

Enhanced surveillance for cases linked to a multistate outbreak of multidrug-resistant *Campylobacter* infections linked to contact with pet store puppies

Request for OMB approval of a New Information Collection

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Supporting Statement B

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1. Respondent Universe and Sampling Methods

Respondents include ill-patients who have had a positive *Campylobacter* culture sent to their state public health laboratory. A subset of state public health laboratories perform Whole Genome Sequencing (WGS) on these isolates and routinely upload the data to PulseNet. These isolates obtained are sequenced at state public health laboratories using the Illumina MiSeq. Sequences will be analyzed using the *Campylobacter* whole genome multi-locus sequence typing (wgMLST) database (wgMLST, core genome (cg)MLST, 7-gene MLST) in BioNumerics 7.6. These results will be compared with high quality single nucleotide polymorphism (hqSNP) analysis results using the LYVE-SET pipeline (github.com/lskatz/lyve-SET).

Isolates from the 2016–2018 outbreak were determined to be resistant to azithromycin, ciprofloxacin, clindamycin, erythromycin, nalidixic acid, telithromycin, +/- gentamicin, and florfenicol; these include first-line antibiotics commonly recommended for treating *Campylobacter* infection. This resistance pattern is very rare, only being documented in 0.3 percent of NARMS surveillance isolates. NARMS has been conducting surveillance for antimicrobial resistance in *Campylobacter* isolates since 1997.

WGS data will also be used to predict antimicrobial resistance. CDC laboratorians will screen post-outbreak surveillance isolates for the multidrug-resistant pattern associated with the outbreak using ResFinder 3.0 to predict resistance. CDC epidemiologists will notify state health departments when isolates with the resistance pattern are identified. State and local health department staff will interview the ill-patients with a standardized questionnaire. Data collection will not rely on statistical methods. Rather, data from all states routinely performing WGS on submitted *Campylobacter* isolates will be analyzed.

The purpose of this enhanced surveillance project is to inform the response for the nation

2. Procedures for the Collection of Information

The standardized questionnaire will be administered by local and state health department staff. The interviewers are trained by their respective departments. Respondents will be selected based on the results of predictive resistance analysis of available WGS data uploaded by state public health laboratories as part of routine surveillance. Respondents will be contacted via telephone and interviewed

with the standard questionnaire. Respondents will be made aware that participate in the interview is voluntary.

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

State and local health departments will use their standard outbreak investigation protocols to contact, interview, and if necessary, follow-up with respondents if unable to complete the interview. If the state/local health department are unable to complete an interview within their standard operating procedure, CDC will be contacted and the respondent will be considered lost to follow-up. Given the severity of the multidrug-resistant nature of the outbreak strain, CDC will work with state and local health departments to achieve the highest response rate possible. The information requested has been kept to the absolute minimum in order to minimize the public burden.

4. Tests of Procedures or Methods to be undertaken

The standardized questionnaire was piloted on several staff members in the Division of Foodborne, Waterborne, and Environmental Diseases before being administered to case-patients. Additionally, there is extensive experience carrying out investigations of this type (i.e. investigations of outbreaks of enteric infections after animal contact).

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

No statistical methods are used in this data collection. Therefore, no individuals were consulted.