The OIE tools to mitigate the risk of rabies transmission at the human–animal interface: Recommendations of the Global Conference on Rabies Control and the new Rabies Technical Disease Card

Rabies is a widespread, under-reported and neglected zoonotic disease with a case fatality rate of almost 100% in humans and animals, if left untreated. Although it is completely preventable in humans through the sustainable vaccination of dogs, limited progress has been made in eliminating the disease at the global level. In countries where people are still dying from rabies, dogs are responsible for an overwhelming majority of the reported animal and human rabies cases. In developing countries, children remain most at risk, due to the all-too-frequent occurrence of stray dog bites. In spite of advances in scientific methods and control tools, rabies remains a threat to both the human and animal populations. Controlling the disease in dogs, especially in stray dogs, must be a priority to prevent lethal cases in humans. The veterinary profession has a leading role in and responsibility for delivering a service that will allow the worldwide elimination of rabies in humans.

Global Conference on Rabies Control: Towards Sustainable Prevention at the Source

Promoting rabies control and eradication in dogs, with special attention to stray dogs, by encouraging governments to consider rabies control as a high priority was identified as a key strategy at the Global Conference on Rabies Control in September 2011, organised by the OIE, in collaboration with FAO and WHO, in Incheon-Seoul, the Republic of Korea (see Bulletin, no. 2011-4, pp. 70-72). The Conference placed great importance on good governance of Veterinary Services and on the use of public and private resources at the local, national, regional and international levels, as well as on prevention activities targeted at animals in collaboration with the public health services.

The effective implementation of rabies control programmes depends on political will, community commitment and sustainable financial resources. Rabies control strategies cannot be effective without intersectoral collaboration and the support of a great many partners and stakeholders, such as animal health and public health services, environmental officers, police forces, non-governmental organisations and dog owners. All such strategies should be coordinated by the competent authorities, including local and municipal authorities. National governments must take responsibility for rabies control in the animal reservoir. Ensuring transparency by officially notifying the occurrence of rabies in animals to the OIE through the World Animal Health Information System (WAHIS) is essential.

Communication, education and awareness are recognised as essential components and priorities in any holistic and successful approach to rabies control. The exchange of information, experience and cooperation among medical, veterinary and environmental authorities was recommended by participants at the Conference.

Highlighted among the 25 recommendations of the Conference was the recognition that controlling rabies is one of the primary responsibilities of veterinarians and national Veterinary Services, who can help to control the disease by breaking the transmission cycle at the human–animal interface. Rabies control programmes should always take into account the need to improve the effectiveness of the public and private components of national Veterinary Services.
Rabies Day (28 September) back in 2007. This annual event is an opportunity for the international community to unite in rabies prevention. The OIE supports and encourages its Member Countries to actively participate in World Rabies Day. In the years since World Rabies Day began, hundreds of thousands of people have organised and taken part in simultaneous events which encourage increased international solidarity and strengthen donor commitment to support rabies eradication programmes based on international standards.

The OIE standards

Assisted by international experts, the OIE is continually developing and updating intergovernmental science-based standards, guidelines and recommendations to control the disease at its source and to prevent its spread through trade. With the support of its International Reference Laboratories for Rabies, the OIE also establishes the international standards for diagnostic methods and vaccine preparation for use in animals. In May 2014, the World Assembly of Delegates adopted the latest version of the Manual of Diagnostic Tests and Vaccines for Terrestrial Animals which, among other updates, included a revised version of the section dedicated to the requirements for rabies vaccines in animals.

According to the OIE standards, clinical and laboratory-based surveillance, along with the strategic use of potent, high-quality vaccines that comply with the OIE standard, are basic requirements for effective rabies prevention and control. The OIE is also promoting and implementing the concept of regional vaccine banks for dog vaccination. This offers an easy procurement and delivery system, reducing the risks associated with the storage of large quantities of vaccines in sub-optimal conditions and, at the same time, ensuring the

Effective Veterinary Services acknowledge that an effective and rapid response depends largely on early detection and diagnosis to minimise the impact and public health consequences of the disease. Clinical signs of rabies in animals are not specific and could vary considerably from one animal to another. The disease may be suspected, based on clinical signs. However, due to the long incubation period, which can be more than six months, it is difficult to establish causality between the risk factors for exposure and the clinical signs. Therefore, laboratory tests are always required to confirm the diagnosis.

