

Foodborne disease and impact of COVID-19

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About us



We're the public sector food body for Scotland. Our remit covers all aspects of the food chain in Scotland that can impact public health. We're here to protect consumers in Scotland from food safety risks and promote healthy eating.

We work across the entire food chain



We continue to adapt and keep pace in a changing food environment. Prioritising public health protection and promoting sustainability.



FSS outcomes for 2021-2026



Food is Safe and Authentic



Consumers Have Healthier Diets



Responsible Food Businesses are enabled to thrive



Consumers are empowered to make positive choices about food



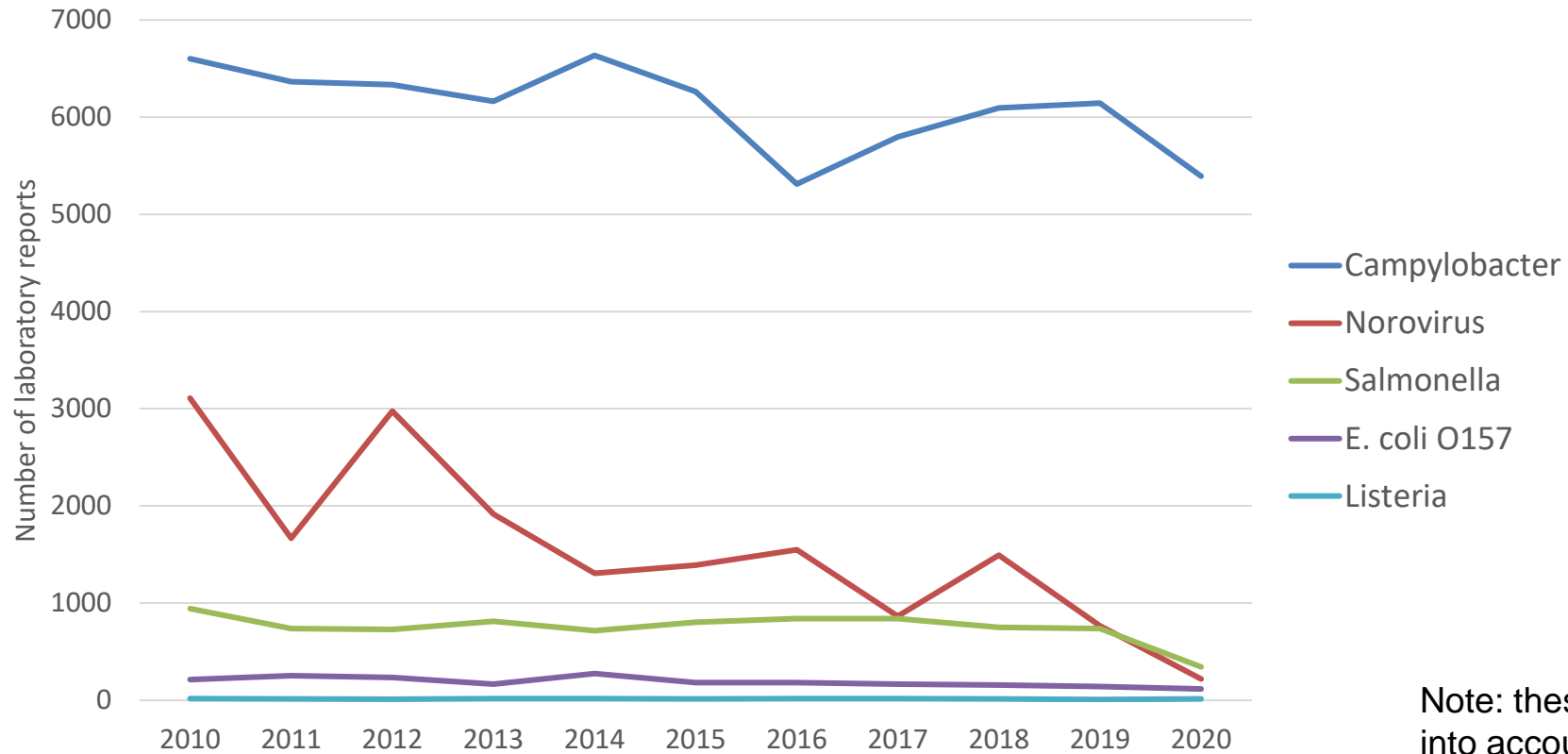
FSS is trusted and influential



