Organisation of veterinary public health in the Western Mediterranean region

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Summary: This paper describes the administrative organisation of veterinary public health (VPH) activities in seven countries of the Western Mediterranean region. These structures vary greatly, as a function of the national administrations overall and, in particular, as a result of assigning VPH to either the Ministry of Agriculture or Public Health. Whereas the VPH unit is generally involved in specific veterinary food hygiene activities, the control of zoonotic diseases is most often assigned to the Veterinary Services. In most countries of the region, VPH is still approached as too narrow a discipline, and the importance of VPH activities is often not recognised by decision-makers at the highest governmental levels.

KEYWORDS: Animal health - Food hygiene - Products of animal origin - Sanitary control - Veterinary public health - Veterinary services - Zoonoses control.

INTRODUCTION

This review covers the organisation of veterinary public health (VPH) activities in some countries of the Western Mediterranean region including North Africa. These are: Albania, Greece, Italy, Morocco, Portugal, Spain and Tunisia.

The relevant administrative structures differ greatly from one country to the next. These structures are described in each country in order to show the great variety of approaches to the problems of VPH. The information presented here is based on reports submitted to the Mediterranean Zoonoses Control Centre, the OIE and through direct contacts with the services concerned.

ORGANISATION IN COUNTRIES OF THE REGION

ALBANIA

The Veterinary Public Health (VPH) Service operates from the Directorate of Veterinary Services and the Directorate of Hygiene and Epidemiology at the Ministry of Public Health (PH).

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VPH activities include animal health, public health and protection of the environment.

By safeguarding animal health, VPH seeks to ensure the good quality of animal products and a high level of public health.

Strong prophylactic measures are employed against all diseases and particularly zoonoses such as tuberculosis, brucellosis, leptospirosis, salmonellosis, anthrax, echinococcosis and leishmaniosis. In Albania forty-two zoonotic diseases are reported.

The Institutes of Veterinary Research and of Hygiene Epidemiology collaborate with the two Ministries mentioned above, operating specialised laboratories for the diagnostic control of zoonotic diseases. Veterinary diagnostic laboratories and Directorates of Hygiene and Epidemiology with laboratories for food control are located in twenty-seven regions of Albania.

In 200 municipalities, State veterinarians are empowered to implement State programmes for the control of enzootic and zoonotic diseases.

Meat and dairy production as well as markets are controlled by the joint efforts of VPH and PH services.

Albania is currently preparing updated laws for its Veterinary Services, with a new perspective regarding VPH. Educational seminars on VPH have been organised with veterinary specialists from time to time.

Regarding Brucella melitensis, echinococcosis, tuberculosis and other zoonotic diseases, Albania wishes to be included in the project of the European Community.

GREECE

VPH activities in Greece are conducted by the Directorate of Veterinary Public Health, within the Ministry of Agriculture. These activities concern a broad range of subjects (Fig. 1).

Regarding meat, poultry and meat products, the Directorate performs the following tasks:

- formation of legislative and administrative actions in harmony with European Community (EC) Directives
- definition of slaughtering methods
- information activities for regional services on technological advances
- training courses for specialists in sanitary control.

Regarding slaughterhouses and other plants, the Directorate defines the sanitary specifications for installation and function of slaughterhouses, as well as drainage discharge (environmental protection). Education of personnel is also undertaken.

Regarding milk and dairy products, eggs and other products of animal origin, the Directorate defines the sanitary specifications of these products in light of EC Directives and also the control methods used in the production, elaboration, transport, standardisation and disposal of milk and dairy products. Education of personnel is also undertaken.
Fisheries and fishing products are another area of VPH activity. The Directorate harmonises legislative and administrative actions with EC Directives. Sanitary measures are taken for the improvement of transport, packaging, conservation and standardisation of fisheries. Educational programmes are also conducted.

The Directorate also studies and defines diagnostic methods and laboratory techniques which must be applied in all veterinary institutions.

The VPH Finance Office drafts the estimated budget for income and expenses. The Secretariat provides clerical assistance.

ITALY

Ten universities offer training in veterinary medicine: Turin, Milan, Parma, Bologna, Pisa, Perugia, Naples, Bari, Messina and Sassari.

Laboratory activities are conducted by the Experimental Zoo-prophylactic Institutes (Istituti Zooprofilattici Sperimentali), the main sections of which are located as follows:

- Turin (regions of Piedmont, Liguria and Valle d’Aosta)
- Brescia (Lombardy, Emilia-Romagna)
- Padova (Veneto)
- Rome-Capannelle (Latium, Tuscany)
- Perugia (Umbria, Marches)
- Teramo (Abruzzi, Molise)
- Foggia (Puglia, Basilicata)
- Portici-Naples (Campania, Calabria)
- Palermo (Sicily)
- Sassari (Sardinia).

