

## Visits to the petting zoo require vigilant hand washing to prevent spread of disease, researcher says

September 14 2012, by Darrah Tinkler

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(Medical Xpress)—A trip to a petting zoo may bring more than a smile to a child's face—it also could lead to them getting sick. That's one reason why a Kansas State University professor says that interactions between animals and the public need better oversight.

Doug Powell, professor of food safety, points to recent cases where 12 people were sickened with influenza A—H3N2 variant—from contact with pigs at petting zoos, and four outbreaks linked to mail-order chicks that sickened hundreds, primarily children, with salmonella.

"People have to be careful—a lot more careful than they thought," Powell said.

Powell is co-author of the paper "Observation of Public [Health Risk Behaviors](#), Risk Communication and Hand Hygiene at Kansas and Missouri Petting Zoos – 2010-2011" that was published recently in the journal *Zoonoses and Public Health*.

The paper's main author is Gonzalo Erdozain, a master of public health student at the Kansas State University who works with Powell. Erdozain, Manhattan, visited numerous petting zoos and fairs in Kansas and Missouri in 2010 and 2011 and found many sanitary problems at the facilities. Article co-authors include Katherine KuKanich, assistant professor of clinical sciences at Kansas State University, and Ben

Chapman of North Carolina State University.

When visiting petting zoos, Powell said parents need to be vigilant in watching their children and they need to put a health plan in effect for the visit. In Erdozain's study, he observed children touching their faces after petting the animals, eating or drinking in the petting zoo, eating petting zoo food and sucking on a pacifier while at the zoo. Children were also seen picking up animal feces.

Another factor to watch for is the presence of high-risk animals—those most associated with [zoonotic diseases](#), including chicks, young ruminants like kid goats, sheep and cattle. Zoonotic diseases can be passed from animal to human, or vice versa.

[Washing hands](#) before and after encountering animals and the animal feed is one of the most recommended method to fight germs and bacteria from the animals and surrounding area of animal pens, Powell said.

"Hand-washing tool selection may also contribute to the success of hand hygiene as a preventive measure, as some outbreak investigations have reported alcohol-based hand sanitizer was not protective against illness, especially when hands are soiled," Powell said.

Powell said Erdozain's study found that visitors were five times as likely to wash their hands when a staff member was present. This observation, Powell said, is consistent with a study published last year that showed the importance of a little encouragement.

To help maintain a safe and healthy environment, Powell said petting zoos should constantly remind visitors to wash their hands when exiting the pens. Keeping clean and useful sinks near the exits of all facilities with a stand by attendant would help decrease the likeliness of a

widespread illness due to forgetful hygiene, he said.

Strict governmental regulation and enforcement would be one way to ensure this happens but is an unlikely solution. Powell said that it is up to the zoos to help keep watch on what is happening within their pens and to make sure that the proper facilities are in place and are noticeable to visitors—children and adults alike.

"Providing [hand hygiene](#) stations, putting up some good signs, having staff supervise, avoiding high-risk animals and logical facility design are easy and inexpensive—and not doing so is inexcusable," Powell said.

The journal article is available at [bit.ly/QKFibx](http://bit.ly/QKFibx).

Provided by Kansas State University

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