

Essential veterinary education in the governance of public Veterinary Services

V. Bellemain⁽¹⁾ & J. Coppalle⁽²⁾

(1) Direction départementale des Services Vétérinaires, Cité administrative, BP 590, FR-64012 Pau, France

(2) Ecole Nationale des Services Vétérinaires, 1 avenue Bourgelat, FR-69280 Marcy-l'Etoile, France

Summary

A comprehensive understanding of the national and international governance of animal health and Veterinary Services must be part of the professional culture of all veterinarians. This includes, in particular, understanding the scope of public (government or national) Veterinary Services within the meaning of the World Organisation for Animal Health standards, the societal importance of the missions of such public Veterinary Services, the history of their structure, and their involvement in animal health, animal welfare, essential protein supply, etc. The quality standards of a national Veterinary Service must be placed within the context of the actual situation in a specific country. Knowing the key elements of international governance implies studying the new global context of animal health services, the international organisations competent to supervise them, and the legal and economic aspects of this arena. In addition, special training is recommended for veterinarians recruited by public Veterinary Services.

Keywords

Animal health – Curriculum – Food safety – Governance – Government Veterinary Services – International public good – National Veterinary Services – Public Veterinary Services – Training – Veterinary Services.

Introduction

The purpose of this article is to emphasise the primary concepts with which all veterinary students should be familiar in the area of public (national or governmental) Veterinary Services, regardless of whether they intend to work in this field or not. Although the specific supplementary training that may be offered to government veterinarians will be addressed briefly in this paper, the authors will concentrate principally on the common veterinary curriculum offered by veterinary institutions as a whole. The term 'Veterinary Services', as used within this article, refers to all established, structured, government-

based services that implement public policies in the domains of animal and public health, including zoonoses.

Educational aims

Leadership and the veterinary profession

The veterinary profession plays a fundamental role in society, by responding to important concerns of citizens in such various fields as:

- the production of essential protein
- food safety

- the care of companion animals
- the welfare of animals in general
- the protection of wildlife
- the protection of the environment, etc. (10).

Public and private action complement each other, with a varying distribution of responsibilities, depending on the specific country involved.

The veterinary profession must be constantly attuned to topical issues ('avian influenza', food shortages, bovine spongiform encephalopathy, etc.) in a world where globalisation is evolving at an ever-increasing pace and new challenges and new opportunities are being presented every day.

Nevertheless, an overall vision, shared values and effective communication are important for the veterinary profession as a whole and are indispensable if it is to receive the respect and recognition it needs to operate successfully within society. This is why all veterinarians will profit, both individually and as a group, from understanding the national and international contexts of their profession and by communicating their shared values.

Veterinarians as sentinels and partners

In the field, even in private practice, veterinarians are all directly or indirectly involved in the implementation of public policies on animal and public health. They, alongside farmers and other livestock owners, are the first line of defence against infectious animal diseases, in particular, zoonoses, since, as sentinels, they are the first to detect disease. They may support the public Veterinary Services for both routine matters and during epizootics. This is true for both rural veterinarians and those in urban practices, who care for small and companion animals (examples include rabies, avian influenza, etc.).

This responsibility also involves building more harmonious partnerships between the public and private sectors, to improve the performance of the veterinary health monitoring network. Veterinarians in private practice are more likely to perform these duties conscientiously when they understand what is at stake (in particular, the international commitments of their country), the mechanisms of public Veterinary Services and their own role in the health services chain of responsibility within their country.

The professional culture of the veterinarian

Understanding the organisation and missions of the modern State, the role of public services, and international governance in animal health constitutes a key element of

professional culture that is indispensable in the modern world. The veterinarian of today must be open and alert to the expectations of society, and able to discuss such issues as, for example:

- zoonoses
- food safety
- the global spread of pathogens
- the growing interdependence among the regions of the world
- the role of breeding and animal health in the fight against poverty and malnutrition in developing countries.

Veterinarians must also understand the continuum of international governance of the profession, ranging from the international responsibilities of the World Organisation for Animal Health (OIE), to national Veterinary Services, down to the local and community responsibilities of veterinarians in private practice.

In many countries, veterinarians employed in the public Veterinary Services do not receive special training. Practising veterinarians may also work part-time for public Veterinary Services, in particular, in slaughterhouses, or on contract to perform on-farm duties (the health services mandate) (1).