In addition, one diagnostic centre is located in each Province, with a total of 84 in the country.

Throughout Italy there are a total of 671 local socio-sanitary units (USSLL).

The main VPH activities concern control of epizootic diseases; food hygiene and residue control; control of feeds and veterinary drugs; animal welfare (including laboratory animals); control of artificial breeding; protection of consumer health and national livestock with respect to imported animals and animal products. These activities are carried out by the Istituti Zooprofilattici Sperimentali, the provincial diagnostic centres and the local socio-sanitary units. All of these services, including the General Directorate of Veterinary Services, belong to the Ministry of Health. The relations between the different agencies active in Italy are presented in Fig. 2.

The professional distribution of veterinarians in Italy is presented in Table I.
TABLE I
Activities and number of veterinarians in Italy, 1991

<table>
<thead>
<tr>
<th>Activity</th>
<th>No. of veterinarians</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government officials (central, local)</td>
<td>3,733</td>
</tr>
<tr>
<td>In laboratories, universities, training institutions</td>
<td>267</td>
</tr>
<tr>
<td>Private practitioners</td>
<td>6,310</td>
</tr>
<tr>
<td>Others</td>
<td>4,563</td>
</tr>
<tr>
<td>Total</td>
<td>14,873</td>
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</tbody>
</table>

MOROCCO

VPH activities are the responsibility of the Veterinary Services and depend on the Directorate of Livestock, Ministry of Agriculture and Agrarian Reform (Fig. 3).

Animal Health Division

The Animal Health Division includes two services:
- prophylaxis
- pharmaceuticals and private veterinary medicine.

Veterinary Division of Food Hygiene

This division is concerned solely with VPH, aiming at the protection of human health. This orientation distinguishes it from the Animal Health Division, which focuses on protection of national livestock. The dissociation between the two structures conforms with the recommendations of the World Health Organisation.

The Veterinary Division of Food Hygiene includes two specialised services, as follows:

Sanitary regulations service

This service adapts constantly to the evolution of requirements for sanitary and quality regulations and to the laboratory methods required for products intended for domestic use, and for export and import of animal products or feeds.

Besides establishing hygiene regulations, the service is involved with regulations concerning inspection methods for animal food products at different levels of production, transformation and marketing.

Service for sanitary inspection and control of food products of animal origin

Whereas the external services ensure the control of food products of animal origin at the local and regional level, the sanitary inspection service at the central level conceives and implements national programmes in conjunction with the Veterinary Services at border stations (ports, airports, etc.) and with veterinary analysis and
research laboratories. The latter are directly connected to the central services of the Directorate of Livestock. Information-sharing is necessary for the monitoring of sanitary inspection data which then serve as a basis for adoption and implementation of programmes.

The activities of the sanitary inspection service include the following:

a) environmental surveillance and control

- sea environment: surveillance of the national coast. In the event of biological pollution ("red water" phenomena) or chemical pollution (hydrocarbons) in a specific area, particular measures are taken to prevent intoxication risks for consumers in coastal zones

- land environment: surveillance and control of pollution from products particularly harmful for human and animal health (pesticides, antibiotics, hormones, etc.)

b) elaboration of technical documents, related to projects for slaughterhouses, milk factories, fish canneries, etc. to ensure their conformity with hygiene standards

**FIG. 3**

Organisation of the Veterinary Services of the Directorate of Livestock, Morocco
c) “emergency network” interventions for the control and sanitary inspection of animal products, with decisions to be taken in accordance with local or international information and transmitted to the different external services for implementation.

d) participation in activities of interministerial commissions, involving coordination of sanitary and qualitative controls of food products.

e) conception and application of guidelines for the principal transformation networks (slaughterhouses, dairy factories, fish canneries, tanneries, etc.).

f) elaboration of sectorial studies, as a basis for the adaptation of the control of animal products to technical and socio-economic developments in each sector.

PORTUGAL

The Division of Veterinary Public Health belongs to the General Directorate of Livestock, Ministry of Agriculture, Fisheries and Food. VPH activities include control of meat, avian products, fisheries and sanitary inspection. The organisation of VPH activities is shown in Fig. 4.

SPAIN

The veterinary public health section belongs to the General Subdirectorat of Food Hygiene, Ministry of Health and Consumption. Laboratory work is conducted by the “Carlos III” Institute of Health. The organisation of VPH activities is shown in Fig. 5.

