Emerging Foodborne Pathogens

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ABSTRACT

Emerging foodborne pathogen is a consequence of host factors (increase in the number of the elderly, immunocompromised, malnutrition etc), pathogen factors (transfer of virulence factors, opportunistic pathogens, improved detection methods etc) and exposure factors (global movement of food, changes in lifestyle etc). A new strain of Enterohemorrhagic E. coli was the latest one to cause fatality and economic loss in Europe, while noroviruses have emerged as the major cause of foodborne outbreaks in the US. Some pathogens had find their ways to cause illnesses in immunocompromised group such as C. botulinum infection in individuals with Crohn's diseases, Cronobacter spp in premature young infants, while the others find a new way to contaminate foods such as transovarian Salmonella Enteritidis. International trade has also contributed to the migration of Vibrio cholerae to South America.

For government, emerging foodborne pathogens have to be anticipated using the risk analysis framework, i.e. risk assessment, risk management, risk communication. The approaches will allow government to produce appropriate policies regarding the new pathogens and define whether a more stringent measure is necessary. At the industry level, information in the emerging pathogens should be used to revisit their HACCP plan and its prerequisite programs. Several practices to be reviewed could include specifications for ingredients, critical control points, environmental monitoring and sampling, sampling plan etc.