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PREVALENCE OF CLOSTRIDIUM DIFFICILE AND DIVERSITY OF GENOTYPES COLONIZING COMPANION ANIMALS AND THEIR OWNERS: A GERMANY-WIDE SURVEY

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Clostridium (C.) difficile infection (CDI) can vary from symptomless carriage to life-threatening disease of the intestine in humans. Recent changes in epidemiology of CDI with increasing incidence and severity are of particular concern. Virulent strains affecting humans have also been isolated from various animal species. However, scarce epidemiological data on *C. difficile* in companion animals limits the knowledge about possible interspecies transmission. This study aimed to collect first national data on occurrence and genotypic variation of *C. difficile* in dogs, cats and their owners.

A Germany-wide survey sampling companion animals and their owners was conducted from July 2012 to August 2013. In 415 different households 1,435 participants contributed faecal samples with 59.3% being of animal and 40.7% human origin. Capillary gel electrophoresis based PCR ribotyping, Multilocus VNTR Analysis (MLVA) and PCR detection of toxin genes A, B and the binary toxin were used to characterise isolated *C. difficile* strains.

The *C. difficile* isolation rates were 2.94% (25/851) and 2.91% (17/584) for animal resp. human samples. Typing revealed eight different PCR ribotypes in isolates from companion animals. Three of those were also isolated from human samples (014/0, 010 and 078). Within two households identical ribotypes were isolated from two partner animals (in both cases 014/0), whereas no *C. difficile* pair from owner and pet sharing the same household could be detected.