TUNISIA

The General Directorate of Animal Production originally formed part of the Ministry of Agricultural and Food Production.

In 1988, the Ministry of Agriculture incorporated all the directorates of the Ministry of Agricultural and Food Production without changing their general structure. In August 1991, during a reorganisation of the Ministry of Agriculture, the General Directorate of Animal Production was curtailed and its divisions and services were absorbed into the General Directorate of Agricultural Production.

In contrast, the Ministry of Public Health includes the Communicable Diseases Service in the Division of Primary Health Care as well as a service of food-borne diseases in the Directorate of Environmental Hygiene and Protection.

General Directorate of Animal Production

This Directorate has the following aims:

- development of animal breeding and production mainly by educating the breeders. Information is furnished on modern breeding techniques, genetic improvements and quality control of feed

- sanitary protection of livestock based on a variety of approaches to detection, organisation of control campaigns and structures of production and commercialisation of veterinary products.
Organisation of the Veterinary Services of the General Directorate of Livestock, Portugal
The Directorate is comprised of three divisions, covering zootechny, animal health and VPH.

**Division of Zootechny**

This Division carries out the following tasks:

- elaboration and execution of animal production programmes
- information on programmes regarding modern breeding techniques
- elaboration of legislation and regulations for breeding, animal production and feeds
- monitoring of animal products (milk, meat and particularly poultry products)
- development, programming and follow-up of activities in genetic improvement of livestock, performance control, etc.
- identification of sectors for development
- programming and control of fodder production
- control of improved cattle feed and agro-industrial by-products
- evaluation of the impact of actions for the improvement of livestock and products
- participation in animal production projects
coordination of different animal production sectors.

The Division of Zootechny comprises three sub-divisions, as follows:

1. The Sub-division for Animal Production Techniques includes three services:
   - milk production
   - meat production
   - avian production and small breeds.

2. The Sub-division for Genetic Improvement includes three services:
   - artificial insemination
   - natural servicing
   - performance control and livestock records.

3. The Sub-division for Animal Nutrition includes two services:
   - fodder production control
   - concentrated food and by-products.

**Division of Animal Health**

The activities of the Division of Animal Health concern these fields in particular:

- detection and identification of animal diseases (laboratory analysis and epidemiological studies)
- programming of implementation and follow-up actions for sanitary control of livestock
- control of major zoonotic diseases
- sanitary control of production structures
- inspection at fairs and animal markets
- documentation, collection and circulation of information on breeding and animal health.

The Division of Animal Health comprises two sub-divisions, as follows:

1. The Sub-division of Epidemiological Studies includes two services:
   - detection and epidemiology
   - documentation and information.

2. The Sub-division of Animal Diseases Control includes three services:
   - prevention
   - zoonoses control
   - avian control.
Division of Veterinary Public Health

The activities of the Division of Veterinary Public Health concern these fields in particular:

- drafting legislative and basic texts related to livestock protection, to biological and pharmaceutical products for veterinary use and to VPH in connection with the Sub-division for Claims and Legal Affairs
- sanitary control of animals and animal products at the borders
- control of biological and pharmaceutical products for veterinary use
- control of slaughter, meat inspection and clandestine slaughter
- hygienic and sanitary control of production and transformation units
- sanitary control of foods of animal origin other than meat
- sanitary control of fish products.

The Veterinary Public Health Division comprises two sub-divisions, as follows:

1. The Sub-division of Hygiene and Foods of Animal Origin includes two services:
   - slaughter and meat inspection control
   - food (other than meat) control.

2. The Sub-division of Veterinary Sanitary Control at the borders includes two services:
   - control of veterinary pharmaceutical products
   - veterinary sanitary control at the borders.

DISCUSSION

Comparing the VPH activities in different countries of the region, it may be noted that these activities often overlap with those of Veterinary Services. The latter deal mainly with the promotion of animal health whereas VPH services are mostly devoted to the protection and improvement of human health.

In Albania, for example, the VPH services which are organised in both Ministries (Agriculture and Public Health) carry out duties in common (control of meat, milk and dairy products) whereas in Greece the control of these products is the responsibility of the Directorate of VPH of the Ministry of Agriculture. The control of zoonotic diseases in both countries is the responsibility of the Veterinary Services (Ministries of Agriculture).

Entirely different is the situation in Italy where VPH activities are carried out through the local socio-sanitary units of the Ministry of Health and the Istituti Zooprofilattici Sperimentali.

