

Food for thought

Catherine Heffernan says we have the work of environmental health officers and the Health Protection Agency to thank for the confidence we have when we eat out or buy food from shops.

A friend of mine runs a successful restaurant in the South West. People come from all over Europe to try their famous fish dishes. Then one day, a number of diners fell ill. All suffered from gastroenteritis. My friend was devastated. Her business's goodwill plummeted and as splattered across all the newspapers. After an investigation, it emerged that her range of supplier of eggs from a wholesaler to a tall organic farmer had brought her a batch infected with salmonella. Great pains were taken to issue press releases to reassure the public that the food poisoning was not due to lack of cleanliness or from poor food preparation.

This got me thinking about how much people take our food production for granted. A bout of food poisoning in many countries is commonplace. Here in the UK it grabs headlines. We live in a country where eating out, sanitation and cleanliness are things we don't need to think about. And we don't because of public health partnerships.

Environmental health officers across the country regularly visit and examine food production and catering facilities. It is due to their tireless work and enforcement of regulations that we can heat up a supermarket ready meal and not worry about getting sick. We can buy prepared sandwiches and munch them happily.

At the same time, public health, in the guise of the Health Protection Agency, carefully monitor all individual cases of gastro-intestinal diseases or food poisoning. Health protection units specialise in communicable diseases and in protecting the public from chemical incidents. In relation to cases of food poisoning, notification very often comes from a GP or from a microbiology laboratory.

About one in thirty people will attend their GP every year with an acute gastroenteritis (usually diarrhoea with/or vomiting). While not all will have been caused by an infection, most will be due to the person picking up an infection from a food contaminated with bacteria, viruses or parasites. The GP should take a stool sample and send it to the laboratory. Identification of the causable organism is dependent upon this laboratory investigation. It is important that the sample be taken as soon as possible after the onset of illness and before any treatment has taken place. This way, the organism can be identified. The local health protection unit is then notified and one of the staff of health protection doctors and nurses will

Picture by: Steve Parsons/PA



Heston Blumenthal enters his Fat Duck restaurant in Bray, Berkshire, after it re-opened following a health scare. The "culinary alchemist" temporarily shut The Fat Duck as a precaution after about 40 diners said they had fallen ill. He did not find the cause of the problem and the restaurant was given a clean bill of health.

proceed to discover when, where, how and why the food poisoning took place.

The most commonly reported gastrointestinal diseases in the UK can be food borne or can be spread from person to person. In the latter case, it is most commonly due to an infected food handler not washing their hands properly after using the toilet and before handling food.

In my own experience at a Health Protection unit, when many of these infections were reported for single cases, they had been imported from abroad with holidaymakers returning home. It may be surprising to some that food poisoning is not usually immediate. Some infections can cause people to fall ill within 72 hours but others can take up to 10 days before the symptoms are developed.

The regular monitoring of cases by the Health Protection Agency will sometimes show up a cluster of cases – that is, two or more people ill with similar symptoms in the same setting such as a wedding, restaurant or nursing home. This can indicate an outbreak.

Environmental officers will enter the premises and collect samples of food for testing. They are empowered by the law to require suspected

infected people to stop working and can prosecute food producers and handlers. A member of the health protection team will pursue laboratory investigation while others will collect clinical details from all reported cases. This produces a profile of symptoms, incubation period, severity and duration of illness. This profile is very important as it is used to predict what type of organism is most likely to be the cause.

Most factual data is collected by a questionnaire including travel and food histories. Once collated we can then plot the data to see if it is a point source outbreak (due to ingestion of an infected food) or if there are waves of cases, which would indicate person-to-person spread. More sophisticated (statistical and analytical) methods are then employed to see if there is a significant difference between the attack rate in those who consumed a given food and in those who did not. If there is, then the food consumed is significantly associated with the subsequent development of illness.

Throughout the investigation, environmental health and public health work hard to prevent secondary spread of disease and to make sure that those infected are treated.