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Has COVID-19 led to fewer foodborne incidents?

It has been well documented that over the last few months, that there has been significantly fewer reported outbreaks of foodborne disease, which may be one small crumb of comfort to come out of the COVID-19 outbreak.

Two months ago, I warned of a potential "perfect storm" of events such as staff shortages, disruption of the supply chain and fatigue which could potentially have led to an upsurge in foodborne outbreaks, but in reality the opposite seems to have occurred.

Why has this happened? Initially I thought that it was just because everyone's attention was distracted by the Coronavirus outbreak, but there have been demonstrably fewer recalls and food poisoning incidents in the last 2 months. It may be down to a culmination of lots of different ways in which the food industry and individuals have reacted to the pandemic.

In response to the initial panic buying and food shortages in early March, many manufacturers scaled back on the wide range of products which they would normally manufacture and concentrated production on core items, producing larger quantities over longer production runs. These core items will have had tried and tested microbiological risk assessments already carried out, and as such these products may potentially carry a much lower risk than the less frequently manufactured bespoke or artisan products. The food industry has responded exceptionally well during the pandemic and the manufacturers have by and large coped with the unprecedented surges in demand.

Perhaps the most significant factor in reducing the number of outbreaks is that for the last eight weeks restaurants and cafes have been closed and people are cooking for their own households at home. A survey in Holland showed that 1 in 10 Dutch people said they had started eating healthier diets because of more time for preparation and cooking due to home working. Nearly half of men and women agreed that they had better attention to hygiene during cooking, which may give us a very simple answer to the question of why we are seeing fewer foodborne outbreaks.....Perhaps we are all just washing our hands more often!!!

Big increase in European recorded STEC infections

As mentioned in previous bulletins, surveillance data can take a while to compile and cumulative data from across Europe for 2018 has only recently been released. The European Centre for Disease Prevention and Control's (ECDC) annual surveillance report states that the Shiga toxin-producing *E. coli* infection rate in Europe increased by 40 percent in 2018 compared to the previous year.

After a stable period from 2014 to 2017, the rate increased by 41 percent in 2018. This made STEC the third most common zoonosis in Europe after *Campylobacter* and *Salmonella*.

A contributing factor may be an increased levels of more reliable testing, with the shift from culture to culture-independent diagnostic methods. The report states that PCR methods are now more commonly used to diagnose cases.

Most infections were reported by Germany and the U.K., which together accounted for 47 percent of all cases. The former had 2,226 infections while the latter recorded 1,840. Bulgaria, Cyprus and Lithuania all reported no infections.

A total of 36 percent of 3,536 STEC patients were hospitalised and eleven people died. The five most common serogroups were O157, O26, O103, O91 and O145. As in previous years, O157 was the most common serogroup in 2018 and accounted for most of the increase. Like in 2016, O26 was a more common cause of haemolytic uremic syndrome (HUS) than O157.

Among the 8,257 confirmed STEC cases for which gender was reported, 46 percent were males and 54 percent females.

The highest rate of confirmed cases was in the age group 0 to 4 years. This group accounted for 2,274, or more than a quarter, of the patients for whom information on age was available. An even larger proportion of children was seen among the HUS cases, where two-thirds were reported in 0 to 4 year-olds.

In 2018, 48 STEC outbreaks were reported to the European Food Safety Authority (EFSA), involving 381 cases in 10 countries. Five of the 43 strong-evidence foodborne outbreaks had a known vehicle: two were caused by cheese and one each by milk, red meat, and vegetables.

France/Scotland Salmonella outbreak from raw goats' milk cheese

More than 150 people were affected by an outbreak of Salmonella from raw goats' milk cheese in 2018, affecting people in both France and Scotland according to a recent report.

France recorded 147 cases, of which 133 were confirmed. Of 38 cases where clinical history was known, 13 were hospitalised. One person died but Salmonellosis was not the principal cause and food exposure information was not available.

