

Signs of potentially fatal bacterial disease affecting the canine community

May 14 2014, by Rebecca Griffiths



Researchers at the Royal Veterinary College (RVC) are calling for dog owners and veterinary surgeons to recognise the signs of a potentially fatal bacterial pneumonia-type disease that has been increasing in the canine community over the past five years, to ensure rapid treatment and help contribute to research to limit further spread.

Streptococcus zooepidemicus is a [bacterial infection](#) that manifests itself similarly to human Toxic Shock Syndrome, causing a severe, bloody pneumonia in dogs. It has an acute onset and in a small proportion of cases the disease has been known to kill dogs within 24 hours of contracting the infection.

Outbreaks are sporadic, but particularly occur in situations where dogs mix in groups, such as rehoming or boarding kennels and in hunting and racing greyhound communities. Although it is rarer in family pets, researchers are still keen to highlight the signs to owners, particularly if they regularly visit kennels or attend events where large groups of animals gather. In the early stages, signs are similar to those of "kennel cough", which is seen in similar environments. However, in *Streptococcus zooepidemicus* outbreaks, dogs rapidly become very ill and show very severe signs, with a mortality rate of up to 50% reported. In contrast to this, in more typical cases of [kennel cough](#), most dogs will have a relatively mild illness and deaths are rare.

Researcher and Veterinary Pathologist Dr Simon Priestnall (right) from the RVC said: "Although *Streptococcus zooepidemicus* was first identified in dogs in the 1970s, veterinarians and researchers have seen the number of cases spiral upwards over the past five years, particularly within rehoming kennels and the greyhound community. This suggests that the bacterium may have mutated to become more virulent and contagious."

"There is currently very limited public awareness of the problem. Signs for owners to look out for in their pets include a fever, which is usually accompanied by sneezing and nasal discharge which is often bloody, and their animal becoming lethargic. If owners notice the rapid onset of these signs, they are advised to seek veterinary help immediately. With prompt identification, medical treatment and supportive care, dogs can make a full recovery."

In 2007 at one rehoming centre in California over a thousand dogs were estimated to have suffered or died from haemorrhagic pneumonia caused by *Streptococcus zooepidemicus*. In 2009 around 30 dogs a day were developing pneumonia at a kennel in South Korea. Smaller, sporadic outbreaks have occurred during this time in the United

Kingdom but all have so far been only reported anecdotally.

Dr Priestnall and his colleagues are working alongside the Animal Health Trust (Dr Andrew Waller) and the University of Nottingham School of Veterinary Medicine and Science (Drs Jenny Stavisky and Janet Daly) to investigate this potentially fatal bacterial pathogen. They are developing a test that will allow them to determine, from a nasal or throat swab, how many dogs are suffering from the disease and how many are carriers (i.e. dogs that have the potential to 'silently' pass the bacterium on to other animals because although they do not appear ill they are harbouring the bacterium). The hope is that by detecting patterns within the bacterial isolates or the infected dogs, they can uncover potential risk factors and limit the spread of the disease.

In particular, they are seeking the help of UK veterinarians who are treating affected [dogs](#) and might be able to submit swab samples to aide research.

Provided by Royal Veterinary College

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