

Rabies Vaccination as part of a holistic Trap-Neuter-Release-Manage (TNRM) Stray Dog Control Programme

Introduction

Singapore has been rabies-free since 1953 and there have also been no cases of lyssaviruses including rabies in local wildlife. However, the disease is endemic in many countries in Asia, including its neighbors. Given the risk of rabies incursion, Singapore has instituted strict import control and quarantine measures to mitigate the risk of disease incursion. Rabies is a vaccine-preventable disease and the World Organisation for Animal Health (OIE) promotes vaccinating dogs as the most cost-effective strategy for preventing dog-mediated rabies in humans.

Issues with free-roaming dogs

Although rabies free, Singapore currently has about 7,000 free-roaming dogs originating from previously-abandoned pet or guard dogs. As these dogs are more likely to be in contact with other strays or wild animals of unknown health status, there is a potential risk of rabies transmission in the free-roaming dog population from contacts with rabid animals free-living in the environment.

Sustainable Management of Stray Dogs and Peacetime Measure for Rabies



Launched on 10th November 2018, the 5-year nationwide Trap-Neuter-Release-Manage (TNRM) programme employs humane, science-based methodology to sustainably reduce the stray dog population in Singapore. The programme involves humanely catching and sterilising stray dogs. Thereafter, efforts are made to rehome as many of the dogs as possible, while releasing any remaining dogs at their original or alternative suitable locations to live out their lives naturally. Dogs that cannot be rehomed are released to the environment and managed by Animal Welfare Groups responsible for the areas. The target is to sterilise more than 70% of stray dogs in Singapore within 5 years. Under the programme, dogs caught are sterilised, microchipped for traceability, and vaccinated against diseases including rabies. In the event of a rabies incursion, having a vaccinated free-roaming dog population should limit the spread of the disease.

Photo 1. Humane trapping of a stray dog for sterilisation, microchipping and vaccination, under the nationwide Trap-Neuter-Release-Manage programme. (Photo Credit : Animal and Veterinary Service (AVS), National Parks Board)

What progress has been made?

The TNRM programme is a collaboration between the Animal and Veterinary Service (AVS) - a cluster of the National Parks Board, animal welfare groups, veterinarians and the community. Based on available science and data, and in the spirit of community partnership, the programme is yielding good progress. More than 1,700 stray dogs have been enrolled in the programme, with more than half of the dogs being rehomed or fostered.



Photos 2 & 3. TNRM dogs which have been rehomed. (Photo Credit : Animal and Veterinary Service (AVS), National Parks Board)



Concurrently, Singapore has an annual rabies vaccination programme for dogs living in coastal regions and off-shore islands.



The exercise, termed “Ops Vax Lyssa”, also involves the government, veterinarians, animal welfare groups, and farmers working together to vaccinate all of these dogs. Blood/ serum is collected annually to ascertain that there is adequate antibody response to the vaccine. Results to date have demonstrated seroconversion above 80%, reflecting the effectiveness of the vaccination programme.

Photo 4. Blood sampling a dog for rabies serology testing at a coastal fish farm, under Ops Vax Lyssa. (Photo credit : Animal and Veterinary Service (AVS), National Parks Board)

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See [here](#) for more information about this project and contact at AVS Animal Health (NPARKS) [AVS Animal Health@nparks.gov.sg](mailto:AVS_Animal_Health@nparks.gov.sg) if there are any further queries.