Foodborne illness



Main food associated pathogens in Scotland from 2010-2020



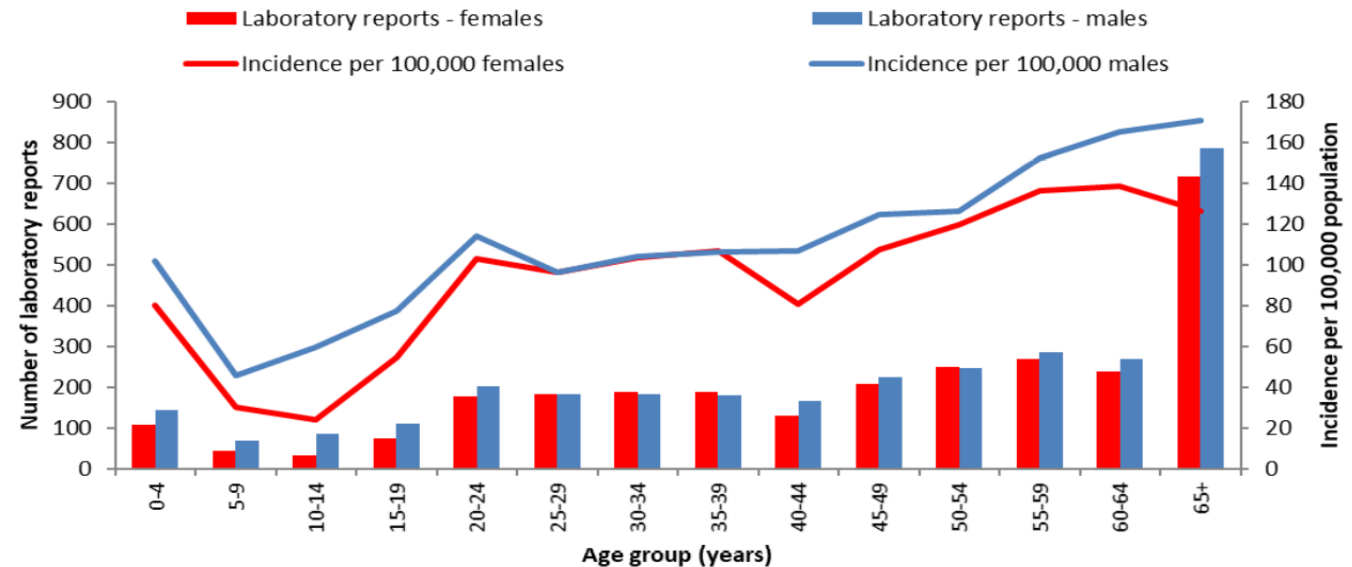
Note: these cases do not take into account underreporting rates

Campylobacter



- Most common bacterial cause of food poisoning in Scotland.
- *Campylobacter jejuni* and *Campylobacter coli*, are responsible for approximately 90% and 9% of cases in the UK, respectively.

- You can become ill by:
 - Improper handling/eating contaminated foods
 - Raw chicken and other poultry
 - Liver
 - Unpasteurised dairy products
 - Drinking contaminated water
 - Direct contact with animals or their environment



PHS: 2019

- Cases occur all year round, but there is increased incidence during the spring/summer months, speculated to be possibly linked to increased barbeque use.