Introducing elements of common professional culture into the everyday curriculum will enable veterinarians to become more relevant in their role in society, as well as in their daily work, and, in some countries, can lead to further work opportunities. It may also stimulate the interest of graduates into joining the public Veterinary Services.

Academic guidelines

The organisation of public Veterinary Services around the world, and the particular circumstances in which they operate, are extremely diverse (1). Obviously, the methods in which the various curriculum topics are presented to students in different countries will be adapted accordingly. For ease of presentation, such nuances are not addressed in this article.

Instead, the authors concentrate on the definition of what veterinary instructors and those who oversee and develop the curriculum call, 'competency guidelines', i.e. what the students must ultimately know or know how to do. The academic guidelines (what to teach) and the teaching methods (how to teach) are highly dependent on the cultural context in which the course is taught and the abilities and priorities of the teachers (2).

Educationalists distinguish between several levels of learning, from an introduction to a subject through to its mastery. The standard veterinary curriculum should include an introduction to public veterinary action (the objective here should be that the student understands the topic) and a solid grounding in the subject (so the student gains the necessary foundation knowledge). Gaining proficiency in this subject ('mastering it') and being able to apply such knowledge in concrete situations should be left to advanced courses in public veterinary medicine.

Various countries have veterinary education guidelines. Generally, these guidelines do not include the public sphere of veterinary activities. For example, this notion is not included in the minimal programme of the European Union (EU) Directive on the mutual recognition of veterinary diplomas in EU Member States (5, 7). Including these concepts in the veterinary curriculum seems to be an innovative element that represents a strategic broadening of the professional culture of veterinarians.

Defining the fields of action of public Veterinary Services

Depending on the country concerned, public Veterinary Services can cover extremely varied fields of action.

For ease of understanding, the authors refer to the international standards of the OIE, adopted by the Assembly of 172 Member Countries and Territories. The OIE *Terrestrial Animal Health Code* (the '*Terrestrial Code*') (8) defines national Veterinary Services as:

... the governmental and non-governmental organisations that implement animal health and welfare measures and other standards and guidelines in the Terrestrial Code in the country. The Veterinary Services are under the overall control and direction of the Veterinary Authority. Private sector organisations are normally accredited or approved to deliver functions by the Veterinary Authority.

The Veterinary Authority means:

... the Governmental Authority of a Member Country, comprising veterinarians, other professionals and para-professionals, having the responsibility and competence for ensuring or supervising the implementation of animal health and welfare measures, international veterinary certification and other standards and guidelines in the Terrestrial Code in the whole country.

This definition refers to public policy and action in such areas as disease prevention and control against regulated

infectious diseases, the safety of food of animal origin (at least at the production stage) and international animal health certification. It excludes the routine care of animals and zootechnical tasks, such as artificial insemination, even if, in certain countries, those actions are performed in whole or in part by civil servants since private veterinary practices do not exist or when privatisation is in progress.

In the course of implementing collective tasks managed by public Veterinary Services, numerous on-farm activities (such as vaccination, taking samples, inspection, etc.) can be delegated to private veterinarians or para-professionals working under the supervision of a veterinarian. Likewise, laboratory tests and animal tagging or registration of movements (for traceability) can be delegated to private bodies (10). Veterinary courses should explain what fields are covered by 'public action' and what tasks can be delegated to the private sector, while taking into account the requirements of international standards and the particular circumstances in that region and country. In addition, in the countries and regions concerned, all veterinarians should be aware of the policy of their country towards the privatisation of veterinary medicine and surgery.

The areas of food safety covered by public Veterinary Services can vary greatly, depending on the country concerned. This may be because public action in this field remains limited (which is the case in numerous developing countries or countries in transition), or because those activities are shared with other parts of the public sector (6). Regardless, students should understand the food safety policies of their country and be able to place them in the context of global trends. The concepts with which they should become familiar include:

- the history of the involvement of Veterinary Services at each stage of the animal production industry (from 'downstream' to 'upstream')
- changes in approaches to food safety for foods of animal origin, from the control of finished products to an integrated approach to risk using the hazard analysis and critical control point (HACCP) system (a preventive approach to controlling the safety of food).

Traditionally, the mission of the Veterinary Services has been to protect breeding and their activities have been geared towards the prevention and control of animal diseases, as a threat to primary production, within the country and at its borders. Later, their activities extended to the slaughterhouse to aid in the detection of animal disease (epidemiological monitoring) and to assess the safety of meat for the consumer. Their competencies expanded further, although this varied according to country, to supervising hygiene controls in the food production chain in food service industries and even at distribution (in retail stores, restaurants, etc.).

