitted that privatisation and community participation are the most effective tools of restructuring. These approaches were known to increase the efficiency and quality of rendered veterinary services.

In many countries in Africa, veterinary services use trained livestock herders as vaccinators or reporters of disease outbreaks. These workers are given basic training, which enables them to carry out primary health care associated with vaccination and curative activities.

It is clearly observed that the process of bringing policy and legislative changes to accommodate the CAHWs approach is relatively slow and weak. The involvement of lawyers and other legislators in the process of drafting regulatory measures, discussions and dialogues with different community factions is essential. Consolidation of the CAHWs concept needs encouragement from the OIE and other relevant organisations to be strengthened and enhanced.

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