



Felid Taxon Advisory Group – Updated Alert for the Risk of Infection with Highly Pathogenic Avian Influenza (HPAI) H5N1 in Felid Species

Approved by the AZA Animal Health Committee and Veterinary Scientific Advisory Group
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As the Highly Pathogenic Avian Influenza (HPAI) H5N1 strain continues to be identified in North America and around the globe, the risk to felid species in our care continues. With die-offs noted in multiple species, including marine mammals and mesocarnivores, the disease continues to expand into new species, most alarmingly in new mammal species.

Emerging information is becoming available of dairy cows across North America being infected with a reassortant virus termed HPAI H5N1 B3.13. Dairy cows infected with virus have been shown to shed the virus in colostrum and milk while showing mild clinical signs, which is very rare in this species, representing the first time in the US that cows have shown antibodies to a H5 antigen. Domestic cats at dairy farms, known to have drunk the raw milk or eaten wild birds, have shown especially high morbidity and mortality rates, including rapid onset of neurologic and ocular signs, as well as respiratory signs. The cats were shown to have the same strain as the milk from the infected cows. Avian influenza has been noted in domestic cats previously, causing neurologic and respiratory signs, but the high mortality rate of this strain in these current reported cases is of note.

A small number of cases in both large and small cat species, both in human care as well as free-ranging animals, have been reported from HPAI H5N1 to date as well, and that list is expected to expand as the outbreak continues. Additionally, since influenza viruses are so prone to mutating and reassorting, it remains difficult to predict how the virus may act in future months and years.

This updated alert serves to remind felid-holding institutions of the potential risk of HPAI H5N1 infection to felid species in your care, and to provide a few basic precautions and preventative measures to guide preparation and response:

- Review diets for felid species in your care, especially those of avian origin. Feeding out free-ranging avian species is not advised. Be sure that any avian food sources are reliable, and have appropriate biosecurity to avoid feeding infected prey items. Be aware of the risk of zoo felids catching and ingesting wild birds.
- Feeding milk to felids is not standard practice, but some facilities do use goat's milk for training. Ensure that any milk products used, even in small amounts, are pasteurized. This recommendation holds true for any zoo species. To date feeding raw beef meat has not been shown to be a transmission risk, but continue to stay informed about the newest reports as more information becomes available.
- Review biosecurity of felid areas. Crossover of fomites between at-risk avian species and felids should be avoided. In the new reports, the dairy cows were thought to have been infected by feed contaminated with wild bird feces; avoiding any contamination with wild bird feces is recommended.
- Monitor wild bird mortalities, especially any in contact with felid species. Consider necropsy and testing in accordance with state or provincial veterinary officials as appropriate.
- Monitor felid species for clinical signs suggestive of avian influenza. Signs can be vague and include lethargy, inappetence, as well as respiratory, digestive, and neurologic signs. Ocular signs (blindness caused by chorioretinitis) noted in the most recent domestic cat reports are of note as well. Consider testing as indicated by necropsy results and in accordance with state or provincial veterinary officials. Brain and eye tissue should be included in any felid necropsies to assess for this disease.

- Keep in mind that many other mammals are also susceptible to this strain of HPAI, including mustelids, canids, ursids, pinnipeds, cetaceans, and even marsupials, and this list continues to expand. This HPAI strain has to date shown low zoonotic potential but some mammal-to-mammal transmission is becoming more apparent. As the strain finds its way into more species, the risk of adaptive mutations and combination with other influenza viruses increases.
- Zoetis is developing inactivated HPAI H5 vaccines for use in poultry to target the currently circulating HPAI H5N1 strain. Zoetis previously licensed inactivated HPAI H5 vaccines in the United States and abroad. Mammalian versions of this vaccine may also be of interest due to the outbreak in cattle. The vaccines are being developed as a two dose initial series for cattle and companion animals. If anyone is interested in further information, please contact Dr. John Hardham for more information:

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The Felid TAG recommends that each facility perform a risk assessment of current practices to assess the risk to HPAI H5N1 now and as the outbreak continues.

Please let us know if you have suspected or confirmed cases in your felid collections so that we can provide the most up-to-date information to our community.

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Recent References:

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