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Editorial

Another emerging disease: Swine Enteric Coronaviruses



This special issue of *Preventive Veterinary Medicine* includes papers on the epidemiology of Swine Enteric Coronaviruses, two in particular, Porcine Epidemic Diarrhea virus (PEDV) and Porcine Deltacoronavirus (PDCoV). Some strains of PEDV have been circulating in Europe since the 1970s with subsequent movement to countries in Asia. Veterinarians and other animal health experts learned to manage the disease as they had done with another coronavirus in swine, transmissible gastroenteritis virus. But as viral pathogens are known to do, the PEDV virus changed, becoming more virulent and pathogenic resulting in a significant outbreak of disease in Asia since 2010. PDCoV was first reported in Hong Kong in 2012 but little is known about its global distribution and epidemiology. In 2013, both of these viruses emerged in the western hemisphere causing disease that resulted in significant morbidity, mortality and economic loss. In the United States, estimates of between 7 and 9 million piglets lost emphasize the devastation to affected producers and resulted in higher prices for consumers.

Emerging diseases are defined as a newly identified pathogen or strain, a known pathogen in a new location, or a new presentation of a known pathogen. Emerging disease events have negative impacts, real or perceived, on animal health, economics, or public health. Rapid detection and response to emerging diseases is critical to livestock and poultry industries but because they are unknown to the area in which they are detected, it is often the case that pre-established policies on reporting, control and other response activities are lacking or vague. In the editorial for a recent special issue of this journal on Schmallenberg virus emergence in Europe the editors stated, “the scientific workup of the outbreak regarding

its virological, epidemiological and veterinary public health was from the beginning characterised by transparency, mutual trust, ability to exchange of materials and knowledge, harmonisation of study protocols, and close collaboration between countries.” Similarly in the United States, prompt and frequent communication between national and local animal health authorities, laboratories and industry partners facilitated reporting, research and control efforts. However, the determination of how to respond effectively was a demonstration of the “learn as we go” approach. The SECD emergence in the western hemisphere was the impetus in the US to create an emerging diseases framework that will provide the pre-established policies that were missing in the SECD incident.

This special issue provides information on the epidemiology, spatial distribution and molecular characteristics of the PEDV and PDCoV. We thank the authors for their contributions and to the editorial board for their interest in the topic.

Brian J. McCluskey

United States Department of Agriculture, Animal and Plant Health Inspection Service, Veterinary Services, Fort Collins, CO, USA

Bob Morrison

Department of Veterinary Population Medicine, College of Veterinary Medicine, University of Minnesota, St. Paul, MN, USA