Veterinarians are generally in charge of the health certification of animals and animal-origin food products for export, as well as of import controls. As the only animal professionals who are present throughout the modern production chain of foodstuffs of animal origin, veterinarians play a central role in quality control, 'from farm to fork', 'from stable to table' or 'from the field to the plate'. Moreover, the globalisation of animal health issues means that the veterinary profession must develop much closer co-operation with stakeholders, including consumers, commercial partners, the Veterinary Services in other countries, and supervisory intergovernmental organisations.

Veterinary education should underscore the importance of these missions, as well as an extremely high standard of public Veterinary Services, particularly in such areas as (10):

- improved animal health, leading to increases in the quality and quantity of animal protein production and decreases in poverty and malnutrition
- public health, including prevention and control of zoonoses transmitted by animals and foods
- international veterinary certification, for better access to regional and world markets (including for certain populations of nomadic livestock keepers)
- the prevention and control of any potential use of animal pathogens in bioterrorism
- the protection of animals, biodiversity and the environment.

International governance

Governance covers a complex set of public and societal actions which have, as a final objective, the optimal management of all animal diseases, food safety, animal welfare, wildlife health (disease monitoring), and even environmental impacts, including those that affect biodiversity.

New global context

The new global context and its consequences must be understood:

- the growing globalisation of the movements of merchandise, animals and people
- climate change

- developments in production and consumption, industrialisation and the overhaul of agrarian systems
- the growth in world population.

These events have encouraged the occurrence of emerging and re-emerging diseases and considerably amplify their impact and speed of propagation.

International organisations

Veterinarians must become familiar with the respective missions of the main international bodies:

- the OIE, which is the principal body of reference for the veterinary profession
- the Food and Agriculture Organization of the United Nations, World Health Organization and Codex Alimentarius
- the World Trade Organization
- the International Monetary Fund and World Bank, as well as regional donors; in particular, donors to the country of the student.

The avian influenza crisis in early 2000s caused a political 'about-turn' among world leaders and a much greater awareness of the dangers of diseases of animal origin, demonstrating why improving animal health around the world must be a priority.

Economic aspects

The economic aspects of animal health policies should be addressed in the curriculum, however briefly, by exploring at least two concepts.

International public good

A serious health-related event affecting the animal kingdom can have global consequences on rural economies and food consumption, while at the same time presenting a threat to public health. This is why Veterinary Services are considered as 'a public good', as defined by the World Bank (i.e. investment decisions should not be based on their direct economic impact, but considered in relation to the benefit they bring to the entire society) (10). It is the responsibility of prosperous countries, as well as being in their own interests, to help developing nations to build or rebuild sustainable and high-quality Veterinary Services. In advanced veterinary training, this topic could be supplemented by a presentation of the veterinary development and co-operative activities being conducted by or within the country in which the course is being taught.

Cost of public policies

The cost of prevention is significantly lower than the cost of crisis and Veterinary Services must be equipped and trained to be able to react to an emergency as swiftly and effectively as possible, at all times. The OIE is currently working with economists to provide more details on this issue (10).

Governance and management of national Veterinary Services

International standards

Veterinary Services are part of the public services whose quality is defined by international standards. The OIE standards on the quality of Veterinary Services (11) cover, in particular:

- good governance and the adoption of efficient veterinary health policies
- legislation
- administrative organisation
- competencies
- the role of farmers, livestock-keepers and private veterinarians in managing disease
- transparency
- international veterinary certification
- human and financial resources.

The early detection of an emerging or re-emerging disease and rapid response to such an event are crucial principles. Good governance means, among other things, creating an independent and impartial Veterinary Service that is able to enforce the strict application of the law.

Reforms of national Veterinary Services should be presented in the context of structural adjustment policies and their consequences on the performance of the Veterinary Service should be discussed.

Management of public Veterinary Services in the normal curriculum

It is not necessary to study the management of public Veterinary Services, except in countries in which the majority of veterinarians practise in the public sector. The accent should be placed on:

- the links between Veterinary Services and their principal partners and stakeholders, in particular: veterinarians in private practice, farmers and livestock-keepers and consumers
- the importance of the presence of veterinarians in slaughterhouses, the preferred site for animal disease monitoring and the protection of public health (through ante-mortem and post-mortem inspections). This is particularly important in countries that do not have the necessary resources to monitor animal diseases and zoonoses on the farm.

