Companion Animal Veterinary Surveillance Network

OVERVIEW AND BENEFITS OF PARTICIPATION

What is CAVSNET?

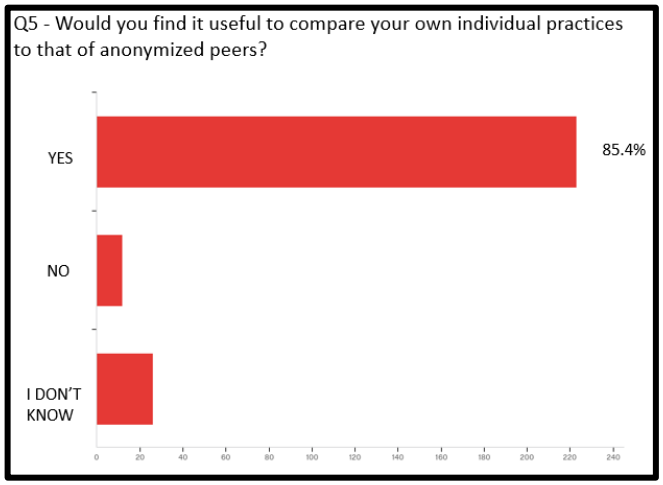
The Companion Animal Veterinary Surveillance Network (CAVSNET) is a comprehensive disease surveillance system that combines clinical practice data with data from veterinary diagnostic laboratories. Companion animal clinics can participate in CAVSNET through submission of deidentified health, disease, and treatment data. Data from participating companion animal clinics are collected in near real-time by an automated process and compiled in a central database. The goals of CAVSNET are to define disease trends over time, identify animal populations at risk, describe treatment practices and outcomes, provide data for veterinary research, and improve awareness of companion animal diseases and disease prevention. In addition to providing data for action across the veterinary profession, the CAVSNET system provides individual clinics with valuable data about their practices and patient population. The system is modeled after, and has been developed in collaboration with, SAVSNET, a University of Liverpool program with the support of the British Small Animal Veterinary Association.[1]

The first major data-driven initiative of the CAVSNET Team is to fill existing knowledge gaps regarding companion animal antibiotic use and resistance. In addition to collection and reporting of aggregate antibiotic use and resistance data, the CAVSNET Team supports clinics to use their own data and benchmarking metrics to understand current practices and how they compare to those of other clinics. The CAVSNET Team is developing resources for improved antibiotic stewardship in companion animal practice and is supporting clinics to implement data-driven stewardship initiatives.

How does CAVSNET work?

CAVSNET operates though integration with veterinary electronic health record (EHR) software systems. Interested EHR vendors opt in to the addition of a CAVSNET application program interface (API) to their existing software platform. This CAVSNET API is communicated by the SAVSNET Team at University of Liverpool to EHR computer programming engineers. The CAVSNET API is then integrated into the EHR and local clinic computers are provided CAVSNET capability through a software update. Participating clinics are then able to remotely activate CAVSNET capability on their local (desktop) software.

How does CAVSNET benefit veterinarians and veterinary clinics?



With the CAVSNET Portal, participating clinics can view their own practice data (e.g., diagnoses, procedures, prescriptions, patient demographics), see benchmark metrics comparing their practices to those of other clinics, and set targets for practice initiatives. Data can be compiled for both individual clinics and practice groups. In a March 2018 Minnesota survey, 86% of veterinarians said that benchmarking against anonymous peers would be useful to them.[2] In addition to these individual benefits, CAVSNET provides valuable near real-time information to the wider veterinary profession about companion animal disease. Clinicians and other animal health professionals can use the CAVSNET website to visualize syndromic (e.g., gastrointestinal, respiratory) and disease-specific (e.g., parvovirus,

canine influenza) incidence data in their area. This information provides situational awareness and empowers clinicians to use data to communicate the importance of disease prevention to pet owners.

How does CAVSNET benefit electronic health record software vendors?