Scottish authorities recorded six infections. Four cases reported consumption of the implicated cheese in Scotland where it was sold by a single vendor, one consumed a variety of unspecified cheeses while travelling in Spain during their exposure period, and for the other information on exposure to the product was not known.

L'Earl Mounier recalled the product "Pélardons" in August 2018. The company, based in Quezac, a commune of the Lozère department in France, issued a recall following detection of *Salmonella newport*. More than 23,000 potentially contaminated units were distributed in France and internationally.

Salmonella newport is an uncommon cause of sporadic Salmonellosis and outbreaks in France. It accounts for 1 percent to 2 percent of human cases per year and since 2000 and has been responsible for four outbreaks linked to different raw goats' milk cheeses.

Report into the US romaine lettuce 0157 contamination cites livestock run off water as a factor

Findings into an investigation on the contamination of romaine lettuce implicated in three outbreaks of *E. coli* O157:H7 during the autumn of 2019 were published last week by the U.S. Food and Drug Administration.

The FDA and CDC have investigated the contamination of romaine lettuce with several strains of *E. coli* O157:H7 that resulted in three outbreaks of foodborne illness which were traced back to the Salinas Valley growing region in California. These outbreaks collectively resulted in 188 people falling ill.

Whole Gene Sequencing analysis showed that same outbreak strain of *E. coli* O157:H7 was detected in a faecal-soil composite sample taken from a cattle grid on public land less than two miles from the produce farm. Strains of *Shiga toxin-producing E.coli (STEC*) were also found in cattle grazing land and water drainage basins in close proximity to where the romaine lettuce was grown.

What these report findings clearly show is that the danger of microbiological contamination of fresh produce and leafy greens clearly can come from a variety of environmental sources, but contaminated irrigation water which runs from adjacent land used for livestock grazing must regarded as a significant risk factor.

Emerging Food Safety issues in Australia and New Zealand

Salmonella in raw fish has been identified by Food Standards Australia New Zealand (FSANZ) as an emerging food safety risk according to their annual report on emerging and ongoing issues.

Salmonella is considered a potential food safety hazard in farmed prawns or shrimps but not farmed finfish; it has not been identified as a risk for raw fish within the Food Standards Code and is not tested for in most industry HACCP programs.

However, the report states that contaminated whole fish and processed portions could potentially cross-contaminate equipment, causing a food safety risk as fish fillets such as tuna, may be eaten raw in sushi.

Hepatitis A virus in ready-to-eat berries was also listed as one of the emerging food safety issues.

Hepatitis A and E cases rise in Scotland

With a link to the article above, Health Protection Scotland (HPS) has published annual surveillance reports for *Listeria, hepatitis A and E, norovirus, Shigella* and *Yersinia*. Data shows a decline in *Listeria, Shigella, Yersinia* and *norovirus* cases while *hepatitis A and E* infections increased in the past year.

Hepatitis A is an infection of the liver caused by the *hepatitis A virus*. Foodborne outbreaks have been associated with contamination of ready to eat foods by infected food handlers. Outbreaks have been linked with the consumption of shellfish and fresh and frozen berries.

Hepatitis E (HEV) is an illness of the liver caused by the *hepatitis E virus,* which can infect animals and humans. HEV infection usually produces a mild disease, however, symptoms can vary from no clear symptoms to liver failure.

Swiss Listeria outbreak linked to cheese

At least 11 people in Switzerland have been infected by *Listeria* and two have died after eating contaminated cheese.

Officials from the Federal Food Safety and Veterinary Office (FSVO) stated that analysis is pending for a further 10 infections to see if they belong to the outbreak cluster.

The outbreak has also been linked to 4 patients at a hospital in Switzerland who had contracted Listeriosis which was reported earlier this month, although it is not clear if the patients consumed the cheese whilst in hospital. Three people recovered but one person with underlying health conditions died.