

## IMPROVING VETERINARY SERVICE IN PAKISTAN

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### INTRODUCTION

Veterinary service is considered as a national and global public good and thus has become the responsibility of national governments and international community. While at international level, World Animal Health Organization (OIE) and Food and Agriculture Organization (FAO) of the United Nations are performing majority of the functions of global veterinary service reasonably well, it is in fact responsibility of the respective national governments to establish and administer an efficient veterinary service in their respective countries. The purpose of this article is to see where we stand in veterinary service in Pakistan and how it can be improved.

### Objectives of veterinary service

Traditional mission of the veterinary service has been to protect domestic animal agriculture in the respective countries. However, this thinking has changed over the years and now control of risks along the animal food chain and animal welfare are also considered as essential components of the veterinary service (OIE Terrestrial Code Commission, 2008). The basic purpose of veterinary public service is to support access of animals and animal products to national, regional and international markets. The official veterinary service should have the following objectives: 1) Control of animal diseases with ability to rapidly detect and diagnose. 2) Minimize and control the risk along the food chain (veterinary public health) including zoonosis and food borne diseases. 3) Welfare of animals.

The veterinary service of the country is evaluated on the basis of four criteria, including human, physical and financial resources; technical authority and capability; interaction with stakeholders and access to markets (OIE Terrestrial Code Commission, 2008). Transparency is essential for the credibility of veterinary service of the country. Furthermore, veterinary service has to be technically independent and immune from political pressures from all sources.

### Tiers of veterinary service in Pakistan

Pakistan is a federal state with four provinces, Northern Areas and Federally Administered Tribal Areas, with Islamabad as its capital. Under the constitution, many functions are devolved to provinces. Current functions relating to veterinary service being performed by the Federal Government include; development of national policies and planning,

international and provincial coordination on animal diseases, import/export of animals and animal products, animal quarantine and research on animal diseases (Ali and Ali, 2005). No animal welfare activities are undertaken by the federal government.

Main functions of veterinary service are being performed by the provincial governments. The activities listed by the provinces in this regard include: diagnosis of diseases and treatment of animals, prevention of animal and poultry diseases, prophylactic vaccination and production of biologics, meat inspection, veterinary training, research in animal health and prevention of cruelty to animals. Some activities of veterinary service have been devolved to local governments under the Local Government Ordinance 2001 (Anjum, 2005). These relate to provision of preventive and curative veterinary health services for the livestock farmers. Meat inspection has also been devolved to local governments.

### VETERINARY SERVICE INSTITUTIONS

Veterinary Service Department in the Indo-Pakistan sub-continent was started by the British Government. This department was renamed as Animal Husbandry Department in the newly created Pakistan. Over the years, the provincial departments dealing with veterinary service used different nomenclature including Animal Husbandry, Livestock and Dairy Development, etc. With increased emphasis on the livestock production, different activities relating to veterinary service have lost focus of these departments.

At the federal government level, Animal Husbandry Commissioner (AHC) in the Ministry of Livestock and Dairy Development also acts as Chief Veterinary Officer (CVO) for the country. This is one of the functions of AHC and as such no whole time CVO exists in Pakistan. AHC is supported by a Deputy Animal Husbandry Commissioner (DAHC), not for veterinary service exclusively, and two Assistant Commissioners (one dealing with epidemiology of animal diseases and other with vaccines and sera). Animal Quarantine Department, an attached department of the Ministry, looks after the import and export of live animals and animal products. This department has its offices at all exit and entry points (international ports and airports) of the country. The department is understaffed, under-budgeted, has minimum laboratory expertise and quarantine house for 200 animals only at one place. National Veterinary Laboratories, Islamabad was set up by the federal government to act as

regulatory body to check drugs and vaccines (not part of mandate of Ministry of Livestock and Dairy Development but are regulated by Ministry of Health), drug residues in the imported and destined for export materials, as well as to provide diagnostic and training services.

Provincial governments manage majority of institutions which carry out activities relating to veterinary service. The detail of these institutions is given in Table 1. Currently, there are 963 veterinary hospitals, 2869 veterinary dispensaries and 2875 veterinary centres in the public sector which are mandated to control livestock diseases and provide prophylactic vaccination against major infectious diseases of animals. These institutions submit monthly progress report, including infectious diseases reports. These institutions are also supposed to provide flash reporting in case of disease outbreak. A network of district diagnostic laboratories exist which are supported by regional and provincial diagnostic laboratories and national reference laboratory. Under the animal welfare activity, British in the united India, set up Society for the Prevention of Cruelty to Animals (SPCA) in 1890. SPCA is an autonomous organization of Punjab Government, primarily working for the welfare of draught animals. Brooks Hospital, a British NGO, also works for welfare of the draught animals.

