

Porcine Deltacoronavirus in MSHMP sow herds

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Key Points

- Porcine Deltacoronavirus (PDCoV) is still present in sow herds since it was first reported in the US in 2014
- Number of cases reported per month averaged 3.2 cases between January 2015 and May 2020.
- PDCoV testing and reporting should continue in order to increase our understanding of the disease

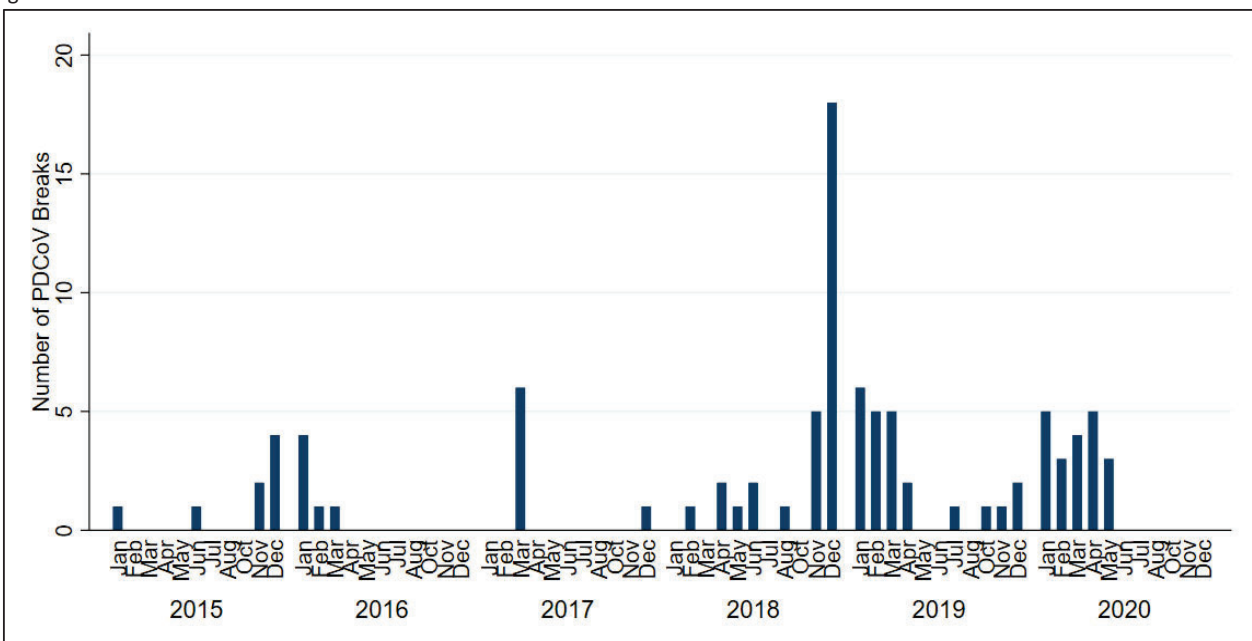
Introduction

Porcine Deltacoronavirus (PDCoV) was first reported in Hong Kong pigs during 2012 (Woo et al., 2012). Two years later it was reported in the United States (U.S.) (Marthaler et al., 2014; Wang et al., 2014). The complete genome of a U.S. PDCoV isolate was characterized by Marthaler et al. (2014), which was ~99% similar to a virus detected in Hong Kong. Clinical signs may be similar to Porcine Epidemic Diarrhea (PED) and Transmissible gastroenteritis coronavirus (TGEV). These include acute diarrhea, that can be accompanied by mild to moderate vomiting, which ultimately cause dehydration and death especially in neonatal pigs (Jung et al., 2016). MSHMP participants have continued to communicate PDCoV cases in sow herds. In this science page, a description of PDCoV cases reported on MSHMP participant sow farms from January 2015 and onwards is presented.

Results

PDCoV continues to be present in the United States swine herd. Since January 2015, PDCoV cases have been both actively and passively reported to MSHMP. Over this period of time, 94 cases from 16 systems have been reported. Figure 1 summarizes the monthly number of PDCoV cases through time. Although in January 2015 only one PDCoV case in sow farms was reported, one new case in a sow farm was reported again on June, and then transmission became more frequent since November 2015 with two quiet periods in April 2016 to February 2017 and April 2017 to November 2017. Up to date, PDCoV cases fluctuate throughout the years, but usually stays below five sow sites reporting a break each month. Interestingly, in December 2018 a total of 21 sow farms from four production systems reported a PDCoV break. Altogether, those represented 19% of all PDCoV cases reported during January 2015 to May 2020. The total number of PDCoV cases reported per year was 8 in 2015, 6 in 2016, 7 in 2017, 30 in 2018, 23 in 2019, and 20 in the current year of 2020 (January to May). For months in which PDCoV was reported, the mean number of cases per month was 3.2 cases (median 2, interquartile range of 1 to 5).

PDCoV still occurs in the U.S. at an apparent low number of reported cases in sow herds indicating that there may be PDCoV infected pig populations serving as sources for this virus. Swine producers and veterinarians must stay vigilant for clinical signs compatible with PDCoV and continue to test for this pathogen.



References

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