Evaluation of the role of milk tankers in the spread of foot and mouth disease in 2001

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The FMD epidemic in the UK in 2001 has provided an opportunity to investigate the role of milk tankers in spreading FMD. In north Cumbria, over 40% of dairy farms became infected with FMD i.e. cases. Few of the remaining dairy farms were culled pre-emptively and so provide a control population. Records of milk tanker visits were available from all the dairy companies operating in north Cumbria.

A matched case-control study was undertaken for 124 pairs of infected/non-infected dairy farms. The farms were matched for location, herd size and exposure times. All tanker visits were examined for the level of risk they potentially carried, which depended on a combination of how long the disease had been present on the “donor” farm and the time between leaving this farm and arriving on the “recipient” farm. The difference in the numbers of these visits to IPs and Non-IPs within each pair was analysed. No significant differences were found for any level of risk analysed, nor was there any evidence of a dose-response effect. Conditional logistic regression found no significant risk due to high risk visits by a milk tanker.

Whilst there are always going to limitations to study power imposed by sample size, the lack of any suggestion of dose-response and lack of measurable effect even when only very high risk visits are included suggest that this “negative” result is real. This indicates that some other process is occurring which is decreasing risk, most likely biosecurity.