### CHALLENGES AND RECOMMENDATIONS

Internationally recognized effective and transparent veterinary service in the country is pre-requisite for trading animals and animal products in the international market. In fact even for domestic market, food safety is of principal concern for the consumers, particularly in higher echelon of the society. This can only be ensured if veterinary service is effectively performing its functions. Pakistan is facing various challenges in this regard and needs to take remedial measures. Recommendations for tackling various challenges in this regard are given below:

#### Appointment of a full-time Chief Veterinary Officer

A full-time Chief Veterinary Officer (CVO) at the federal level should be the beginning of an effective veterinary service in the country. CVO should be aided with an epidemiology cell manned with competent and dedicated professionals. A contract needs to be developed, clearly defining the obligations of district and provincial governments as to disease reporting and control. This will only be effective if a small federal office is established in Livestock Development/Animal Husbandry Departments of each of the federating units.

Restructuring of provincial livestock departments to create a position of Provincial Chief Veterinary

Officer will facilitate the working of veterinary services in the provinces. Coordination with CVO will also improve in this way. Job description of such a position should be clearly defined, so that he/she can contribute towards developing an effective veterinary service in the province.

#### Disease monitoring and reporting

Disease monitoring and reporting needs to be improved. Main reason of poor reporting of the disease outbreaks is the lack of response from the concerned authorities. A clear standard operating procedure (SOP), highlighting the control measures in case of report of each outbreak, needs to be developed and made effective. This mechanism could be started with a few diseases and then expanded to include other infectious diseases, once visible progress is made and the farmers' confidence in veterinary service is gained.

Recently, Strengthening of Livestock Services Project (SLSP, funded by Government of Pakistan and European Union), has made progress in improving the disease reporting from district to the province and federal level. A computerized network has been established in 30 districts with relevant software which is connected to a provincial node in each province and a federal epidemiology node in the project office. This system is being expanded to 60 districts and ultimately all districts will be connected to this system. The system has provision for passive disease reporting, as well as flash reporting in case of outbreak of an infectious disease.

Disease monitoring and reporting is fundamental to priority setting in disease control and, thus, needs to be emphasized. In the federal governance system like Pakistan, it will be imperative that federal representative is present at provincial level for assisting in disease reporting. It could later on be envisaged that one such person at each district level is posted, either through federal or provincial governments. The most important factor for improving the disease reporting is the type of control response received by the farmers, veterinarians and community. Until and unless we assure that control response would take place, the reporting will not be improved as required under the international norms. The detailed SOP needs to be developed for each notifiable disease in this regard. Disease reporting network developed by SLSP needs to be sustained and brought into regular activities of the veterinary service.

#### Disease diagnosis

Although a network of district laboratories exist in the country, their role has not yet been clearly defined. Furthermore, these laboratories are ill-equipped to diagnose and handle any infectious disease outbreak.

**Table 1: Number of veterinary service institutions in different provinces/regions of Pakistan**

Region	Research/vaccine production institutes	Veterinary hospitals*	Veterinary dispensaries	Veterinary centres	Diagnostic labs
Punjab	1	530	1213	1713	28
Sindh	2	119	60	608	7
NWFP	1	98	363	218	7
Balochistan	1	116	783	-	15
Northern Areas	-	12	165	-	7
Federally Administered Tribal Areas	-	25	212	207	1
Islamabad Capital Territory	1	4	7	-	1
Azad Jammu & Kashmir	-	59	66	129	6
Total	6	963	2869	2875	72

\*Veterinary hospital is an institution where at least one veterinarian is posted along with other para-professional staff and there are facilities for artificial insemination also. Each veterinary dispensary is mostly headed by a veterinarian and a veterinary centre is headed by a veterinary paraprofessional.

Regional or provincial diagnostic laboratories, although reasonably equipped, lack operational funding and necessary reagents and protocols. Although OIE diagnostic protocols are available (even on internet free of cost), the required reagents are usually not available to undertake these tests. Validation of diagnostic methods is not carried in any of these laboratories and most of the veterinarians require training in laboratory techniques. The role of each tier of laboratory needs to be clearly defined, approved and implemented. Equipment, reagents and operational resources commensurate with their roles need to be provided. Technical expertise needs to be continuously upgraded in techniques, standardization and interpretation of diagnostic tests.

#### **National programmes for control and eradication of infectious diseases**

Traditionally, Pakistan did not launch any national programme for the control and eradication of well-known infectious diseases in the country. Following a severe outbreak of Rinderpest in 1994-95 in Northern areas, a national programme for the eradication of Rinderpest from Pakistan was launched under technical assistance of FAO of the UN. This programme met with great success and Pakistan was able to eradicate the disease and got international certification in May, 2007. This gave a lot of confidence to the veterinary service in Pakistan. In 2006, when avian influenza H5N1 outbreak was recorded in the country, a national programme for the control of avian influenza was launched. This programme has also yielded success but being a development project, its continuity beyond June, 2010 is questionable.

National programmes for the control and eradication of frequently prevalent diseases need to be launched. The programmes to be launched immediately include: progressive control of Foot and Mouth Disease, control and eradication of Peste des Petits Ruminants (PPR), control of Brucellosis and control of Haemorrhagic Septicaemia in the country. Similarly, eradication programmes need to be launched for poultry

diseases, particularly for vertically transmitted infectious diseases. Sustainability of avian influenza control programme beyond 2010 should also be ensured.

