Emerging and re-emerging zoonoses

18/11/2004 The interaction between human and animal health is not a new phenomenon. However, the scope, scale, and world-wide impact of zoonoses we are facing today have no historical precedent. Central to the profound changes for our vision and activities are both the birth of a new era of emerging and re-emerging diseases, and the significant potential impact of these diseases on public health. The unprecedented impact of globalisation, industrialisation, restructuring of agricultural systems and consumerism, among others, will certainly change the basic foundation and operations of animal health policies and how we must consider and prepare for the future.

An emerging disease is defined as a new infection resulting from the evolution or change of an existing pathogen or parasite resulting in a change of host range, vector, pathogenicity or strain; or the occurrence of a previously unrecognised infection or disease. A re-emerging disease is considered an already known disease that either shifts its geographical setting or expands its host range, or significantly increases its prevalence.

The rapid detection and response to an emerging or re-emerging disease is crucial. From the time this new disease develops until it is detected, a critical time period elapses. The rapid detection of such a new epidemiological event is therefore a key element for all policies to be developed. It is often the case that the disease will have spread undetected for a significant period of time before it is detected and reported. With globalisation and the increase in speed and volume of international transport as well as passengers travel, emerging pathogens also begin their global voyage and spread. Rapid detection of emerging diseases is slow in many developing countries and some developed countries where there are possible deficiencies in the veterinary infrastructure, expertise, diagnostic laboratories and in surveillance capabilities as a whole especially for new diseases. The preparedness and response capability of a country towards an emerging disease largely depend on the availability of such facilities and it is therefore not surprising that methods to control emerging diseases in some developing countries are less effective.

Most of the recent emerging diseases have an animal origin, and almost all of them have zoonotic potential. These diseases must therefore be addressed through coordinated actions between animal and public health authorities. In this respect, the Member Countries of the OIE (World Organisation for Animal Health) have clearly indicated their overwhelming support for a greater OIE role in confronting the challenges of such zoonoses. In fact, emerging and re-emerging zoonotic diseases will become a progressively greater factor in the demands on the activities of Veterinary Services, thus impacting on future partnerships, resources, and programmes. This will imply cooperative actions between the three bodies that are primarily involved by such a challenge - OIE, Food and Agriculture Organization (FAO) and World Health Organization (WHO) - in order to continue to provide important international linkages.
One cannot forget that the fight against zoonoses starts by eliminating the pathogen at its animal source. This fact provides Veterinary Services, veterinarians, farmers, managers of wildlife and the OIE, with a leading role at both national and international level.

As a follow-up to the Resolution on emerging and re-emerging zoonotic diseases adopted by the OIE International Committee in May 2004, the OIE is creating a new inter-disciplinary Ad hoc Group to advise on the control of emerging and re-emerging zoonoses and on surveillance systems which cover wildlife, domestic animals, and the relevant corresponding human continuum. The Group will also assist in the education of OIE Member Countries regarding such activities. The Resolution also recommends that in the event of serious outbreaks of zoonotic diseases that transcend national borders, the OIE will demonstrate leadership in providing guidance on disease control strategies at the animal production levels and will support the communication efforts of public health agencies in addressing human impacts.

The OIE is already strongly committed in bringing its expertise in the international control of currently emerging and re-emerging zoonoses such as avian influenza and rabies. The role played by the OIE, its information system for transparency and its network of Reference Laboratories and world renowned experts during the recent avian influenza crisis in South East Asia has been very strong. Affected Member Countries benefited not only from diagnostic facilities (training and supply of laboratory reagents) and surveillance but also from advice on general policies on the strengthening of Veterinary Services and general policies on animal disease control methods, including the use of vaccination under certain conditions. An international conference on avian influenza has been scheduled at the OIE Headquarters in Paris for the second trimester of 2005 to address these issues. This Conference will also include discussions on new safety standards for the international trade in avian products.

Rabies has recently been a cause for major concern - among others - in Eastern Europe where several countries are witnessing an increased prevalence of the disease in animals resulting in known fatal consequences for man. The OIE has recently sent an expert mission in one of the seriously affected countries to provide necessary assistance in the control of rabies in that country. In addition, the OIE is organising the *First International Conference on Rabies in Europe* to be held during the first semester of 2005. The Conference will provide a multidisciplinary forum for the exchange of the latest scientific information on rabies research as well as in the control and prevention of human and animal rabies in Europe. Several observers from the other Continents will also be participating in the event.

The OIE is also collaborating closely with regional and international organisations in the control of bio-terrorism caused by zoonotic pathogens. In addition to participation in international conventions and for dealing with this problem, the OIE has provided guidelines to Member Countries on how best such issues could be addressed. Strengthening of Veterinary Services in terms of surveillance, rural network of veterinarians, early detection, warning and response, improved diagnostic capabilities and other resources as well as the adoption of new legislations giving appropriate capacities to Veterinary Administrations and their partners will provide the basis for better prevention of bio-terrorism.

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