

RABIES IN PAKISTAN: ROADMAP FOR FUTURE

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Rabies is a vaccine preventable viral disease, generally transmitted by rabid dog-bite (99%) (1). Veterinarians, dogcatchers, street cleaners, travelers and hunters are typically at risk of dog bites and rabies. Rabies in humans manifests as fever, headache, paresthesias, convulsions, hydrophobia and aerophobia after a week to 6 months, unless post exposure prophylaxis (PEP) is timely provided. Although, the case fatality of rabies is ninety-nine percent after the onset of symptoms, yet is hundred percent vaccine preventable (1).

Rabies is pandemic, affecting more than 150 countries, spread across all continents (2). It causes an estimated 60,000 deaths per year; 95% in Africa and Asia. Rabies disproportionately affects poor rural communities; 40% of the victims are children under 15 years of age (3). Rabies is neglected in Pakistan, ranking third among the priority zoonotic diseases after avian influenza and brucella (4). Rabies is endemic nationwide; however, limited data is available as it is not a notifiable disease in Pakistan. The probability of a dog being rabid in Pakistan is 67%. The estimated annual incidence of rabies in Pakistan is 7 - 9.8 cases per million steering 2000 to 5000 deaths per year (5).

The Stepwise Approach towards Rabies Elimination (SARE), was established by the Food and Agriculture Organization (FAO) and Global Alliance for Rabies Control (GARC) as an assessment and monitoring tool to evaluate the current situation of rabies in a country and its progress towards elimination (6). It gives a score from 0 to 5; with 0 depicting a country with suspected rabies but no data and 5 represents freedom from human and animal rabies being monitored (6). SARE was applied to determine the situation in Pakistan (2018), and exhibited a score of 1.5; highlighting the dire need of developing a national rabies prevention and control strategy. Thus, a National Rabies Control Strategic draft was formulated by the joint consultation of the ministry of national health services, regulations and coordination, national institute of health, ministry of national food security and research, ministry of climate change, provincial health, livestock and environmental departments in collaboration with CDC.

The National Rabies Control Strategic Draft outlines the short-term goals for Pakistan to be implemented over a five-year period from 2018 to 2023. The strategy advocates to make rabies a notifiable disease; where the hospitals report to local bodies, reporting to NIH and international bodies. A case definition of animal rabies will be formulated and shared with all the livestock departments. Legislation will be drafted for compulsory vaccination of dogs under a defined schedule. There would be assessment and mapping of the availability of PEP; vaccines and immunoglobulins throughout the country. It also calls for determining the knowledge, attitude and practices of public health professionals for rabies. Pre exposure prophylaxis (PrEP) will be commenced for high risk groups and standard operating procedures (SOPs) will be formulated for rabies outbreaks. The plan builds up on expansion of the already existent local projects of dog vaccination employed in various pockets of the country. It is envisioned to establish

human and animal rabies testing in all provinces and enhance the capacity of the National Veterinary Laboratory, Islamabad. A national dog population management strategy will be formulated by the local governments, to upsurge vaccination and reduce the number of stray dogs. The ministry of climate change will be involved to diminish the environmental factors uplifting rabies, such as removing dog food sources from the streets. Preventive messages will be drafted for creating awareness among the masses using a variety of media including but not limited to television, newspapers, posters, radio, schools etc. Lastly, national rabies stakeholders will be re-identified to create a central task force for controlling rabies in Pakistan.

The National Rabies Control Strategic Draft follows the one health approach to tackle the menace of rabies in Pakistan. It incorporates the dimensions of environmental, human and animal health to have a comprehensive approach towards rabies control. However, the greatest challenge lies in coordination of these diverse sectors to work in a synchronized fashion to bring about constructive change in the existing landscape.

References

1. World Health Organization. Fact sheets [Internet]. [updated 2019 May 21; cited 2019 Jul 19]. Available from: <https://www.who.int/news-room/fact-sheets/detail/rabies>.
2. WHO/Department of control of neglected tropical diseases. Zero by 30: the global strategic plan to end human deaths from dog-mediated rabies by 2030: Geneva: 2018. 49 p.
3. WHO/Department of control of neglected tropical diseases. Driving Progress Towards Rabies Elimination: Results of Gavi's Learning Agenda on rabies and new WHO position on rabies immunization. Kathmandu, Nepal: 2018. 31p.
4. Government of Pakistan, Ministry of National Health Services, Regulations and Coordination. Islamabad [Internet]. Priority diseases, 2017 [updated 2017 Dec 14; cited 2019 Jul 19]. Available from: <https://www.nih.org.pk/wp-content/uploads/2018/11/Notification-of-Priority-Diseases-in-Pakistan.pdf>.
5. Global Alliance for Rabies Control homepage [Internet]. Pakistan. Sep 2014 .Available from: <https://rabiesalliance.org/world-rabies-day>.
6. Overview of the "Stepwise Approach towards Rabies Elimination" and Workplan Development tool. Global Alliance for Rabies Control. Mar 2018. Bangkok. <https://rabiesalliance.org/resource/stepwise-approach-towards-rabies-elimination-and-rabies-blueprint-introduction>.