#### **Import and export of animals and animal products**

Informal trade of livestock and livestock products continue to be a major issue in disease control efforts in the country. Seasonal movement of animals from Afghanistan and Iran and vice versa has been practiced since centuries in this area. Previously, livestock was smuggled from India into Pakistan for in-country use and onward transmission to Iran and Afghanistan, mainly through Sindh borders but after the fencing of international border by India, this practice has practically stopped. Pakistani cattle and buffaloes for beef are routinely transported to Afghanistan and Iran without observing any quarantine practices. There is need to strengthen quarantine services in accordance with trade volume from different ports and airports and informal trade needs to be discouraged. After consultation with veterinary authorities of Afghanistan and Iran, a simpler quarantine system needs to be developed and formal trade among these countries could be encouraged. Proper quarantine houses needs to be established and relevant laboratory facilities be upgraded. This could be achieved by developing detailed SOP for the import and export of each item of animal origin and department records should be properly audited periodically by independent team for transparency and restoring confidence of the stakeholders.

#### **Vaccine production**

Veterinary vaccines are mainly being produced in public sector in Pakistan, although some private vaccine manufacturers have also emerged over the last decade. Drugs and biologic manufacturing and import (including veterinary) are regulated by the Ministry of Health. Vaccines manufactured in public sector are not registered in the Ministry of Health, thus these are not

legally manufactured and sold. In fact most of the veterinary vaccine manufacturers in the public sector do not comply with Good Manufacturing Practices, a basic requirement for licensing of manufacturing facility. Most of the public sector vaccine manufacturers are over-staffed, use obsolete technology and have poor infrastructure. In fact, a complete revamping of vaccine production in the public sector is needed. The vaccine manufacturing units in the public sector may be given full autonomy and be provided with reasonable seed money to improve quality of infrastructure and production technology. Alternately, these vaccine manufacturing units could be operated under public-private partnership. Most importantly, these public sector units have to be registered with drug licensing authorities in the country. This will require willingness to proceed in this direction, improvement in their infrastructure, developing proper production protocols and quality assurance systems at these units.

#### **Quality control of vaccines and veterinary drugs**

Quality of drugs and vaccines for animal use is a major concern of farmers. Although National Veterinary Laboratories were established to cater to this need, it still has not been officially mandated by the Ministry of Health to undertake this task. The staff of the Ministry of Health staff is pre-occupied with human drugs and biologics and a few, if any, samples are being collected and analyzed for veterinary drugs and biologics. There is immediate need to improve quality control infrastructure for veterinary drugs and biologics in the country. National Veterinary Laboratories could be mandated to undertake this work. It should be made mandatory to submit samples from each batch of biologics (from public and private manufactures and all imported vaccines) to the designated laboratory which could initially examine them at random and later on each batch is evaluated, as the facilities are strengthened.

#### **Veterinary public health**

Veterinarians are not primarily concerned with the increase in production by treating the sick animals and poultry but their important job is to ensure quality (residue free) edible animal products such as milk, meat and eggs to the public (Muhammad *et al.*, 2009). This is probably the weakest area of veterinary service in Pakistan. The concept of whole food chain (from farm to fork) does not exist in milk, meat and their products. The responsibilities of regulating foods of animal origin (milk, meat and their products) are divided among various departments/ministries and effective coordination is practically missing. Veterinary service does not regulate the milk supply, transport and dairy industry and only slaughtering at the recognized slaughterhouses (less than 25% of slaughtering occurs in these slaughter houses) are inspected by qualified

staff. The number of qualified staff is grossly deficient as per number of slaughtered animals. Furthermore, as these slaughterhouses are primitive and do not have assembly lines, the inspection is difficult.

Veterinary public health is the main area of improvement where veterinary service has to be mandated and asked to deliver. Private sector should be encouraged to build and operate slaughterhouses and government responsibility should be to provide regulatory services. A clear policy directive should be issued in this regard by the provincial governments. Milk supply and transport should also be regulated by the veterinary service and this aspect should be brought under the purview of veterinary service. Necessary changes in the rules of business should be brought. The district and regional diagnostic laboratory services should include testing for quality of milk and meat and necessary facilities can be created in these laboratories.

#### **Up-gradation of legal framework**

A comprehensive and workable legal framework is required for the efficient working of veterinary service in the country. The current legal framework has recently been reviewed and deficient areas have been pointed out. Federal as well as provincial laws, rules, regulations and guidelines have to be developed and approved from the appropriate bodies.

#### **Animal welfare**

Animal welfare refers to the state and condition of the animal in which it lives and performs. To be declared in good state of welfare, the animal should be healthy, comfortable, well-nourished, safe, able to express its innate behaviour and not suffering from pain, fear and distress (Fraser *et al.*, 2009). Animal welfare has become an excellent marketing tool in the international trading. Most of the large consumer retail markets want to ensure that livestock products being sold at their stores are obtained from farms complying animal welfare guidelines and rules. Thus, animal welfare activities should become part of veterinary service in the country.

Initially, a cell can be created in the CVO's office. This office should document and coordinate all animal welfare activities across the country. Working group can then develop animal welfare guidelines for food, draft and pet animals and start capacity building of the stakeholders in this regard.

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