

FAQ on Canine Distemper Virus and tigers



What are the symptoms of CDV and how can it be confirmed if it is present in the Sumatran tiger population?

As far as we know from a handful of CDV cases in zoo tigers and also wild tigers in Russia, the symptoms include respiratory disease (similar to a pneumonia), diarrhea, neurological disease in which the animal's behavior is altered (losing fear of man is one manifestation), seizures (fits), muscular incoordination, and death. We are aware of other wild tigers (and leopards) that show evidence of having met the virus (i.e they have been exposed and have responded by producing positive antibody levels), but without progressing to disease. This may be a result of a low dose of virus, or perhaps some individuals mount a more effective immune response, but we really don't know.

Why is the work in Sumatra so important?

Tigers are critically endangered in all the countries they exist – largely due to habitat destruction & degradation, and ever-increasing poaching pressures. However, as the populations of tigers decrease, they become ever more vulnerable to disease. For example, large populations of animals that get hit by epidemics of infectious disease may lose a percentage of their numbers, but there will be sufficient animals left that are resistant and can repopulate to former levels rapidly (look at the impact of the Spanish 'flu epidemic in 1918 – millions of people died, but no significant impact on the human population). When a small population gets impacted by lethal infectious diseases, they may simply not be enough survivors to restart. In Sumatra, it is conceivable that habitat issues and poaching could be addressed if enough effort is expended, but if we ignore the possible impact of disease, there may not be enough tigers left to benefit from this greater protection when and if it comes! The warning signs are there – reports from vets on Sumatra suggest that CDV may be common across the island, and because this virus has evolved in recent decades with the result that it is now not only a disease that effects dogs, but many other species including the big cats (as has been seen in Russia), it could be the final straw that makes extinction inevitable. Tigers whose behavior is altered so that they lose their fear of man will become easy prey to poachers, and even if they aren't poached, CDV is capable of killing them anyway.

Where else are tigers in a similar situation?

The simple answer to this question is that we don't know. However, as a vet I would judge that the conditions for CDV to have a major impact on tiger populations are present in most of the countries that still have tigers. CDV is very widespread, human populations in those areas are ever increasing, and along with humans come the dogs that are probably the most important source of the virus. No tiger range state has an effective disease surveillance programme that can accurately map and predict the impact of CDV on tigers (and other big cats) yet. We are hoping that WVI's work with vets and conservation agencies on Sumatra might establish a model to do exactly that, and having understood more about the disease, we may be able to plan preventive measures to protect the tigers. It has to be said that this is an ambitious plan, but what works in Sumatra may work in other countries, so its impact could be very wide-ranging.

WVI work on so many important projects – how do you prioritise one over others?

Generally WVI responds to requests for help, following which we identify the most appropriate vet to deal with it. We don't have a very formal process to decide which projects will take priority, but

the degree of conservation urgency (how rare, how threatened etc), whether veterinary intervention or assistance will make a significant difference, inevitably whether it is possible for us to find sufficient funding rapidly enough, etc all come into it.

WVI does have a substantial cat portfolio, and this is a result of one of the founders having been involved in large cat conservation veterinary work for many years prior to WVI's establishment and registration as a UK charity.

How can people help?

Inevitably veterinary activities are rather specialized and don't immediately lend themselves to general members of the public becoming directly involved. However, such activities are also very expensive, and we need people to help us raise sufficient money to support WVI in its work. Of course we welcome donations from anyone who is interested and concerned, but we would be particularly delighted if enlightened donors can be found within the Indonesian community. Sumatra is a part of Indonesia and the more Indonesian people are involved in addressing the problems of the Sumatran tiger, the better. The greater the in-country support is for tigers, the more quickly the message will spread to all Indonesians that they have a fabulous and unique creature living in their forests that needs their help and protection.

This goes for all the countries we work in.

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