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## Improving veterinary services in Bangladesh

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In the poverty-reduction strategy paper, livestock has been recognised as one of the tools for reducing poverty, particularly for rural poor women and vulnerable farmers in the country. Sustainable animal production can be expected when infectious and contagious diseases are eliminated with scientific herd health management. These are highly dependent on the structure of the livestock production system and the market for its products. Until 1947, the civil veterinary department in British Bengal shouldered the responsibility of controlling epidemic of animal diseases. Subsequently, this department became the Directorate of Animal Husbandry in 1948. The dairy and poultry farms of the then Agriculture Department merged with the newly-created directorate. In 1962, it became the Directorate of Livestock Services, which was later transformed into the Department of Livestock Services (DLS). At present, veterinary services provided by the DLS are mostly (a) clinical services, (b) preventive services, (c) input deliveries, and (d) veterinary public health and food safety. A defined official veterinary service in line with the World Animal Health Organisation is absent.

Comprehensive reports on livestock services are available, where an integrated approach to disease surveillance, epidemiology of infectious diseases together with strong veterinary public health services for controlling 'zoonotic' diseases and safe food production are highlighted. The implementation of laws relating to disease control, animal slaughter and meat inspection has been suggested.

The private sector's involvement in production of vaccines, medicines, animal feeds, and breeding of food-animals is highly recommended. Besides, an institutional reform defining the mandate and function of the DLS to strengthen its capacity to provide public services such as monitoring, control and prevention of diseases, including trans-boundary disease transmission, veterinary public health, quality assurance of private sector services, and provision of information particularly to the poor on new technologies, management practices and farming systems are suggested.

The yearly operational fund available for the DLS from the revenue budget is only 5 per cent. The DLS purchases vaccines and distributes them among the farmers free of charge, but the quantity is grossly insufficient. Private investments in vaccines and drugs amount to Tk 2,100 million (\$35 million), of which feed additives, vaccines and drugs constitute 15 per cent, 33 per cent and 63 per cent respectively. Sales of local products constitute 55 per cent of the market and imported products constitute 45 per cent of the market. There are over 50 pharmaceutical companies that are either national enterprises or subsidiaries of multinational companies. These companies manufacture or import veterinary drugs, vaccines, premixes and vital

The main constraints facing the veterinary services are (a) limited veterinary services provided by the DLS (sub-district) Veterinary Hospital, (b) no quality control for vaccines, drugs, feeds and breeding tools and materials, (c) no non-strategic disease control programme, (d) poor disease investigation facilities, (e) weak linkage between diagnostic laboratories and surveillance system, (f) no epidemiological unit in the DLS for disease surveillance, (g) absence of quarantine services, (h) lack of regulations pertaining to veterinary public health and food health and hygiene, (i) lack of continuing veterinary education and training, (j) absence of continuing professional development (CPD), (k) lack of training facilities for an auxiliary staff, (l) absence of quarantine service and veterinary policing and (m) inadequate facilities for veterinary and biomedical research.

The major issues for modernisation of veterinary services to cope with the changing need of the new century are (i) institutional reform of the DLS in line with the World Animal Health Organisation, (ii) quality assurance of products and services, (iii) human resource development, (iv) strengthening of veterinary education, research and training, (v) establishment of disease surveillance, emergency planning and quarantine services (vi) framing and reforming

legislation for legal coverage, (vii) capacity building of Bangladesh Veterinary Council for framing and implementing regulatory affairs, (viii) capacity building of veterinary public health and food safety, (ix) establishing or strengthening the veterinary drugs control authority.

**Institutional reform:** The DLS provides veterinary services of a private nature and it is limited mainly to headquarters and the adjacent areas. It pays little attention to public tasks like disease surveillance, enforcing veterinary regulations, quality assurance and certification of services and products, control of alien diseases and quarantine of animals and animal products, food safety, 'zoonotic' disease surveillance and control.

The structure and modus operandi of the DLS are neither suitable for rendering public services nor sufficient for delivering private services. The DLS acutely needs institutional reform with clear mandate and function in order to enhance capability in rendering public services and to ensure gradual withdrawal from private services.

