



## **New Zealand Food Safety Authority's response to the 'flies, fingers, fomites, and food' article on campylobacteriosis**

Nelson and Harris's analysis of New Zealand campylobacteriosis data proposes flies as vectors and transmission agents for *Campylobacter*.<sup>1</sup> It uses ecological investigation of seasonal variation to try to infer causality.

The authors need to remember that associations identified in aggregate data may not apply to individuals. There are many potential *Campylobacter* transmission routes that can lead to illness in humans. Epidemiological studies indicate that campylobacteriosis is predominantly of food-borne origin with poultry consumption/handling considered to be a major risk factor in New Zealand.<sup>2</sup> Food from animals, including red meat, poultry, offal and raw milk can be contaminated. From the farm, the natural environment and the processing premises through to our homes, there are opportunities for spread to humans.

The potential for transmission of *Campylobacter* to humans is not limited to the meat itself or meat-handling utensils (including hands), there being opportunities for contamination during food purchasing and preparation. The relative importance of poultry as a reservoir of *Campylobacter* and cause of disease has yet to be accurately determined in New Zealand but available evidence is suggestive that it is important.<sup>3</sup> While climatic factors may contribute to any role that flies play in the spread of this organism, the higher rates of illness in urban rather than rural dwellers do not support the hypothesis of direct transmission by flies from cattle faeces to food.

We believe that a 'farm to fork' approach has to be taken to minimise food's contribution to New Zealand's unacceptable high rate of campylobacteriosis. There is no 'magic bullet' that can be adopted. Human exposure to *Campylobacter* should be minimised utilising a risk management based approach. A range of interventions involving primary production and primary and secondary processing are likely to be needed to progressively reduce the high load of *Campylobacter* which is entering our food chain. To this end, the New Zealand Food Safety Authority has commissioned work looking at laboratory methods, epidemiology, transmission routes, source attribution and interventions throughout the food chain, in association with both the Ministry of Health and the food industry, as described at <http://www.nzfsa.govt.nz>

While the fly theory is interesting and may, along with other postulated sources, merit further study in the long term, we agree with the authors that effective programmes to reduce the known risks of direct food-borne transmission must not be delayed.

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## References:

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