

Vaccination reduces the risk of unvaccinated badger cubs testing tuberculosis positive

December 12 2012

New evidence from a four-year field study has shown that BCG vaccination reduces the risk of tuberculosis infection in unvaccinated badger cubs in vaccinated groups, as well as in badgers that received the vaccine.

The research, published today in the journal [PLOS ONE](#) provides the strongest evidence to date that unvaccinated badger cubs can be indirectly protected from [TB infection](#) when some of the badgers in their social group are vaccinated. By studying rates of new cases of TB in cubs in vaccinated social groups, researchers have shown that the risk of non-vaccinated cubs testing positive was reduced by almost 80 per cent when more than a third of badgers in their group had been vaccinated.

The results come from a controlled clinical [field trial](#) of badger vaccination, conducted by the Animal Health and Veterinary Laboratories Agency (AHVLA) and the Food and Environment Research Agency (Fera), in an area in Gloucestershire where TB is highly prevalent in the badger population.

Dr Steve Carter of Fera and lead author of the latest research said: "One concern about the effectiveness of badger vaccination is that new-born cubs might acquire TB before they first emerge above ground. As the vaccine is not expected to benefit infected individuals it has been suggested that by the time cubs emerge and are available for vaccination they might have already been exposed to TB. Therefore, vaccination for them may be too late. This study indicates that vaccination of badgers

above ground can indirectly protect unvaccinated cubs before they emerge from the sett".

The latest analyses were conducted by a team of scientists at Fera, AHVLA and the Universities of Newcastle and Strathclyde.

Professor Robbie McDonald, an author of the paper and now at the University of Exeter said: "This striking result in cubs shows a protective effect at the social group level and is important evidence that vaccination not only has a direct benefit to vaccinated badgers, but can also reduce the infectivity of TB within a badger [social group](#) that has been vaccinated."

But he cautioned: "Although this is an encouraging development, the costs and benefits of vaccinating [badgers](#) for controlling disease in cattle are not yet well understood".

"This means that it is a hard choice for farmers to make without further information and trials of how it would work in practice. The current Badger Vaccine Deployment Project in Gloucestershire and experience in the Welsh Government's badger [vaccine](#) project will help deliver this experience and knowledge."

Provided by University of Exeter

Citation: Vaccination reduces the risk of unvaccinated badger cubs testing tuberculosis positive (2012, December 12) retrieved 18 April 2024 from <https://medicalxpress.com/news/2012-12-vaccination-unvaccinated-badger-cubs-tuberculosis.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.