

Correction factors country:

Are norovirus outbreaks usually genotyped in your country?

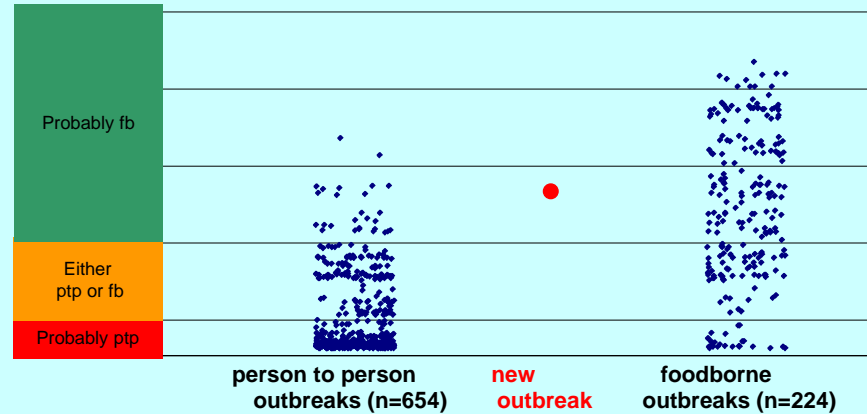
Does the surveillance system focus on foodborne outbreaks?

Outbreak characteristics

Current number of cases involved

Setting of the outbreak

Scatterplot of the results of the formula for 878 outbreaks reported to FBVE between 2002 and 2006



The purpose of this tool

This tool is meant for health care workers involved in decision making for follow-up of norovirus outbreaks and implementing intervention strategies. This tool can assist in discriminating potential food-related norovirus outbreaks requiring source-tracing from the bulk of norovirus outbreaks caused by person-to-person transmission and requiring different intervention and prevention measures. The formula behind the tool was derived from a validated predictive statistical model, which was based on combined epidemiological and virological surveillance data reported by 9 European countries to the Food-borne Viruses in Europe network from 2002 through 2006. The construction and validation of the model is described in detail elsewhere (Verhoef et al. submitted).

The model will be periodically updated once more data is available.

When to use the tool

When an outbreak of gastroenteritis is reported to a Public Health service, the Kaplan criteria (references below) can be used to identify if the agent is likely to be norovirus, as follows:

Vomiting in more than half of affected persons, a mean or median incubation period of 24-48 hours, a mean or median duration of illness of 12-60 hours, no bacterial pathogen in stool culture.

How to use the tool

At the moment a national institute is notified of a norovirus outbreak, this tool can be used with the minimum data available at that time. If the requested data are not (yet) available, the data-field stays empty.

1: chose the characteristics of the surveillance system in your country: presence of genotyping reported outbreaks, intensity of norovirus surveillance, a food-borne focus as a result of legislation.

2: enter the outbreak requested characteristics: number of cases (as far as known at the reporting moment), setting in which the outbreak took place, genotype (if available).

How to interpret the outcome

The red dot in the middle of the figure shows the potential for food-relatedness in your outbreak compared to the person-to-person outbreaks and food-borne outbreaks reported to FBVE.

Red area: Person-to-person transmission is likely, however, food-relatedness of the outbreak cannot be ruled out

Orange area: The outbreak can be caused by either food-borne or person-to-person transmission

Green area: Food-relatedness of the outbreak is likely, however, person-to-person transmission cannot be ruled out.

What foods to suspect in a food-borne norovirus outbreak?

