

NEWS

Supermarkets with the most *Campylobacter* infected chickens will be named and shamed next week

Ingrid Torjesen

London

A Food Standards Agency report due to be published next week will show which fresh supermarket chickens are most likely to be infected with *Campylobacter*, and Public Health England hopes that this will urge the major supermarket chains to pressure their suppliers to bring down infection rates.

Public Health England was contracted by the Food Standards Agency to measure *Campylobacter* contamination in fresh raw chickens sold by UK supermarkets and butchers over a 12 month period. The first results, which were published in August, showed that the contamination rate was around 60%, but they did not break this down by retailer. The next set of quarterly results will do so, and it is expected to show higher infection rates.

Frieda Jorgensen, of Public Health England's food, water, and environmental laboratory, told a press briefing in London on 18 November, "We know more chicken stocks tend to be *Campylobacter* positive in the summer, [so] it is highly likely that the contamination rate for retail chickens will be higher for the summer months quarter which is due to be published at the end of this month.

"It is hoped that their publication will encourage retailers and producers to take further action to reduce the levels of *Campylobacter* in chickens."

Every year around 60 000 cases of food poisoning from *Campylobacter* are confirmed in the United Kingdom, but studies have shown that the actual number may be as high as half a million. Most people who are infected self manage their illness, and many who seek advice from their GP do not have a stool sample tested for the infection. Studies have estimated that *Campylobacter* costs the economy £900m (€1.12bn; \$1.41bn) a year in healthcare and lost productivity, Jorgensen said.

Chicken is the main source of *Campylobacter* infection, although the bacterium is found in other poultry, game, and farm animals, including cows and pigs. Rates are higher in fresh chicken than frozen chicken and are also higher in free range chickens than in those kept in barns.

Jorgensen said that, although kitchen and hand hygiene are very important in preventing transmission, "There is no doubt that a reduction of *Campylobacter* contamination in chickens would substantially reduce human illness caused by this food poisoning bacteria." This has been achieved in other countries and would require limiting infections in poultry farms and making changes to industry practice, she explained. Such measures would include

improved biosecurity to reduce contamination of chickens on farms and ensuring that processing plants minimise the chance of *Campylobacter* in the gut coming into contact with the chicken meat.

One problem is that farms are asked to focus on producing certain sizes and numbers of chickens at a precise time, Jorgensen said, adding, "They are perhaps not first and foremost asked to produce *Campylobacter*-free chickens." Many farms use a process known as "thinning," which involves slaughtering some birds in a shed ahead of others, and Jorgensen noted that taking people and machinery into the shed to achieve this "constitutes a considerable biosecurity breach."

Discussing the approach taken in other European countries, she said that "a substantial reduction" in the number of human cases of *Campylobacter* had been seen in Iceland after it banned thinning and introduced testing of every batch of chickens due for slaughter. Any batches found to be infected with *Campylobacter* could not then be sold fresh but had to be frozen. Freezing reduces the number of *Campylobacter* cells by around 90%, Jorgensen said.

She added that testing all batches and freezing those that test positive was not the answer for the UK because "we will not have enough chilled chickens available on the shelves for customers." That approach would also be costly for producers, because frozen chickens sell at a lower price than fresh ones.

Chris Elliott, chair of food safety at Queen's University Belfast, told the press briefing that two pilot studies by two major processing companies were comparing and contrasting two possible techniques to reduce *Campylobacter* contamination during processing: rapid surface chilling and steam ultrasound. Rapid surface chilling uses liquid nitrogen to keep down surface bacteria counts, but the vast amounts of liquid nitrogen required could be a safety concern at busy processing plants, Elliott warned. Ultrasound detaches the *Campylobacter* from the poultry, and the steam cleans it off.

Richard Griffiths, senior executive officer at the British Poultry Council, told *The BMJ* that a limiting factor to routine testing for *Campylobacter* before chicken slaughter had been the lack of a rapid test. Results from the standard test take around a week.

The poultry industry is assessing a potential new test that could produce results in around a day, which involves someone walking around the chicken shed in a special paper sock that is then sent for testing. Each test would cost around £8, and one test would be needed for each shed of 20 000 to 25 000 chickens

due for slaughter. The UK has around 2500 chicken farms, each with around six chicken sheds. Each farm would need to test its sheds about seven times a year.

Cite this as: *BMJ* 2014;349:g7008

© BMJ Publishing Group Ltd 2014