Outbreak Alert!
Trends in Foodborne Illness Outbreaks, 1990-2004

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History of Outbreak Alert

- CSPI started collecting data on FBI outbreaks in 1997 and organizing it by regulatory agency

- The data was not available from CDC without a FOIA with our continued requests, CDC started posting yearly line listing on the internet

- In 1999, we published the first line listing of FBI outbreaks organized by food category and by regulatory agency.
Unique Data

- CSPI database contains 5,000 outbreaks with both known food source and etiology which occurred in the U.S. between 1990-2004

- Outbreaks are grouped by food vehicle, and placed in one of 13 food categories

- Outbreak data was compiled from several different sources including the CDC, state and local health departments, and scientific journals

- A unique database of outbreaks linked to specific foods, as well as specific pathogens
Outbreak Alert!

**Source:** Outbreak Alert!  Center for Science in the Public Interest, 2005
Number of Outbreaks By Food, 1990-2004

Source: Outbreak Alert! Center for Science in the Public Interest, 2006
Top Five Single-Food Vehicles of Outbreaks, 1990-2004

- Seafood
- Produce
- Poultry
- Beef
- Eggs

Number of Outbreaks

0 200 400 600 800 1000 1200

Number of Cases

0 5000 10000 15000 20000 25000 30000 35000

Outbreaks
Cases
Top FDA Categories:
Outbreaks by Year

Seafood

Produce
Database Applications

- Outbreak data with food attribution is critical to conduct a food/hazard assessment for HACCP.
- Assesses food types most often linked to FBI outbreaks by location.
- Assesses pathogens causing outbreaks by location and food type.
Outbreak by Vehicle, 1990-2004

- Seafood: 19%
- Multi-Ingredient: 19%
- Produce: 13%
- Poultry: 11%
- Beef: 9%
- Eggs: 7%
- Both: 7%
- Dairy: 3%
- Pork: 4%
- Other Meats: 3%
- Breads/Bakery: 3%
- Beverages: 1%
- Game: 1%

Outbreak by Vehicle, 1990-2004
Outbreaks by Location, 1990-2004

- Hospital/Clinic: 1%
- Prison: 1%
- Hotel: 1%
- Camp: 1%
- Fair: 1%
- Restaurant: 41%
- Unknown: 3%
- School: 4%
- Work: 5%
- Home: 22%
- Other: 15%
- Multiple: 2%
- Church/Temple: 3%

Source: Outbreak Alert! Center for Science in the Public Interest, 2006
Causes of Seafood Outbreaks

- Ciguatoxin: 23%
- Scombrotxin: 35%
- Norovirus: 9%
- Salmonella: 6%
- Clostridium: 4%
- Histamine: 2%
- Shigella: 1%
- Staphylococcus: 2%
- Vibrio: 9%
- Other: 9%

Source: *Outbreak Alert!* Center for Science in the Public Interest, 2005
Causes of Produce Outbreaks

Source: Outbreak Alert! Center for Science in the Public Interest, 2005
Causes of Beef Outbreaks

Source: Outbreak Alert! Center for Science in the Public Interest, 2005
Causes of Poultry Outbreaks

Source: Outbreak Alert! Center for Science in the Public Interest, 2005
Causes of Egg Outbreaks

- Salmonella: 96%
- Staphylococcus: 2%
- Other: 2%
Limitations of CSPI’s database

- Represents a small percentage of actual foodborne illnesses

- Represents only about 25%-30% of reported foodborne outbreaks, others include unknown food of pathogen.

- Sporadic cases of foodborne illnesses are omitted, e.g. *Campylobacter* and *V. vulnificus* are underreported in the data.
Outbreak Alert!

- Useful for alerting consumers to food safety hazards, providing information for better food safety resource allocation, and identifying gaps in the U.S. outbreak reporting system.

- Food Protection Trends article _____ (date) describes methodology for developing the database.

- *Outbreak Alert!* Version 8 is scheduled to be released in Fall 2006. Available at: [http://www.cspinet.org/foodsafety/]
Conclusion

- U.S. surveillance programs need to be more integrated and coordinated.

- A single, unified food safety agency would strengthen the U.S. food safety system and give a single voice to food safety oversight and policy in the U.S.
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