Increasing Campylobacter Infections, Outbreaks, and Antimicrobial Resistance in the United States, 2004–2012

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Abstract

Background.

Campylobacteriosis, a leading cause of foodborne illness in the United States, was not nationally notifiable until 2015. Data describing national patterns and trends are limited. We describe the epidemiology of *Campylobacter* infections in the United States during 2004–2012.

Methods.

We summarized laboratory-confirmed campylobacteriosis data from the Nationally Notifiable Disease Surveillance System, National Outbreak Reporting System, National Antimicrobial Resistance Monitoring System, and Foodborne Diseases Active Surveillance Network.

Results.

During 2004–2012, 303,520 culture-confirmed campylobacteriosis cases were reported. Average annual incidence rate (IR) was 11.4 cases/100,000 persons, with substantial variation by state (range, 3.1–47.6). IRs among patients aged 0–4 years were more than double overall IRs. IRs were highest among males in all age groups. IRs in western states and rural counties were higher (16.2/100,000 and 14.2/100,000) than southern states and metropolitan counties (6.8/100,000 and 11.0/100,000). Annual IRs increased 21% from 10.5/100,000 during 2004–2006 to 12.7/100,000 during 2010–2012, with the greatest increases among persons aged >60 years (40%) and in southern states (32%). The annual median number of *Campylobacter* outbreaks increased from 28 in 2004–2006 to 56 in 2010 –2012; in total, 347 were reported. Antimicrobial susceptibility testing of isolates from 4,793 domestic and 1,070 travel–associated infections revealed that, comparing 2004–2009 to 2010–2012, ciprofloxacin resistance increased among domestic infections (12.8% versus 16.1%).

Conclusions.

During 2004–2012, incidence of campylobacteriosis, outbreaks, and clinically significant antimicrobial resistance increased. Marked demographic and geographic differences exist. Our findings underscore the importance of national surveillance and understanding of risk factors to guide and target control measures.

Keywords: Campylobacter, Campylobacter infections, drug resistance, public health surveillance, disease Article Navigation outbreaks

Topic: campylobacter infection, ciprofloxacin, epidemiology, food poisoning, demography, disease notification, disease outbreaks, drug resistance, microbial, travel, infection, antimicrobial susceptibility test, food borne disorder, surveillance, medical, immune reconstitution inflammatory syndrome, geographic difference, foodborne diseases active surveillance network, campylobacter, internal revenue service, insulin receptor substrate proteins

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