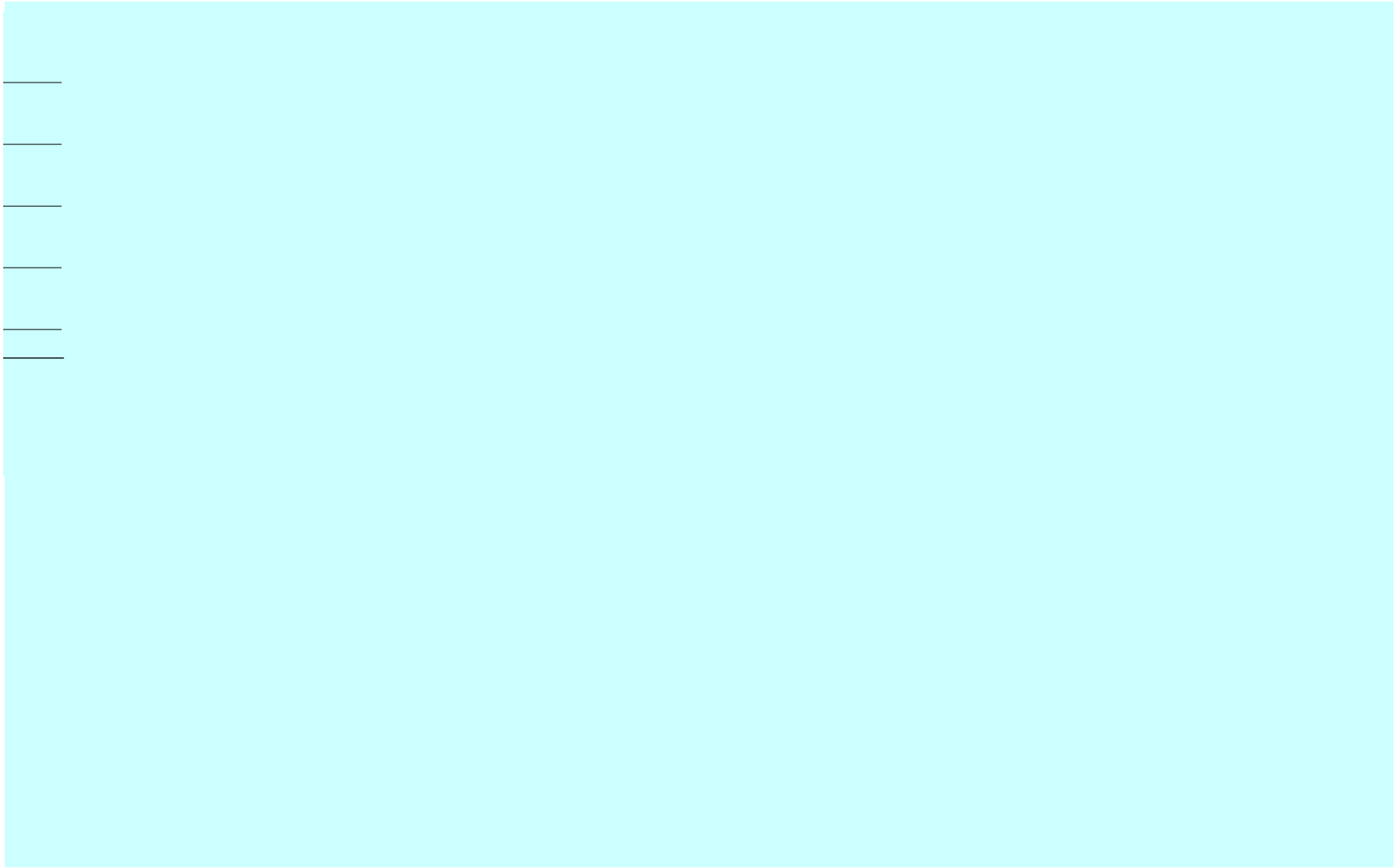
Any food that is not processed in a way that inactivates viruses is suspicious during a food-borne norovirus outbreak. Distinction can be made between foods contaminated during processing and foods contaminated during preparation.

Examples of foods likely to be virally contaminated during processing: shell fish, soft fruits, and leafy vegetables.

Examples of foods likely to be virally contaminated during preparation: manually handled foods like wedding cakes, sandwiches, salads, fancy cakes, deli meat.

References

1. Turcios RM, Widdowson MA, Sulka AC, Mead PS, Glass RI. Reevaluation of epidemiological criteria for identifying outbreaks of acute gastroenteritis due to norovirus: United States, 1998-2000. Clin Infect Dis. 2002;34(12):1829-32.
2. Kaplan JE, Feldman R, Campbell DS, Lookabaugh C, Gary GW. The frequency of a Norwalk-like pattern of illness in outbreaks of acute gastroenteritis. Am J Public Health. 1982 Dec;72(12):1329-32.



t Dis. 2006 Apr 1;42(7):964-9.

