

Vaccine study shapes plan to wipe out rabies in free-roaming dogs

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Rabies could be eradicated from street dogs in India with the help of a new smartphone app, a study has shown.

Researchers are using the app to track free-roaming dogs that have been vaccinated against rabies.

Monitoring them in this way has enabled vets to vaccinate 70 per cent of the dog population in the City of Ranchi - the threshold needed to minimise the risk that the disease is passed to people.

Adopting the approach more widely could help to eliminate rabies from people and animals, the researchers say.

Teams vaccinated more than 6000 dogs in 18 districts of the city of Ranchi, India. They surveyed the number of marked, vaccinated and unmarked, unvaccinated dogs to monitor the proportion of animals that had received the vaccine.

A bespoke smartphone app - called the Mission Rabies app - was developed for researchers to instantly upload information about the animals vaccinated, including their exact location.

In areas where coverage fell below 70 per cent, catching teams were re-deployed to vaccinate more dogs until the target was achieved.

The study was led by Mission Rabies in collaboration with researchers

from the Royal (Dick) School of Veterinary Studies at the University of Edinburgh.

Rabies remains a global problem that leads to the suffering and premature deaths of over 50,000 people and many times more dogs each year.

The disease has been eliminated from many countries through mass vaccination of the dog population. However, rabies elimination remains challenging in countries where the majority of dogs are allowed to roam freely.

Previous research has shown that vaccinating just 70 per cent of the dog population is enough to cut the risk of [rabies](#) infections in people.

Dr Richard Mellanby, a Wellcome Trust Clinical Fellow at the Royal (Dick) School of Veterinary Studies, said: "We have shown that mobile technology can help to monitor the efforts of large scale vaccination of free roaming [dogs](#) in real time This allows us to identify areas where vaccination needs to be increased to meet the 70 per cent threshold and cut the risk of the disease being passed to people."

The study is published in the journal *BMC Infectious Diseases*. It was funded by the Dogs Trust with additional resources provided by Ranchi Municipal Council. All vaccines used in the project were donated by MSD Animal Health.

More information: Andrew D. Gibson et al. Vaccinate-assess-move method of mass canine rabies vaccination utilising mobile technology data collection in Ranchi, India, *BMC Infectious Diseases* (2015). [DOI: 10.1186/s12879-015-1320-2](https://doi.org/10.1186/s12879-015-1320-2)

Provided by University of Edinburgh

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