

Epidemiological approaches for food safety and quantitative risk assessment for foodborne pathogens

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Abstract

The literature reveals that milder cases of foodborne diseases are commonly underreported and often undetected through routine surveillance. There are limited research studies that examine utilizing a combination of epidemiological approaches (active and passive) to determine the prevalence of selected foodborne pathogens from agricultural (fresh produce and poultry) products. This includes outbreaks due to *Staphylococcus aureus* which are not under active surveillance, yet they are on the rise. The overall goal of this presentation is to provide a brief overview of a retrospective study that was conducted to examine associated risk factors and quantify the impact of foodborne disease outbreaks from secondary data sources collected by the Centers for Disease Control and Prevention and other surveillance bodies. This presentation will also briefly explore policy options or recommendations that can reduce the prevalence of foodborne diseases using a hazard risk index of mortality (HRI) and its relationship between key demographics (age, gender and ethnicity). At the conclusion of the presentation, we anticipate the attendees will understand the prevalence of *Staphylococcus aureus* and other pathogens from selected agricultural products using epidemiological approaches and quantify outbreak data from key statistical food safety databases that can be used to develop key public health food safety policies.