Reform is needed for development of a national veterinary service that meets the conditions set by the International Organization for Epizootics (OIE), that is, World Animal Health Organisation. It is imperative that a national veterinary authority should consistently be led by a veterinary surgeon and also supervised by competent veterinary surgeons at all levels. The entire process needs a thorough overhauling for achieving targets. The process should take into account existing farming systems and financial capacity of the farmers.

**Quality assurances:** The quality assurance system for drugs, vaccines, semen, embryo feeds, services, etc. is non-existent, except the registration of veterinary drugs by the Directorate of Drug Administration. The quality of services produced by the DLS is internally assessed. There is no authority in the country to oversee the quality of services by veterinary professionals and para-professionals. The Bangladesh Veterinary Council (BVA), although responsible for licensing veterinary professionals, does not have the capacity to ensure quality veterinary education, research and extension services. Many NGOs and government offices offer different types of short courses and training without quality assurance by a competent authority.

**Human resource development:** There is a serious dearth of continuing veterinary education for practising veterinarians and auxiliary staff. Training institutes of the DLS are neither equipped nor functional in terms of offering need-based training to its officials, staff and clients.

The Departments of Youth, Child and Women Affairs, the Bangladesh Rural Development Board (BRDB), the Agricultural Village Defence Directorate and Bangladesh Academy for Rural Development (BARD) offer short training programs to livestock farmers. However, training offered is not effective because of the weakness of the training modules and lack of interest of the trainees. Some non-government organisations (NGOs) also provide short training for their field work beneficiaries. These training programmes are generally inadequate and facilitated by people without relevant technical background.

**Veterinary research:** The Bangladesh Livestock Research Institute (BLRI) is neither adequately staffed nor funded to carry out research on veterinary sciences including biomedical research. Very little has been done in identification of pathogens, epidemiology of important diseases, identification and characterisation of 'zoonotic' and food-borne diseases, development of cheap and effective techniques for quick identification of pathogens (with the exception of developing slide ELISA (enzyme-linked immunosorbent assay, a test that uses antibodies and color change to identify a substance) for identification of Peste des Petits Ruminants (PPR)--contagious disease affecting goats and sheep--assessing drugs, heavy metal residues and toxins in foods of animal and aquatic origin. The Bangladesh Livestock Research Institute (BLRI), Savar, has been rendering routine poultry disease diagnostic services, which is the job of the diagnostic laboratory of the DLS or the private sector. Moreover, the BLRI does not have any systematic link with the field for refining new technologies.

**Veterinary public health:** The issues considered such as food safety, control of 'zoonotic' diseases, meat inspection and abattoir management are very poorly addressed. It has implications for trade issues, human health and environmental health. Classically, veterinary and human health authorities address these areas jointly. However, coordination between them is

services is virtually non-existent. In the DLS, there is a small section with the mandate of 'zoonotic' disease through surveillance, but it suffers seriously from shortage of human capital, funding and laboratory facilities. In the veterinary public health (VPH) section has no support through a legal framework to implement the mandates.

Municipalities and city corporations are entrusted with carrying out meat inspection under their jurisdiction. However, veterinary surgeons are generally inadequately trained in VPH and food hygiene. There is no proper regulatory framework which should address sanitary and safety issues. For other foods of animal origin such as milk, meat, eggs, and value-added products, the sanitary inspectors of the health department have the authority of inspection and examine such products. But they are neither properly trained nor supervised by competent veterinary surgeons. This results in marketing of products that pose the threat of spreading diseases in humans and these are not also friendly to the environment.

Export of animal products needs to follow the World Organisation for Animal Health (OIE) or importing country standards. In the near future, the role of international organisations is likely to intensify in monitoring regional diseases which Bangladesh should be prepared to participate. To this end, strengthening of VPH services is essential for participation in the process of regionalised disease control aimed at increasing international market access, ensuring safety of health and protect the environment.

Disease surveillance, monitoring and a strong reporting system are the keys to any disease control initiative. The surveillance and reporting system was instituted with donors' help, but after completion of the project, the system is facing the lack of funding and manpower. Different institutes have done sporadic disease monitoring, but till date there has been no national disease surveillance using sero-prevalence techniques.

There was no animal quarantine system in Bangladesh before promulgation of the Animal and Animal Product Quarantine Act, 2005. Absence of an animal quarantine system leads to entry of trans-boundary animal diseases and impedes trade.

Natural calamities and disease epidemics are frequent phenomena that particularly affect the poor people. In Bangladesh does not have any emergency preparedness plan to combat such adverse situations.