Salmonella

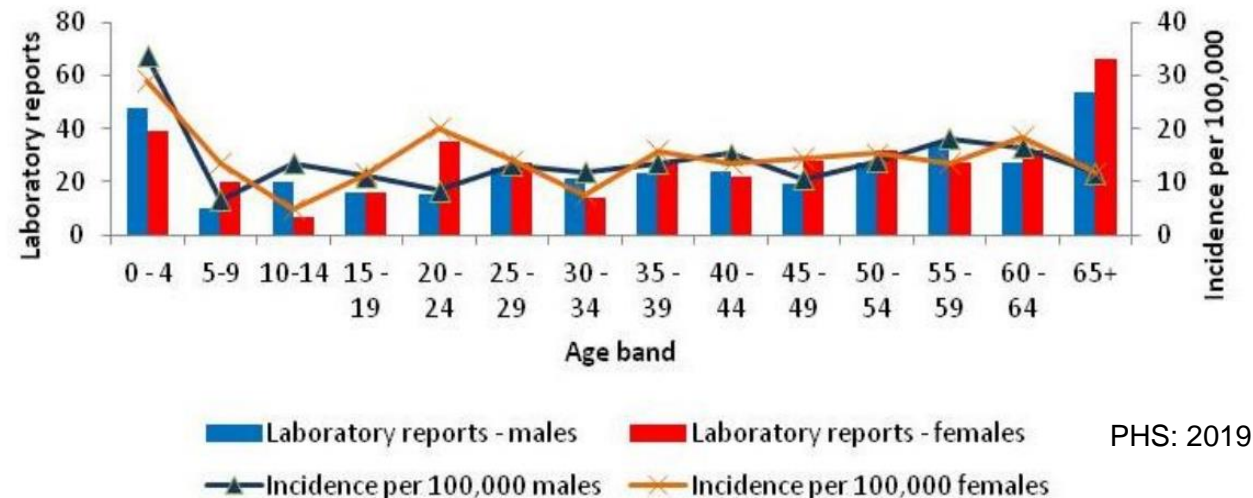


- Second most common bacterial cause of food poisoning in Scotland.
- There are more than 2,500 different serovars of salmonella, but 58% of salmonella clinical isolates were either *Salmonella enterica* subspecies Enteritidis or *Salmonella enterica* subspecies Typhimurium.

- You can become ill by:
 - Improper handling/eating contaminated foods
 - Undercooked poultry
 - Raw meat
 - Raw eggs
 - Unpasteurised dairy products
 - Raw pet food
 - Drinking contaminated water
 - Direct contact with a person/pet carrying the infection

- Strong seasonality link with increased incidence in summer and mid-October, coinciding with school holidays (travel).

Laboratory reports and incidence per 100,000 of Salmonella by sex and age band in 2019

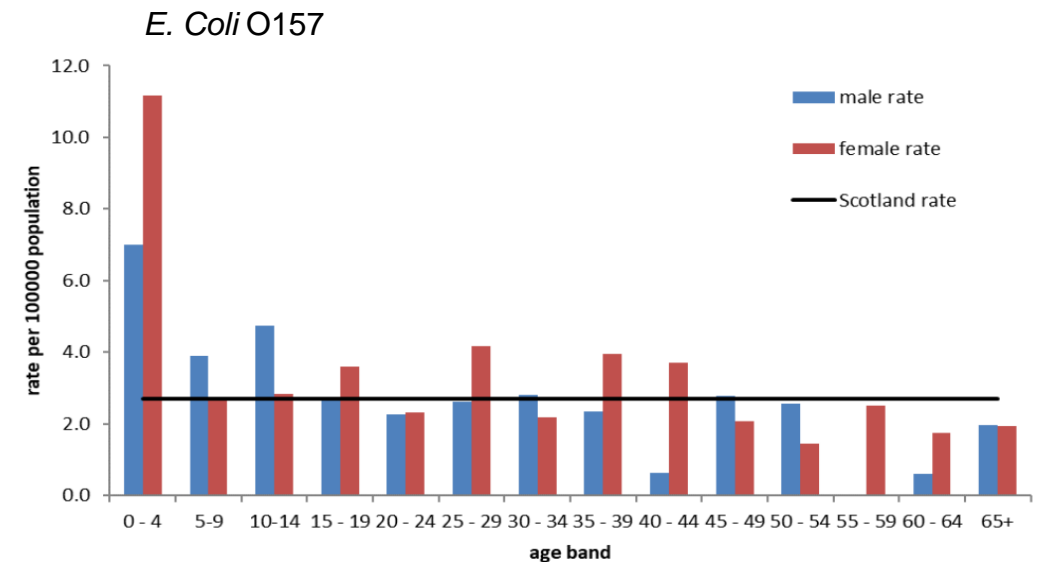


PHS: 2019



Shiga-toxin producing *E. coli*

- Shiga-toxin producing *E. coli* (STEC) are a group of pathogenic *E. coli* which can cause foodborne disease.
- The most commonly isolated STEC strain is *E. coli* O157, responsible for ~150 cases a year in Scotland, with other non-O157 *E. coli* strains account for approximately a further 100 cases each year.
- You can become ill by:
 - Improper handling/eating contaminated foods
 - Raw and undercooked meats
 - Raw vegetables and salads
 - Unpasteurised dairy products
 - Drinking contaminated water
 - Direct contact with farm animals (faeces and their environment)
 - Direct contact from another infected person