A deep understanding of the epidemiology of the disease, including the source of the virus, its domestic and wildlife hosts, the risk factors for transmission, etc., are of paramount importance for the investigation of a rabies outbreak and for the timely implementation of appropriate control measures.

At the international level, the OIE, in collaboration with its partners FAO and WHO, is committed to assist its Member Countries in their efforts to eradicate rabies in humans, using the ‘One Health’ approach. One of the priorities of the Tripartite (WHO, OIE and FAO) is promoting the One Health concept at all levels to achieve deeper and sustainable political support for the coordinated prevention of rabies at the human–animal interface. Rabies can act as a model and entry point to demonstrate the benefits and value of an intersectoral approach and improved collaboration in the fight against zoonoses.

When the general public becomes more aware of rabies, understands the route of transmission and knows what actions should be taken when an animal or a person is exposed to the virus, the impact of the disease is drastically reduced. Following this principle, the Global Alliance for Rabies Control (GARC), with the support and active participation of the OIE and other international organisations, established World Rabies Day (28 September) back in 2007. This annual event is an opportunity for the international community to unite in rabies prevention. The OIE supports and encourages its Member Countries to actively participate in World Rabies Day. In the years since World Rabies Day began, hundreds of thousands of people have organised and taken part in simultaneous events which encourage increased international solidarity and strengthen donor commitment to support rabies eradication programmes based on international standards.
availability of high-quality vaccines that comply with international standards at a low cost, since they benefit from the economies of scale. This is also an incentive for developing countries to carry out dog vaccination campaigns and rabies control programmes.

The OIE Rabies Reference Laboratories and Collaborating Centres are designated as centres of expertise and the standardisation of diagnostic techniques and they provide technical assistance for diagnosis, surveillance and control of the disease. They contribute to the international harmonisation of laboratory methods and to the quality control of vaccines, as well as the development of new techniques and methodologies for rabies control, in collaboration with other laboratories and organisations.

One of the ongoing efforts of the OIE laboratory twinning programme is to further improve diagnostic capability in other laboratories, especially those in developing countries. The aim of the OIE twinning programme on rabies is to provide a more balanced distribution of advanced expertise, allowing countries to access high-quality diagnostic methods. Each twinning project links an existing OIE Reference Laboratory with a selected candidate laboratory for the exchange of knowledge and skills. Twinning projects provide mutual benefits, including joint research opportunities which benefit the entire international community by establishing stronger global rabies surveillance networks.

### Rabies Technical Disease Card

In its continuing efforts to increase awareness and promote understanding of the technical aspects of rabies, and of international standards and recommendations, the OIE, in collaboration with its Rabies Reference Laboratories, has recently created and published a Rabies Technical Disease Card on its website.

Along with the other 33 Technical Disease Cards already published, it serves as a technical reference for both the veterinary sector and the general public. It includes up-to-date information on the most important aspects of the disease, such as the aetiology of the virus, the main epidemiological characteristics of the disease, current OIE-approved diagnostic methods, and recommendations on prevention measures. The information included in the Technical Disease Card is based on peer-reviewed papers and the international science-based standards already adopted by OIE Member Countries.

The Rabies Technical Disease Card, as well as the dedicated rabies portal on the OIE website, are communication tools to educate the public on rabies, and possible reference points for the media. They convert scientific data into audience-targeted information.

As recommended during the 2011 Global Conference on Rabies Control, the OIE continues to build on its communication strategy to contribute to improving our understanding of rabies through advocacy, awareness and education. Furthermore, it works hard to encourage Veterinary Services and public health sectors around the globe to continue their progress towards the sustainable prevention of rabies at the source.