

**Knowledge, Attitudes, and Practices of U.S. Large Animal Veterinarians
Concerning Common Veterinary Infection Control Measures When Working with
Animal Obstetric Cases**

Request for OMB approval of a New Information Collection

Supporting Statement B

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LIST OF ATTACHMENTS

Attachment A.	Section 301 of the Public Health Service Act (42 USC 241)
Attachment B.	60-Day FRN
Attachment C.	Electronic Information Collection Instrument
Attachment D.	Cover Letter
Attachment E.	Reminder to Complete Email Script
Attachment F.	HSR determination letter
Attachment G.	JAVMA Advertisement

1. Respondent Universe and Sampling Methods

The goals of this survey are to better describe veterinarians' current knowledge of zoonotic infectious diseases that cause abortion in large animals, determine typical veterinary infection control practices when working up obstetric cases, and identify common barriers to personal protective equipment use. The results will be used to identify areas for improvement in risk perception and preventative behavior to reduce the rate of exposure of large animal veterinarians to infectious zoonotic diseases in the United States. Knowledge gained from the survey will be used to improve and enhance zoonotic disease education targeted to veterinarians.

The study sample will be a nonprobability-based purposive sample. Therefore, the results are not generalizable to the general veterinary population. Descriptive statistics of general findings will be reported. Category variables will be described as counts and proportions; continuous variables will be described by using median and range. Tests of comparison will be conducted by using chi-square.

In 2017, there were close to 20,000 veterinarians working in U.S. private clinical practices that specialized in food animal or mixed animal veterinary care. Participants' recruitment will take place through collaboration with veterinary specialty organizations (e.g. American Association of Small Ruminant Practitioners, American Association of Bovine Practitioners, American Veterinary Medical Association) including but not limited to various associations composed of veterinarians interested in bovine, small ruminant, or swine medicine. These veterinary organizations typically have around 5,000 to 6,000 members, representing approximately 1/3 of our target population. Electronic survey links (Attachment D) will be distributed by collaborating veterinary specialty associations. The organizations will distribute the surveys to their listserves on our behalf. The statistical power is not applicable because this is a qualitative study. We anticipate around 8-10% completion rate for approximately 500 completed surveys; however, there is no cap on the number of veterinarians that may respond.

Study Population

Veterinarians that work with livestock in the United States.

2. Procedures for the Collection of Information

We plan to administer the Knowledge, Attitudes, Practices (KAP) survey (**Attachment C**) to a convenience sample of large animal veterinarians across the United States. Electronic survey links will be distributed by selected veterinary specialty associations. The organizations will distribute the surveys to their listserves on our behalf. All veterinarians contained in the organization's membership list will be asked to participate. The survey will be distributed through e-mail (**Attachment D**) with a link to an EpiInfo web survey. We estimate the one-time survey should take 15 minutes to complete. Four weeks after the survey is initially sent to the sample population, a reminder email (**Attachment E**) will be sent with a link to the survey. Four weeks after the first reminder email is sent, it will be sent for a second time. Four weeks after the second reminder email is sent, the completed surveys will be compiled into a database and analyzed.

In the e-mail providing the link to the survey, participants will read about the purpose of the survey and receive the standard informed consent information (**Attachment D**). The introductory e-mail will include informing participants of the following:

1. The survey is voluntary; participants may choose not to answer any question and can end participation at any time.
2. Data will be collected anonymously to ensure the privacy of survey response. No identifying information will be collected or transmitted to CDC.
3. Survey responses will not be tied to individual respondents.

Data will be collected from a web-based survey platform. No personally identifiable information will be collected. Data will be downloaded from the survey platform and stored on a secure network drive on a password-protected computer.

3. Methods to Maximize Response Rates and Deal with No Response

Questionnaires will be designed to be administered in less than 20 minutes, so the burden on participants should be sufficiently low to maximize response rates. We will inform respondents of what the project is asking, why it is being asked, who will see the results, and how the results will be used, as well as discussing how respondents will benefit from the results and how the findings will be put into action. Respondents will be informed of the time it will take to complete the survey, how their answers will be used, and will address data security and

anonymity with respondents. To maximize cooperation and achieve the desired participation rates, we will send survey completion reminder e-mails 1 and 2 months prior to the original email survey request.

4. Test of Procedures or Methods to Be Undertaken

We conducted pre-testing of key informant interviews, to ensure that the survey collection instrument is appropriate and realistic to the work place settings of livestock veterinarians. Collection instruments were pre-tested with 3 large animal practitioners prior to implementation to ensure that questions were easily understood. Veterinarians piloting the survey were also asked to record the amount of time it took to complete the survey to estimate the burden for administering the survey. In this way, the burden estimate should most closely resemble a maximum average burden.

5. Individuals Consulted on Statistical Aspects and Individuals Collecting and/or Analyzing Data

The individuals consulted on technical and statistical issues related to data collection are listed below. Members of the Rickettsial Zoonoses Branch, Enteric Zoonoses Activity, Bacterial Special Pathogens Branch, and the National Institutes of Occupational Safety and Health may be involved in the design, collection, and analysis of the data collected using this survey instrument.

- Cara Cherry, Epidemiologist, Rickettsial Zoonoses Branch, National Center for Emerging & Zoonotic Infectious Diseases; (404) 718-5401; imv5@cdc.gov; [POC for data collection and analysis; project design.](#)
- María E. Negrón Sureda, Veterinary Medical Officer, Bacterial Special Pathogens Branch, National Center for Emerging & Zoonotic Infectious Diseases; (404) 639-4619; mnegron@cdc.gov; project design.
- Megin Nichols, Outbreak Response and Prevention Branch, National Center for Emerging & Zoonotic Infectious Diseases; (404) 639-4194; gpg6@cdc.gov; project design.
- Christa Hale, Veterinary Medical Officer, National Institute for Occupational Safety and Health Western States Division; (303) 236-5943; CRHale@cdc.gov; Project design.
- John Gibbins, Veterinary Medical Officer, Hazard Evaluations And Technical Assistance Branch, National Institute for Occupational Safety and Health; (513) 841-4585; ffi9@cdc.gov; project design.
- Brad Biggerstaff, Statistician, Division of Vector-borne Diseases, National Center for Emerging & Zoonotic Infectious Diseases; (970) 221-6473; bkb5@cdc.gov; statistical support.