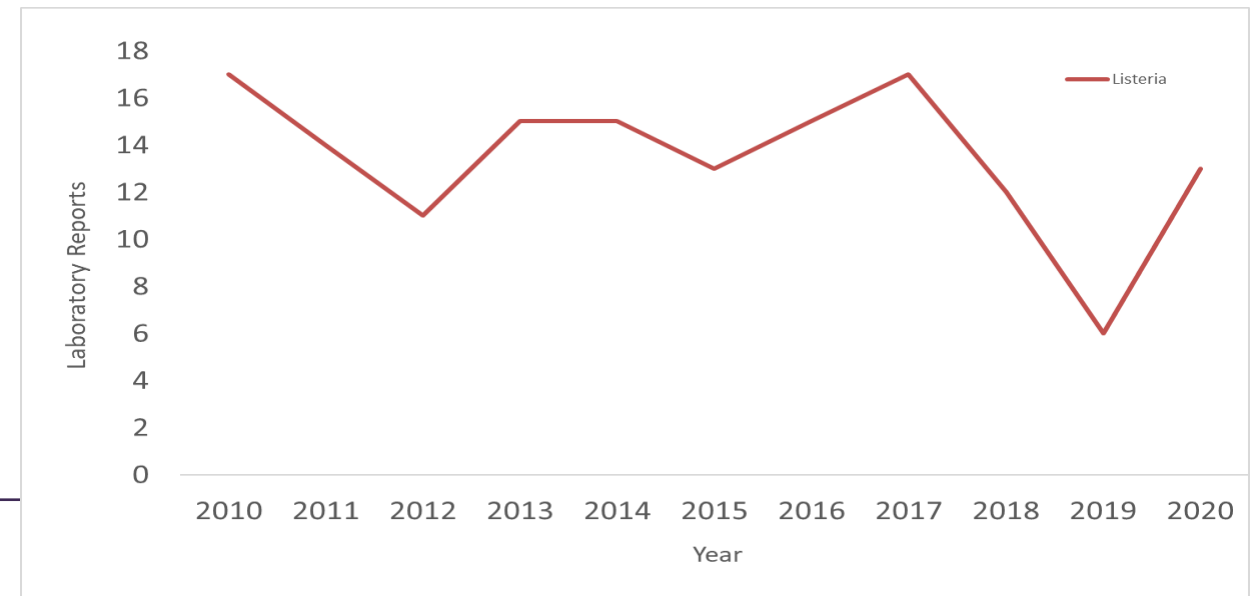


- Infections are seen year-round, but with an increased rate during the summer months.

Listeria



- Bacteria widely found in the environment but most cases are due to eating contaminated food.
- Listeria may not infect many people in Scotland each year (vulnerable groups more at risk) but it is important to be aware of, as it can cause serious illness and, in severe cases death (mortality rate of ~20-30% of cases).
- *Listeria monocytogenes* differs from the other foodborne pathogens in that it can grow at low temperatures, and can survive the freeze/thaw process of foods, so this isn't a control factor.
- You can become ill by:
 - Improper handling/eating contaminated foods
 - Cooked sliced meats, such as ham
 - Cured meats
 - Pre-packed sandwiches and salads
 - Pate
 - Blue veined and mould-ripened soft cheese
 - Smoked fish



