FOODBORNE OUTBREAKS

The BC Centre for Disease Control is responsible for the surveillance, monitoring and response to foodborne outbreaks in British Columbia.

An outbreak occurs when multiple people get sick from the same source – this may be eating the same contaminated food item or doing the same activity such as visiting a petting zoo.

When an outbreak is detected, an investigation will take place in order to:

- Identify the source of the illness
- Control the source to prevent additional illnesses
- Make recommendations to prevent a similar outbreak from happening in the future

Investigations are often led by epidemiologists who study how and why diseases occur in certain groups of people, and who work to control the spread of disease.



INVESTIGATION OF A FOODBORNE OUTBREAK

OUTBREAK
INVESTIGATIONS
REQUIRE THE
EXPERTISE OF:

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PUBLIC HEALTH gather case information and identify a source



FOOD SAFETY identify the origin of the source



LABORATORY test human, food, and environmental samples



Outbreak detection can take about 4 weeks

- Ill people visit doctor and provide a sample...... 1 week
- Sample is tested to identify a microbe....... 1 week
- Microbe is sent for further testing to identify the "fingerprint", which is reported to epidemiologists2 weeks



Public health professionals monitor for a higher than expected number of cases in the same timeframe with the same genetic fingerprint. This indicates that all the cases got sick from the same source



Interview cases to ask about the foods eaten during their exposure period



Collect purchase receipts or grocery store shopper card records to get as much detail as possible about the foods eaten



Review information to identify a common exposure that may have made the cases sick



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Epidemiological data from cases showing the proportion of cases who reported eating the same food item



Food safety data to determine the origin, distribution, and affected lots of the contaminated food item

CONFIRMATION OF SOURCE



Laboratory data to confirm that the microbe in the food is the same as the microbe making the cases sick



If the food is confirmed to be the source of the outbreak, recall the food to ensure it can no longer make people sick



Inspect the facility where the food came from to determine how the food became contaminated and ensure the contamination does not occur again



Communicate the risk to the public and educate consumers on how to protect themselves

MOST COMMON OUTBREAK MICROBES

Salmonella

INCUBATION PERIOD

12 hours to 7 days after eating contaminated food

SYMPTOMS

stomach cramps. diarrhea, fever, nausea, vomiting

DURATION OF ILLNESS

RECENT OUTBREAKS HAVE BEEN LINKED TO 4 to 7 days

chicken nuggets, eggs, reptiles, baby chicks, raw pet food

Norovirus

INCUBATION PERIOD

12 hours to 2 days after eating contaminated food

SYMPTOMS

nausea, cramps, chills, fever, vomiting, diarrhea

DURATION OF ILLNESS

RECENT OUTBREAKS HAVE BEEN LINKED TO 1 to 2 days

raw oysters, contact with a person with norovirus, eating foods prepared by a person with norovirus

E. coli

INCUBATION PERIOD

2 to 10 days after eating contaminated

SYMPTOMS

watery diarrhea, stomach cramps, bloody diarrhea. Can lead to hemolytic uremic syndrome, a condition that affects the blood and can lead to kidney failure

DURATION OF ILLNESS

RECENT OUTBREAKS HAVE BEEN LINKED TO 5 to 10 days

flour, unpasteurized cheese, beef, leafy

greens

550,000

CASES OF DOMESTICALLY-ACQUIRED FOODBORNE ILLNESS OCCUR IN B.C. EACH YEAR



FOR EVERY 347 PEOPLE THAT **GET SICK WITH** DIARRHEA, ONLY ONE GETS REPORTED TO **PUBLIC HEALTH OFFICIALS**



OUTBREAKS ARE INVESTIGATED BY BCCDC EPIDEMIOLOGISTS EACH YEAR



OF OUTBREAKS ARE SOLVED AND THE **FOOD SOURCE IS IDENTIFIED**

FOOD SAFETY TIPS



CLEAN WASH YOUR HANDS AND SURFACES OFTEN



SEPARATE SEPARATE DISHES AND UTENSILS USED FOR RAW AND **COOKED MEATS AND POULTRY**



COOK



CHILL KEEP PERISHABLE **FOODS COLD**

OTHER ROUTES OF TRANSMISSION



WATERBORNE

Swallowing water contaminated with microbes



ZOONOTIC

Contact with animals that carry the microbes, such as Salmonella in chicken or E. coli in cattle



PERSON-TO-PERSON

Close contact with an ill person via unclean hands or changing diapers, for example