Frequently Asked Questions

Q.NO.1 what are food borne diseases?

Ans. Foodborne disease is caused by consuming contaminated foods or beverages. Many different disease-causing microbes, or pathogens, can contaminate foods, so there are many different foodborne infections. In addition, poisonous chemicals, or other harmful substances can cause foodborne diseases if they are present in food.

Q.NO.2 Who are at the risk of food borne illness?
Ans. Although majority of the foodborne illness cases are mild and self-limiting, severe cases can occur in high risk groups resulting in high mortality and morbidity. The high risk groups for foodborne diseases include infants, young children, the elderly and the immunocompromised persons.

Q.NO.3 What are foodborne disease outbreaks and why do they occur?
Ans. An outbreak of foodborne illness occurs when a group of people consume the same contaminated food and two or more of them come down with the same illness. It may be a group that ate a meal together somewhere, or it may be a group of people who do not know each other at all, but who all happened to buy and eat the same contaminated item from a grocery store or restaurant. For an outbreak to occur, something must have happened to contaminate a batch of food that was eaten by a the group of people. Often, a combination of events contributes to the outbreak. A contaminated food may be left out a room temperature for many hours, allowing the bacteria to multiply to high numbers, and then be insufficiently cooked to kill the bacteria.

Q.NO.4 What are the areas of occurrence of food borne diseases?
Ans. There are changes in the spectrum of foodborne illnesses along with demographic and epidemiologic changes in the population. A century ago, cholera and typhoid fever were prevalent foodborne illnesses, globally. During last few decades, other foodborne infections have emerged, such as diarrheal illness caused by the parasite Cyclospora, and the bacterium Vibrio parahe-

molyticus. The newly identified microbes pose a threat to public health as they can easily spread globally and can mutate to form new pathogens. In the United States, 31 different pathogens are known to cause foodborne illness, however, numerous episodes of foodborne illnesses and hospitalizations are caused by unspecified agents.

Q.NO.5 What are the symptoms of Foodborne Illness?
Ans. •Common symptoms of foodborne illness are diarrhea and/or vomiting, typically lasting 1 to 7 days. Other symptoms might include abdominal cramps, nausea, fever, joint/back aches, and fatigue.
•What some people call the "stomach flu" may actually be a foodborne illness caused by a pathogen (i.e., virus, bacteria, or parasite) in contaminated food or drink.
•The incubation period (the time between exposure to the pathogen and onset of symptoms) can range from several hours to 1 week.

Q.no.6 What are the causes of Foodborne Illness?
Ans. Food & Drug Administration (FDA) give 5 foodborne illness risk factors

- Improper hot and cold holding temperatures
- Improper cooking temperatures
- Dirty and/or contaminated utensils and equipment
- Poor health and personal hygiene
- Food from unsafe sources

Q.NO.7 Write short note on the Economic impact of foodborne illness

Ans. Every illness has an economic cost and same is the case with foodborne illness. However, the economic cost of health losses related to foodborne illnesses has not been extensively studied. There are few studies available which provide either incomplete cost estimates or
their estimates are based on limiting assumptions. In the United States, data from Foodborne Diseases Active Surveillance Network (FoodNet) and other related studies contributed to estimates of

the economic cost of foodborne illness.The annual economic cost of foodborne illness is calculated by multiplying the cost per case with the expected annual number of foodborne illnesses experienced. It was estimated that in 1999, the US government spent $1 billion on food safety efforts at federal level, an additional $300 million were spent by state governments. Moreover, it is estimated that a total of $152 billion a year is spent on foodborne illness in the U.S. The foodborne illness also bears substantial economic burden at regional level. The annual estimated economic cost of foodborne illness for Ohio is between $1.0 and $7.1 billion i-e., cost of $91 to $624 per Ohio resident. A retrospective study performed in Uppsala, Sweden during 1998–99, estimated average costs per foodborne illness as $246 to society and $57 to the patient. An estimated $123 million was the annual cost of foodborne illnesses in Sweden . In New Zealand, the total cost of foodborne illness cases was estimated to be $55.1 million, accounting for $462 per case. The direct medical costs were calculated as $2.1 million while direct non-medical costs were $0.2 million . The estimated total costs were $161.9 million including government outlays of $16.4 million, industry costs of $12.3 million and $133.2 million for incident case costs of disease associated with treatment, loss of output and residual lifestyle loss.

Q.NO.8 Define Surveillance in the context of food borne diseases.
Ans. Surveillance refers to a specific extension of monitoring where obtained information is utilized and measures are taken if certain threshold values related to disease status have been passed. The main objectives of surveillance are outbreak detection, monitoring trends in endemic disease, evaluating interventions, and monitoring programme performance and progress towards a predetermined control objective. However, surveillance is not merely a routine measure of the current situation (as opposed to monitoring), but a basis for giving qualified feed-back to producers, tracing back contamination to its origin, pin-pointing critical (control) points during production and initializing targeted action.

Q.NO.9 What is Food Net and Pulse Net?
Ans. FoodNet (Foodborne disease active surveillance network): FoodNet is the surveillance system in the United States. For Foodnet, CDC has collaborated with ten Emerging Infections Program (EIP) sites (California, Colorado, Connecticut,Georgia, New York, Maryland, Minnesota, Oregon, Tennessee and New Mexico), the US Department of Agriculture, and the Food and Drug Administration. It performs active surveillance for foodborne illnesses and also conducts epidemiologic studies to determine the changing epidemiology of foodborne illnesses. It responds to new and emerging foodborne illnesses, monitors the burden of foodborne illnesses, and identifies their sources. It helps in understanding foodborne disease reporting in FoodNet surveillance system. It shows steps involved in the registration of an episode of foodborne illness in the population.
PulseNet (The molecular subtyping network for foodborne bacterial disease surveillance): In the United States, PulseNet has created a national framework for pathogen-specific surveillance . PulseNet is responsible for molecular subtyping of foodborne illness surveillance. It helps in detecting widespread foodborne outbreaks by comparing strains of bacterial pathogens from all over the United States. It performs DNA "fingerprinting" on foodborne bacteria by pulsed-field gel electrophoresis. By identifying and labeling each "fingerprint" pattern, it is possible to rapidly compare these patterns through an electronic database at the CDC, thus identifying related strains

Q.NO.10 Write short note on Electronic Foodborne Outbreak Reporting System (eFORS)

Ans. Electronic Foodborne Outbreak Reporting System (eFORS): The Electronic Foodborne Outbreak Reporting System's (eFORS) database is a surveillance system that collects reports on foodborne outbreaks. It requires specialized knowledge and,expertise to appropriately analyze and interpret the data Various studies are conducted by analyzing the data collected within the Electronic Foodborne Outbreak Reporting System (eFORS) in various settings, such as schools in order to examine the magnitude of foodborne illness, their etiologies and to provide recommendations for prevention of foodborne illness .