A role for flies (Diptera) in the transmission of Campylobacter to broilers? - DTU Orbit
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A role for flies (Diptera) in the transmission of Campylobacter to broilers?
Campylobacter is the leading cause of bacterial diarrhoeal disease worldwide, with raw and undercooked poultry meat and products the primary source of infection. Colonization of broiler chicken flocks with Campylobacter has proved difficult to prevent, even with high levels of biosecurity. Dipteran flies are proven carriers of Campylobacter and their ingress into broiler houses may contribute to its transmission to broiler chickens. However, this has not been investigated in the UK. Campylobacter was cultured from 2195 flies collected from four UK broiler farms. Of flies cultured individually, 0.22% [2/902, 95% confidence interval (CI) 0–0.53] were positive by culture for Campylobacter spp. Additionally, 1293 flies were grouped by family and cultured in 127 batches: 4/127 (3.15%, 95% CI 0.11-6.19) from three broiler farms were positive for Campylobacter. Multilocus sequence typing of isolates demonstrated that the flies were carrying broiler-associated sequence types, responsible for human enteric illness. Malaise traps were used to survey the dipteran species diversity on study farms and also revealed up to 612 flies present around broiler-house ventilation inlets over a 2-h period. Therefore, despite the low prevalence of Campylobacter cultured from flies, the risk of transmission by this route may be high, particularly during summer when fly populations are greatest.

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