

Point Prevalence Survey of Antimicrobial Use in Minnesota Companion Animal Veterinary Clinics: 2020

OVERVIEW AND BENEFITS OF PARTICIPATION

What are point prevalence surveys and why are they important?

Measurement and reporting of **antimicrobial use (AU)** and **antimicrobial resistance (AMR)** is a core component of antimicrobial stewardship (AS). In public health, the **point prevalence survey (PPS)** approach has been used to establish national estimates of AU in acute care and long-term care settings. A PPS is an approach to identify the number of people with a disease or condition at a specific point in time. In the case of AU, the PPS has been used to determine the number of people receiving antimicrobial treatment on a given day. National PPS for healthcare settings have compiled the number of individuals on an antibiotic in many individual facilities into a national estimate of how many people receive antimicrobials in these settings per day. Information is also gathered about antimicrobial type, class, and reason for use, as well as general patient details.

Why should we consider conducting an AU PPS for companion animal veterinary medicine?

The companion animal (considered here as canine, feline, equine) veterinary profession lacks data to evaluate AU and AS practices, but inappropriate AU is likely as prevalent in clinic-based veterinary practice as it is in human medicine. In a single-center study, 38% of canine antibiotics in a veterinary teaching hospital were prescribed without documented evidence of infection. The International Society for Companion Animal Infectious Diseases (ISCAID) has published AU guidelines for canine superficial bacterial folliculitis and for canine and feline urinary tract and respiratory tract disease. However, without AU data, we cannot assess adherence to these guidelines, measure trends, or describe broader AS practices. PPS can be used to collect uniform data from multiple sites over a single time period, providing a snapshot of practice and information to guide profession-wide improvement.

What are the goals of this PPS?

The goal of this study is to establish an estimate of AU in Minnesota companion animal hospitals for use in setting AS objectives, developing AS resources for veterinarians, and benchmarking progress. There are no published state-specific or national data on AU in U.S. companion animal hospitals and few data on practices in individual hospitals. During 2018–19, a research team at the University of Minnesota (UMN) College of Veterinary Medicine has been using the PPS approach for internal AU measurement and has summarized this methodology to facilitate establishment of a statewide snapshot of AU in referral companion animal hospitals.

What will be required of me if I participate in the PPS survey?

Time required for participating facilities is minimal. The UMN Institutional Review Board (IRB) and UMN Institutional Animal Care and Use Committee (IACUC) has reviewed and approved this study, deeming it exempt (STUDY00007359).

Each participating facility must identify a primary contact for this study. This person, or his/her designated team, will be responsible for obtaining local ethics approval, if necessary (e.g., IRB or IACUC), completing a facility survey (e.g., services offered, hospital capacity, urban/rural characteristics) before and after survey dates (15 minutes for each survey), identifying survey dates, generating a census of patients on study

services on the survey dates, and allowing UMN study personnel to review medical record information for each animal included in that census. Research personnel from UMN will do data collection and analysis, however, a staff member (e.g., veterinary technician) will review records with UMN personnel and should anticipate three hours each quarter (total of 12 hours during study period). Exact time estimate will vary depending on size of clinic. Data will be collected on four survey dates that will be determined by participating clinics.

What will be provided to me?

UMN study personnel will collect information needed in the data collection tool. A short clinic survey will be provided to staff and asked to be completed. A sample IRB project description will be provided to participating veterinary hospitals that request it. An AS resource toolkit, including a Field Guide to AS in Veterinary Clinics, customizable commitment posters, an antibiotic time-out worksheet, antibiotic use talking points, and more, will be provided to each participating clinic.

What are the benefits to my clinic?

In addition to contributing to a baseline of knowledge for the profession, each participating facility will gain experience reviewing AU data and using protocols that can be used internally for continued AU tracking and improvement of facility-level prescribing. Clinics will be provided an AS resource toolkit, which can be used to improve antibiotic prescribing and communication with clients around antibiotics. Clinics will also receive a summary of their AU data, as well as a summary of aggregated data.

Are there any data privacy issues?

Data will be collected in secure software systems. Only approved study personnel will have access to the data. All research has been reviewed and approved through UMN ethics and local ethics review is requested of participating clinics. Data will be presented and published in aggregate as to not identify individual clinics, patients, or employees.

What is the timeline, and how do I participate?

- Oct-Dec 2019: Clinic recruitment
- Dec 2019-Jan 2020: Survey completed prior to data collection
- Jan 6-19, 2020: Quarter one of data collection
- April 6-19, 2020: Quarter two of data collection
- July 6-19, 2020: Quarter three of data collection
- Oct 5-18, 2020: Quarter four of data collection
- Nov 2020: Post-study employee survey completed
- Nov 2020-Feb 2021: Participating facilities receive summary of their data and in aggregate

Exact dates are subject to change. To participate, contact the lead study personnel to receive additional information.

- Program Manager: Emma Leof (leofx003@umn.edu)
- Dr. Amanda Beaudoin (beau0209@umn.edu)
- Dr. Jennifer Granick (grani003@umn.edu)

December 2019