CAVSNET can increase the value of any EHR system by providing the capability for participating clinics to track their own practice data, benchmark practices against those of other clinics, and contribute to disease surveillance that benefits animal health and the entire veterinary community. The CAVSNET system overcomes the barriers of clinic ownership, geographic location, varied software systems, and facility technical expertise and capacity to collect data from diverse veterinary clinics with minimal resource investment. Incorporation of CAVSNET provides EHR systems with the value-added ability to track, benchmark, and set goals for only the expense of the programming time that it takes to install the CAVSNET API.

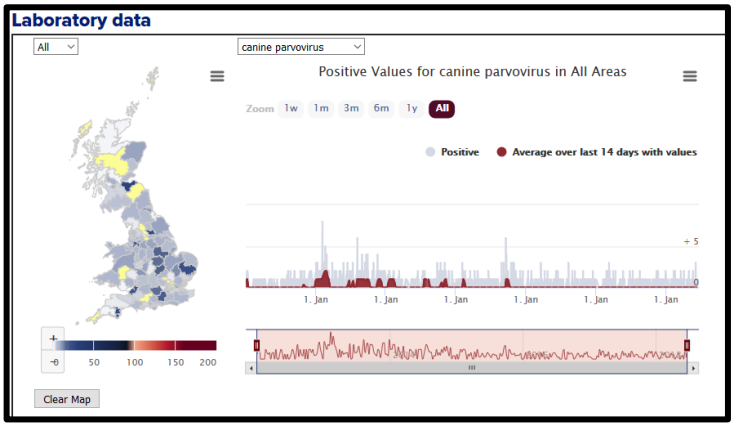
In the U.S., no national or state-level programs are in place to track companion animal disease, despite the positive impact that such surveillance might have on animal health, and the importance of these species to human health and wellbeing. CAVSNET takes a step toward filling this gap, and CAVSNET partners will be recognized for their contributions to the broad mission of improving animal health and advancing the veterinary profession. Additionally, should reporting of practice (e.g., antibiotic prescribing) or animal disease be mandated in the future, CAVSNET-capable EHR systems will likely be well-positioned to meet those requirements.

How does CAVSNET benefit animal and public health?

CAVSNET is the first surveillance system in the U.S. that provides sustainable data on companion animal disease and veterinary practice. Infectious and chronic animal diseases can be monitored by individual clinics and at population level (e.g., locally, statewide, nationally). In addition, zoonotic and vector-borne diseases of human health importance, such as leptospirosis, influenza, and Lyme disease, can be monitored for public health awareness and targeted prevention messaging. CAVSNET is also a powerful tool in the fight against antimicrobial resistance, or the ability of microbes to evade the effects of drugs meant to kill them or slow their growth. Resistant organisms and antimicrobial use, a major driver of antimicrobial resistance, are both tracked in CAVSNET. Tracking antimicrobial use is an important part of antimicrobial stewardship, or the process of improving antimicrobial use while effectively treating infections.[3] Tools for measuring antimicrobial use in veterinary medicine are rare. CAVSNET tracks prescriptions by species, clinical syndrome, and drug type, facilitating identification of intervention opportunities and progress tracking. CAVSNET data also provide valuable population measures of antimicrobial use, which can be used for goal-setting for prescribing improvement in the veterinary profession. CAVSNET has the potential to become a comprehensive national surveillance system, vastly expanding our knowledge of animal disease and veterinary practice.

Do veterinarians want to participate in disease surveillance?

Veterinarians are ready and eager to participate in companion animal disease surveillance. Of 261 Minnesota veterinarians surveyed in March 2018, 244 (94%) think veterinarians should contribute anonymized data to a disease surveillance system, and 220 (85%) would be willing to participate in automated submission of anonymized animal health data.[2] Most (86%) would find it useful to benchmark their practices (e.g., antibiotic use) against those of other veterinarians. [2]



1. SAVSNET, University of Liverpool, e.g., Radford 2011
2. Unpublished data, 2018. University of Minnesota College of Veterinary Medicine
3. AVMA Core Principles

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