The situation in Morocco provides a contrast for here the aim is exclusively the protection and improvement of human health in spite of the fact that the VPH services belong to the Ministry of Agriculture and Agrarian Reform.
In Portugal, the VPH Division belongs to the Ministry of Agriculture. Its main activities aim at the control of products of animal origin and fisheries. In addition, it performs sanitary inspection. The situation in Spain is entirely different due to the political and administrative structure of the country. In Spain, there are actually three administrations involved in VPH activities:

1. at the central level, the administration which includes VPH is part of the Ministry of Health and Consumption

2. the administration of the autonomous communities with three services (central, provincial and sub-provincial levels)

3. the municipal administration of large cities like Madrid, Barcelona and Seville.

VPH services exist in all three administrations and deal mainly with activities in animal production, food hygiene and the environment.

In Tunisia the VPH Division, with its two subdivisions, affords a clear picture of the activities performed, extending its responsibilities to veterinary sanitary control on the borders.

Considering the various systems of organisation in the different countries of the region, it may be seen that VPH performs mostly specific activities in veterinary food hygiene such as inspection of food and food products of animal origin, slaughter and meat inspection, hygienic supervision of export and import foods and collaboration in disease surveillance.

CONCLUSIONS

Reviewing the VPH organisation of the countries of the Western Mediterranean and North Africa and comparing the different functions and activities (including technical strategies in specific VPH areas, their value in the control of important zoonotic diseases and finally the interrelationship between health and agriculture actions), the following points may be emphasised:

– in most countries of the region VPH is still approached as too narrow a discipline

– VPH activities and programmes are not accepted at the highest governmental level and therefore are not considered an integral part of the overall national development plan

– VPH services are not directly involved in surveillance, prevention and control of zoonotic diseases

– there is a lack of adequate training for VPH veterinarians and other related professionals

– VPH activities overlap with those of Veterinary Services. Animal health, animal production and human health are terms that often are confused and overlap, especially in those countries where the administrations are separate

– there has been no definitive decision regarding the most appropriate location for VPH units, e.g. in the Ministry of Agriculture or in the Ministry of Health.
However, there are reports (1) from other countries that the establishment of VPH units within the Veterinary Service of the Ministry of Agriculture is successful

— VPH should be responsible for the execution of specific programmes solely or jointly with other departments according to the administrative infrastructure of the country.

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ORGANISATION DE LA SANTÉ PUBLIQUE VÉTÉRINAIRE DANS LA RÉGION DE LA MÉDITERRANÉE OCCIDENTALE. — G. Papadopoulos.

Résumé: L'auteur décrit l'organisation administrative des activités de santé publique vétérinaire (SPV) dans sept pays de la région de la Méditerranée occidentale. Ces structures diffèrent beaucoup selon chaque Administration nationale et, en particulier, selon que la SPV est affectée au ministère de l'Agriculture ou à celui de la Santé Publique. Le plus souvent, la responsabilité du contrôle des zoonoses revient aux Services vétérinaires, tandis que les Services de SPV interviennent généralement dans des activités vétérinaires spécifiques d'hygiène alimentaire. Dans la plupart des pays de la région, la SPV est conçue de façon étroite et monodisciplinaire et les décideurs au plus haut niveau gouvernemental ne reconnaissent pas toujours l'importance des activités de SPV.

MOTS-CLÉS : Contrôle des zoonoses - Contrôle sanitaire - Hygiène alimentaire - Produits animaux - Santé animale - Santé publique vétérinaire - Services vétérinaires.

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ORGANIZACIÓN DE LA SALUD PÚBLICA VETERINARIA EN LA REGIÓN DEL MEDITERRÁNEO OCCIDENTAL. — G. Papadopoulos.

Resumen: El autor describe la organización administrativa de las actividades de salud pública veterinaria (SPV) en siete países de la región del Mediterráneo occidental. Estas estructuras difieren mucho en función de cada administración nacional y más particularmente según que la SPV esté afiliada al ministerio de agricultura o bien al de salud pública. En general, los Servicios de SPV asumen las actividades veterinarias específicas de higiene alimentaria, mientras que el control de las zoonosis incumbe a los Servicios veterinarios. En muchos países de la región, la SPV sigue siendo entendida en un sentido estrecho y monodisciplinar y, los responsables gubernamentales de más alto nivel no siempre conceden a las actividades de SPV la importancia que éstas merecen.

PALABRAS CLAVE: Control de zoonosis - Control sanitario - Higiene alimentaria - Productos de origen animal - Salud animal - Salud pública veterinaria - Servicios veterinarios.
REFERENCE