National Advisory Committee on Meat and Poultry Inspection

Update on Associating Food Safety Activities with Public Health Surveillance Data

Purpose

This briefing paper is provided to update the Committee on the status of its recommendations to FSIS, made on November 5, 2003, about ways in which the Agency can better associate its food safety activities with public health surveillance data.

Main Points

As a public health regulatory agency, FSIS is keenly interested in measuring the impact of its regulatory programs or policies, and especially changes to existing programs, on the incidence of foodborne illness in the United States. Conversely, trends in traditional foodborne infections or emerging pathogens transmitted in food contribute to development of the FSIS food safety regulatory program. This activity of associating human illness to regulatory policy is ongoing and iterative.

Highlights of recent and current activities:

- FSIS continues its support of the Foodborne Disease Active Surveillance Network (FoodNet), and through this inter-agency collaboration has access to the best data on the incidence of foodborne illness and trends in foodborne pathogens commonly transmitted by foods. FSIS is especially interested in the third goal of FoodNet, which is to estimate the proportion of foodborne illnesses that are associated with specific food commodities (the issue commonly referred to as attribution). FSIS has 8 staff members engaged in the current FoodNet attribution working group.
- FSIS has been especially active in the *Salmonella* modeling subgroup, whose goal is to create a mathematical model which can attribute human cases of salmonellosis to likely food source using serotype data. FSIS will contribute data on *Salmonella* serotypes from the HACCP verification sampling for food source data. To prevent significant misattribution (i.e., only attribute to FSIS regulated product) without other food source microbiological data, the model created will need to include a factor to represent the lack of or uncertainty about other food source microbiological data. The project is expected to be completed by May 2005. FSIS has 8 staff members engaged in this subgroup effort.
- In addition to FoodNet activities on attribution, FSIS has collaborations with the Centers for Disease Control and Prevention (CDC) Foodborne and Diarrheal Diseases Branch in its ongoing analysis of outbreak data, which is another source of information linking human illness to specific food commodities.
- FSIS baseline studies are just beginning. The first commodity to be studied will be beef trim. FSIS' Office of Public Health Science (OPHS) is currently

enhancing its own capacity in the areas of project/study design, but will also continue to seek outside advice from National Advisory Committee on Microbiological Criteria for Food and others.

- In addition FSIS has begun scientific dialogue with the Food and Drug Administration's Center for Veterinary Medicine about their data and analysis of the occurrence of microbial pathogens on retail samples of raw meat and poultry collected in conjunction with the multi-agency NARMS project. This data contributes to our understanding of the exposures of consumers to pathogens in their kitchens. Additionally CVM has a bacterial source tracking project underway, which will contribute to the understanding of the pathway of pathogens from food animals to foods to humans.
- FSIS developed an interdisciplinary assessment team to develop methods for measuring the impact of Agency's Interim Final Rule **Control of *Listeria* monocytogenes in Ready-to-Eat Meat and Poultry Products.** One of the teams, the Public Health Assessment Team, developed a report (*see attachment)* identifying data sources for monitoring trends in human listeriosis and a mechanism for OPHS to report back to policy staff on these trends.
- FSIS has submitted for publication to peer-reviewed journal a manuscript describing its analysis of the Agency's *E. coli* O157:H7 data from ground beef sampling, which utilized a Poisson regression model to analyze trends in the data. This is an example of the kind of analysis that the Agency can conduct on its HACCP verification data.

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