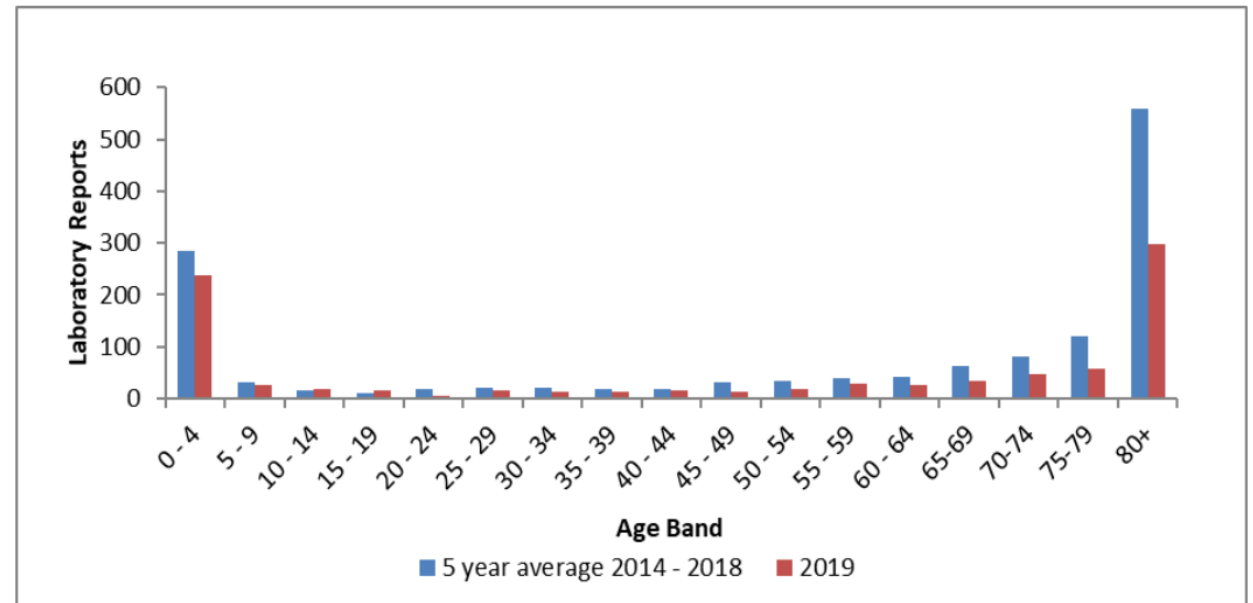
Norovirus



- Most common stomach bug in the UK, also known as the winter vomiting bug.
- It is estimated that for every case reported to national surveillance there are approximately 290 further cases in the community, so the true burden of norovirus is underestimated and unknown.
- As norovirus is a virus, it cannot grow on food products like bacteria, but it can persist for long periods of time and is still viable even after freezing and thawing of food products.

- You can become ill by:
 - Improper handling/eating contaminated foods
 - Salad leaves
 - Salad vegetables
 - Soft berries
 - Shellfish
 - Direct contact from another infected person

PHS: 2019



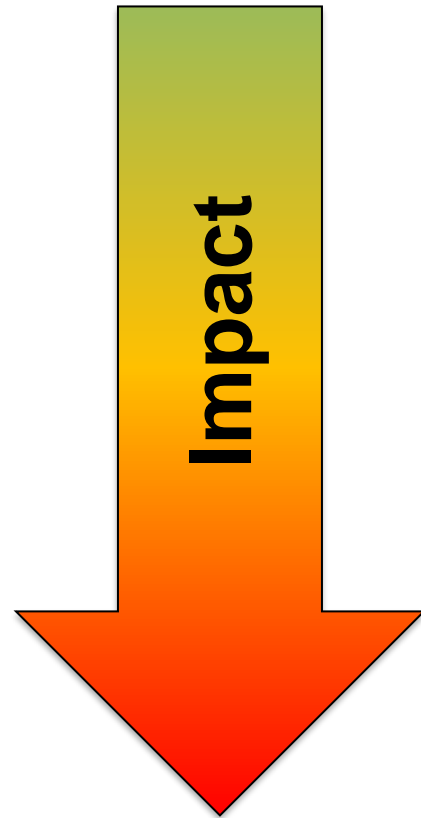
Younger and older more likely to report symptoms due to dehydration

Impact of COVID-19



- COVID-19 and the associated control measures have had wide ranging direct and indirect impacts across many **health, social, and economic aspects of life**, including the incidence of **infectious intestinal disease (IID)** in Scotland.

Impact of COVID-19



L. monocytogenes

Campylobacter

STEC (O157)

Salmonella

Norovirus



Conclusions

- The level of impact of COVID-19 on the main foodborne pathogens in Scotland differed between pathogen (specific pathogen data redacted as not yet published by PHS).
- The changes seen in foodborne disease over 2020 and 2021 during the COVID-19 pandemic are likely due to a variety of factors caused by the pandemic, but less likely attributable to a change in food consumption and food safety behaviours.

Thank you, any questions?