Management of public Veterinary Services in the advanced curriculum

The management of public Veterinary Services should have some part in a more advanced curriculum and should include such essentials as:

- public management
- public finances
- agricultural and food industry economics
- constitutional, criminal, administrative and common law
- personnel management, including the sociology of organisations
- the preparation and assessment of public policy
- comparative administration
- foreign languages
- communication
- crisis management.

Concepts such as the sociology of nutrition and anthropology can broaden the viewpoints of the students (for example, the way in which the presence of the veterinarian, when 'killing for food', carries a symbolic function, or the differences in perception of what constitutes food in various cultures) (9).

Advanced training of veterinarians recruited by public Veterinary Services

Included here is a simple overview of the special training of veterinarians recruited by public Veterinary Services.

Some countries (Italy, for example) require veterinarians to have taken specialised modules, organised by particular veterinary schools, as a pre-requisite to recruitment. Other countries offer special government training. The length of such training varies: a few days, a few weeks, a few months, one year (France). Most often, it involves acquiring targeted technical concepts (food hygiene, epidemiology, management of animal diseases, etc.). Long-term training makes it possible to supplement scientific and technical knowledge with public service skills, such as public policy conduct and Veterinary Services management (8).

Wanting to harmonise such training systems among countries seems unrealistic, considering the differing institutional history of each country and the costs of more complex training. However, the authors emphasise the importance of special vocational training, organised by the employer, which allows the graduate to gain not only technical tools and competencies but also a sense of their professional culture and values.

Within the EU, a regulation on an integrated approach to official health controls (the 'hygiene package' of 2004) sets a minimum training programme for official veterinarians (6). Furthermore, a specialised degree in Veterinary Public Health may be undertaken under the supervision of the European College of Veterinary Public Health (4). In both cases, the subjects studied are technical and do not address the governance or management of public policies or Veterinary Services.

In France, the Ecole Nationale des Services Vétérinaires (ENSV), OIE Collaborating Centre for the Training of Official Veterinarians, hosts future official veterinarians for one or two years. The programme includes biological and technical knowledge, such as:

- the prevention and control of transmissible animal diseases
- the welfare and protection of animals
- technology, microbiology and the management of food safety
- animal environments and production.

However, it also includes:

- agricultural economics and food industry policies
- national and European law

- public administration
- the official inspection strategy: organisation and methods
- human resources management
- English
- communications, media training and communication in crises
- information technology systems (3).

Conclusion

In the 21st Century, with the globalisation of trade, animal diseases and zoonoses, in the face of challenges as well as opportunities, professional veterinary culture must include the concept of animal health as an international public good and the national and international governance of Veterinary Services. Such subjects could take the form of a short module (of possibly five to ten hours) in the general veterinary curriculum, entitled, for example: 'The governance of animal health and food safety – public Veterinary Services'. Preferably, this module could be offered towards the end of studies, when students would have gained some maturity. They would be better able to understand, among other things, the opportunities offered by the relationship between the public and private sector. Furthermore, life-long training of all veterinarians (public and private) should also contribute to maintaining the shared values and vision of the veterinary profession.

With the support of its Collaborating Centres (in Lyons, Buenos Aires, Minneapolis and Dakar), the OIE could usefully offer basic academic support in the international role of the veterinary profession, including such fields as: structural policies, the concept of an international public good, examples of the organisation of national Veterinary Services in various countries and the international standards to which Veterinary Services should aspire.



Les fondamentaux de l'enseignement vétérinaire dans le domaine de la gouvernance des Services vétérinaires

V. Bellemain & J. Coppalle

Résumé

Une bonne connaissance de la gouvernance de la santé animale et des Services vétérinaires au niveau national et international fait partie de la culture professionnelle que chaque vétérinaire devrait posséder. En particulier, les vétérinaires doivent connaître les compétences des Services vétérinaires nationaux ou gouvernementaux au sens des normes de l'Organisation mondiale de la santé animale, l'importance sociétale des missions des Services vétérinaires publics, l'histoire de leur structure et leur rôle dans le traitement des questions de santé animale, de bien-être des animaux, d'alimentation animale (par exemple la teneur en protéines essentielles des rations), etc. Les normes de qualité des Services vétérinaires doivent être jugées en tenant compte du contexte et de la situation particulière de chaque pays. Pour maîtriser les éléments clés de la gouvernance internationale il faut connaître le contexte mondial des services de santé animale, les organisations internationales compétentes en la matière, ainsi que le cadre juridique et les dimensions économiques de ce domaine. En outre, il est recommandé de prévoir une formation spécifique destinée aux vétérinaires recrutés au sein des Services vétérinaires publics ou gouvernementaux.

