



AASV Quick Facts

Porcine Epidemic Diarrhea

Porcine Epidemic Diarrhea (PED) is a viral disease caused by a member of the family *Coronaviridae*. Although clinically similar to transmissible gastroenteritis (TGE), the virus is unrelated to TGE. Prior vaccination for TGE (or, presumably, prior exposure to TGE or respiratory coronavirus) does not infer protection against PEDV. Introduction of PED virus into a naïve herd typically results in acute outbreaks of severe diarrhea, vomiting, high morbidity (often 100%) and variable mortality (as high as 100% in young pigs). The incubation period is short (2 - 4 days) and natural immunity develops over two to three weeks, resulting in colostral protection for neonatal piglets. The virus spreads via the fecal-oral route and fomites.

The virus is diagnosed based on clinical signs, history, ELISA or electron microscopic examination of fecal material, PCR and post-mortem examination of dead pigs. Differentiation from TGE requires laboratory diagnosis. Treatment is supportive to maintain hydration. The virus is susceptible to a number of common disinfectants including: Virkon S, Clorox, 1 Stroke Environ, and Tek-Trol (Pospischil A, et al; 2002). Sanitizing and drying pig trailers is effective against PEDV. Preliminary results suggest that it may be possible to inactivate PEDV in the presence of feces by heating trailers to 160F for 10 minutes or by maintaining them at room temperature (68F) for at least 7 days (Holtkamp; unpublished 2013).

The disease occurs in Europe (first identified in 1971 in Great Britain) and became endemic in Asia in 1982. In 2010, a variant strain was identified on pig farms in China resulting in decreased efficacy of the PED vaccines routinely used in Chinese sow herds and severe disease (high morbidity and mortality). The virus currently circulating in the U.S. swine herd is 99.4% homologous with a strain known to be circulating in China in 2012.

Research has identified transportation and points of swine concentration (markets, buying stations, etc.) to be key sites of virus contamination and subsequent routes of exposure to naïve populations. Strict adherence to biosecurity measures designed to prevent exposure to contaminated fomites may help reduce the risk of disease transmission. PEDv working groups have issued recommendations to enhance biosecurity measures associated with [markets](#), [buying stations](#) and [transportation](#). Additionally, the National Pork Board has allocated \$800,000 to conduct research on various aspects of PEDv. Regular [research](#) updates will be published to the AASV website.

PEDV is not a listed disease of the World Organization for Animal Health (OIE); is not considered a foreign animal disease in the United States; and there are currently no interstate trade restrictions pertaining to PEDV in U.S. swine. It is not a zoonotic disease, does not affect people, and is not a food safety concern.



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References:

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