
Scientific Interpretive Summary

Source attribution of human cases of *Campylobacter jejuni* infection from the Manawatu, July 2009 to June 2010

NZFA has a public health goal of a 50% reduction in the foodborne proportion of campylobacteriosis occurring in New Zealand over five years. Current surveillance data present a promising picture of achieving this organisational goal. However it is important to monitor any changes in the source attribution, especially from poultry, whether in response to a known intervention or from undetermined cause(s).

This report describes the results of multilocus sequence typing and source attribution modelling of isolates saved in the NZFA funded culture bank of *Campylobacter jejuni* samples from poultry and humans in the Manawatu sentinel site. These were catalogued and stored in the Hopkirk mEpiLab, Massey University between July 2009 and June 2010.

The marked decline in human cases attributable to poultry, subsequent to the introduction of the *Campylobacter* in Poultry Risk Management Strategy in 2006, is still evident in 2009/10. In the pre-intervention period over 70% of human cases were attributable to poultry, whereas in the post intervention years 2008 through to 2010 this estimate has declined to less than 50%. The proportion of cases attributable to genotype ST 474 declined from approximately 40% in the pre-intervention period to approximately 20% in the post intervention period. However, despite a proportional increase in the contribution of ruminants to human cases, poultry still remains the most important source of human infection in the Manawatu. This is confirmed by means of dynamic modelling, using temporal attribution results, which demonstrates ruminant strains remaining relatively stable and the major movements to be in poultry strains.

Recent trends in human cases indicate that the rate reduction in the Central and Lower North Island, which includes the Manawatu, is lower than elsewhere in New Zealand. This may indicate that the decline in poultry associated cases, although marked, may be less than that observed in other regions of New Zealand.

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