Mots-clés

Bien public international – Formation – Gouvernance – Programme d'enseignement – Santé animale – Sécurité sanitaire des aliments – Services vétérinaires – Services vétérinaires du secteur public – Services vétérinaires gouvernementaux – Services vétérinaires nationaux.



Enseñanza veterinaria básica sobre mecanismos de gobierno de los Servicios Veterinarios públicos

V. Bellemain & J. Coppalle

Resumen

En la cultura profesional de todo veterinario debe haber lugar para una profunda comprensión de los mecanismos nacionales e internacionales con que se gobiernan la sanidad animal y los Servicios Veterinarios. Ello supone, en especial, entender el alcance de los Servicios Veterinarios públicos (oficiales o nacionales) tal como vienen definidos en las normas de la Organización Mundial de Sanidad Animal, la importancia que reviste para la sociedad la misión de tales servicios, la historia de su estructura y su participación en temas de sanidad y bienestar animales, suministro básico de proteínas, etc. Las normas

de calidad de un Servicio Veterinario nacional deben ser coherentes con las circunstancias reales de cada país en concreto. Para aprehender los principales entresijos de los mecanismos internacionales de gobierno hay que familiarizarse con el nuevo contexto mundial de los servicios zoonos, las organizaciones internacionales con competencias para supervisarlos y la dimensión jurídica y económica de la cuestión. Es recomendable, además, impartir formación especial a los veterinarios contratados por Servicios Veterinarios públicos u oficiales.

Palabras clave

Formación – Inocuidad de los alimentos – Interés público internacional – Mecanismos de gobierno – Planes de estudios – Sanidad animal – Servicios veterinarios – Servicios veterinarios nacionales – Servicios veterinarios oficiales – Servicios veterinarios públicos.



References

1. Benet J.J., Dufour B. & Bellemain V. (2006). – Organisation and functioning of Veterinary Services: results of a 2005 survey of Member Countries of the World Organisation for Animal Health. In *Animal production food safety challenges in global markets* (S.A. Slorach, ed.). *Rev. sci. tech. Off. int. Epiz.*, **25** (2), 739-761.
2. Carré P. & Caspar P. (2004). – *Traité des sciences et des techniques de la formation*, 2nd Ed. Dunod, Paris.
3. Ecole Nationale des Services Vétérinaires (2008). – Introductory training programmes for Veterinary Public Health Inspectors. Available at: www.vet-lyon.fr/ensv/ (accessed on 9 August 2008).
4. European College of Veterinary Public Health (2001). – Information brochure. Available at: www.ecvph.org/ (accessed on 20 August 2008).
5. European Economic Community (1978). – Directive 78/1027/CE of the Council of 18 December 1978 on the co-ordination of legal, regulatory, and administrative provisions pertaining to the activities of veterinarians. *Off. J. Eur. Communities*, **L 362**, 23/12/1978, 7-9.
6. European Union (2004). – Regulation (EC) 854/2004 (amended) of the European Parliament and the Council of 29 April 2004 laying down specific rules for the organisation of official controls on products of animal origin intended for human consumption. *Off. J. EU*, **L 139**, 30/04/2004, 206-320.
7. European Union (2005). – Directive 2005/36/EC of the European Parliament and the Council of 7 September 2005 on the recognition of professional qualifications. *Off. J. EU*, **L 255**, 30/9/2005, 22-142.
8. Food and Agriculture Organization (FAO), World Health Organization (WHO) (2004). – Training personnel of official food safety control services. In *Proc. 2nd FAO/WHO Global Forum of food safety regulators: building effective food safety regulations*, 12-14 October, Bangkok. FAO, WHO, Rome, 1-12.
9. Poulain J.-P. (2002). – *Sociologies de l'alimentation*. Collection sciences sociales et société. Presses Universitaires de France, Paris.
10. World Organisation for Animal Health (OIE) (2008). – Editorials of the Director-General. Available at: www.oie.int/eng/Edito/en_edito.htm (accessed on 9 August 2008).
11. World Organisation for Animal Health (OIE) (2008). – Terrestrial animal health code. OIE, Paris. Available at: www.oie.int/eng/normes/mcode/en_sommaire.htm (accessed on 17 July 2009).