Legislations and regulations: Laws and regulations are essential for high-quality service delivery and assurance of products and also for trade access. Bangladesh has laws and regulations to cover some areas, but the regulatory frameworks and implementation are still weak. Furthermore, the institutions responsible for drafting and implementing laws and regulations have inherent weaknesses in terms of requisite knowledge and expertise.

The BVC should come forward to shoulder the responsibilities with the concerned ministries in formulating and implementing the legal aspects for better protection of human health and environment. On the other hand, professional skills should be enhanced.

In order to update the present veterinary services with specific emphasis on the reduction of poverty and its sustenance, a comprehensive review and assessment are done to address these issues as related to the national need within the framework of the Animal Health Code (OIE, 2003).

Privatisation of veterinary services:

Veterinary services are the areas where economic classification of various components differs with different interpretations. The livestock development programme is exacerbated by deficient veterinary infrastructure and inadequate disease control programmes, veterinary legislation and information services, as well as a lack of quality drugs and biologics. In Bangladesh, disease control and prevention are the major tasks for the public sector, while some other veterinary tasks such as treatment of individual sick and injured animals could be done in response to the needs of the owners.

The DLS has been devising and implementing strategies for progressive control through preparedness plan diseases.

Empowerment of veterinary public health section: Veterinary public health, food hygiene and zoonoses control are to improve the health status of the people. Poverty is thought to be one of the risk factors for zoonoses and for diseases in both rural and urban consumers. Consumers should be provided with safe food but, unfortunately, the of the DLS does not have the required funds, facilities and manpower to determine the presence of harmful agents. Attention should be given to the risks at the level of both production and consumption of food of animal origin. It the risks of transmitting 'zoonotic' diseases, risk of occupation health hazards and the risk to environmental health may affect the health status of domestic and companion animals.

Bangladesh has been facing serious threat of 'zoonotic' diseases such as rabies, anthrax, brucellosis, tubercular cysticercosis, echinococcosis and toxocariasis while Nipah, campylobacter, salmonellosis, E. coli and fungal infections are the more recent problems. There is also a serious risk with the avian influenza.

The present VPH section of DLS needs to be revitalised with clearly defined function, duties and responsibilities. A laboratory building is required to perform surveillance, diagnosis and epidemiological analyses. Also sanitary measures need to be introduced in the meat industry. They should participate in international fora (FAO/Codex, WHO, OIE, WTO) to perform these functions in future.

Development of para-vet/community animal health workers: The DLS is providing veterinary services through its network of 464 Upazila Veterinary Hospitals (UVH). This constitutes the administrative units of 64 districts under six divisions. Around 20-25 sick and injured animals are attended to as outpatients daily. In addition, it extends outdoor services to at least 5-10 sick and sub-fertile animals at small and commercial farms. It is very hard for one veterinary surgeon to cope with all the work.

The DLS has four training institutes for imparting training to auxiliary staff, and one officers training institute (OTI) for continuing the veterinary education to update their knowledge. After getting appointment as veterinary field assistant (VFA) and veterinary 'compounders', these auxiliary staff are trained at those institutes.

Capacity building for regulatory affairs: Every veterinary surgeon has of course a duty as a citizen to keep abreast of current developments in the laws of the country and to take care of observing those.

The BVC should establish a sound legal framework in line with Sanitary and Phyto-sanitary (SPS) Agreement under the World Trade Organisation (WTO), which is required for trade purpose; livestock production and processing sectors should be organised and harmonised as per internationally acceptable standards, so that the internal regulations are implemented and monitored in all aspects of livestock health and production. The BVC should take the responsibility to frame regulations and get them approved by the parliament.

Bangladesh has inherited legislation pertaining to animal welfare, health and production from the British India. These regulations and Acts have been modified or changed but not implemented. Regulations pertaining to slaughter, meat inspection, drug residue, zoonoses and animal welfare and quality assurance/control of all aspects of livestock production and health are regulated and controlled by different ministries and organisations, but these are not implemented in practice due to lack of coordination and responsibility.

This is an abridged version of an article titled 'Veterinary services: Present status and future plans' by Professor Iqbal Shahi Alam, Dean, Faculty of Veterinary Science, Bangladesh Agricultural University, Mymensingh.

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