Infectious Disease Outbreak Management & Schools- **Food & Environmental Health** Environmental Health Officer & Health Advisor Roles

Foodborne Illness

- There are about 2.4m cases of food poisoning in the UK every year – more than double the estimate in 2009, according to the Food Standards Agency.
- New research has provided a more accurate assessment of how many cases of infectious intestinal diseases (IID) were caused by food.
- In 2009 cases of food-borne illness were thought to be about 1m and that now stands at 2.4 million

Foodborne Illness

Researchers have estimated there are 180 deaths per year in the United Kingdom caused by foodborne diseases from 11 pathogens.

Campylobacter, Clostridium perfringens, Listeria monocytogenes, Salmonella and Norovirus are the most common pathogens linked with mortality

For E. coli O157 it is predicted there are annually between 1 and 39 deaths from foodborne sources.

Norovirus

An estimated 380,000 cases of norovirus linked to food occur in the UK per year

A breakdown of the roles of the main transmission pathways in food suggest eating out accounts for an estimated 37% of all foodborne norovirus cases, takeaways at 26%, open-headed lettuce on retail sale at 30%, raspberries on retail sale at 4%,and oysters on retail sale at 3%

Source: Food Standards Agency June 2022

Sources

Schools are **very rarely** the source of foodborne outbreaks. Not all pathogens are food related. Our role is to stop the transmission of the disease and schools unfortunately are the ideal setting to be vectors for the diseases

However, as Health Professionals we will never forget the death of the little boy, Mason Jones in Wales

Mason was killed by E.coli from contaminated meat eaten in a school meal supplied by a butcher

Mason died aged 5

- 150 school children and adults were ill, 31 were hospitalised and Mason died as part of the E.coli outbreak
- 44 schools across the south Wales valleys were affected
- The butcher was jailed
- Failures throughout the food chain were identified
- Professor Hugh Pennington completed the inquiry.

Professor Hugh Pennington's Findings

- E.Coli O157 is a particularly nasty organism but it can be prevented from causing infection in people.
- It remains a potential threat to people's health. There are no specific treatments yet available.
- It has not gone away.
- There are no specific treatments yet to prevent the onset of complications which are often severe and sometimes fatal.

Prevention is paramount

E.coli O157 and O26

- We work hard on preventing transmission, often working late in to the evening delivering sample pots and undertaking questionnaires in the local community.
- The Food Standard Agency's E.coli Guidance forms one of the main pillars of our food hygiene inspections.
- All people are susceptible to the illness but young children, the elderly and people with weaker immune systems are more at risk for the illness to progress to more severe complications.

Our Main Areas of Work & Collaboration

Parents / Guardians of Case

Support family particularly at times of exclusion

Undertake information gathering by questionnaire

Assist with pots to facilitate confirmation/clearance samples

Update the family as necessary

Identify who are an ‘at risk’ contact of the case

School

Undertake investigations where necessary

Provide support to the setting by visit or telephone

Prevent further transmission by way of advice

Visit to assess washing facilities, cleaning and disinfection regimes, chemicals used.

Food hygiene inspection of kitchen, milk kitchens.

UKHSA

Advise on proportionate & appropriate control measures by working together

Assist with any risk assessment for case returning to school

Outbreak Control Meeting

Attend all meetings and update stakeholders

Follow up any required action points which are usually identified in the meeting

Give feedback on the outcomes of our action

Exclusion

It is the most difficult part of our role

We don't want children to miss valuable learning and their social interaction

We don't want parents to miss work due to childcare issues
but
We have to prevent further transmission of the disease

How we support families

- We hand deliver sample pots
- Some infectious diseases will require two clear sample results taken 24 hours apart
- We help with completion of the forms which accompany the pots
- Further analysis can delay the results, they may need to be sent to a different laboratory depending on the type of strain
- The process takes time and we understand how frustrating this can be and liaise with parents on an almost daily basis
- The turnaround of results depends very much on lab workload

How we support schools

- Just this week we have undertaken a Risk Assessment in order for a case to return to school. It was necessary to look at the toilet facilities, the risks involved and mitigating/reducing the risks. We offered further advice to the school by sending literature and explained what symptoms the school should be aware of.
- Factors considered:
  - Age of case
  - Risk activities such as sharing food with other children
  - Evidence of secondary transmission (household)
  - Assessment of personal hygiene standards of case
  - Toilet facilities at school / nursery
  - Ability to provide supervised toileting and handwashing for case whilst at school

Risk Groups

- **Group A:** any person who is unable to perform adequate personal hygiene due to their lack of capacity or ability to comply, OR lack of access to hygiene facilities.

- **Group B:** all children aged five (up to their sixth birthday) who attend school, pre-school, nursery or childcare and child minding groups. Attendance at playgroups and parties is also considered.

- **Group C:** people whose work involves preparing or serving any unwrapped ready to eat food and drink. Voluntary work, community events are also considered.

- **Group D:** Clinical, social carer, nursery staff who work with young children, the elderly or other vulnerable groups and whose activities increase the risk of transferring infection via the faecal-oral route.

Any Questions ?