

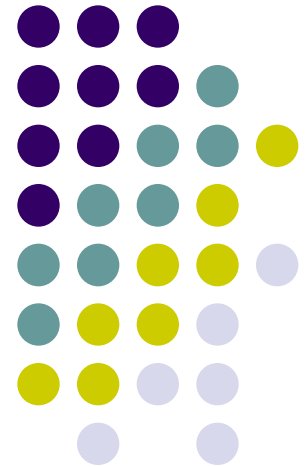
CIFOR Foodborne Disease Response Guidelines

Council to Improve Foodborne
Outbreak Response (CIFOR)

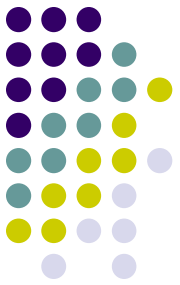
Ernest Julian, PhD.

AFDO

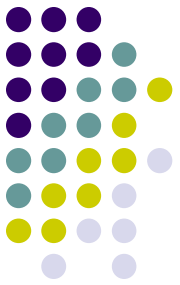
June 8, 2009



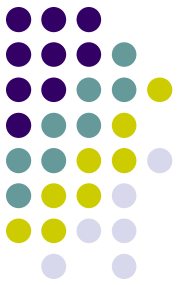
GUIDELINES FOR FOODBORNE DISEASE OUTBREAK RESPONSE



CIFOR



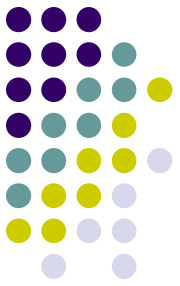
- Created to help develop model programs and processes that will facilitate the investigation and control of foodborne disease outbreaks.
- Goal is to improve performance and coordination of local, state and federal agencies involved in foodborne disease outbreaks
- Participants -- ASTHO, NACCHO, CSTE, NEHA, AFDO, CDC, FDA, USDA/FSIS, APHL, NASDA



CIFOR Workgroups

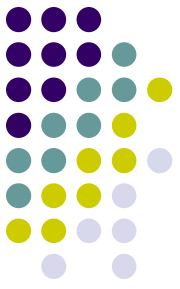
- Clearinghouse
- Complaint
- Industry Workgroup
 - Recalls
 - Traceability
 - Food establishment outbreak response
- Marketing and Vision
- Multi-Jurisdictional Guidelines
- Overall Guidelines
- Performance Indicators
- PulseNet
- Training

Guidelines Purpose and Intent



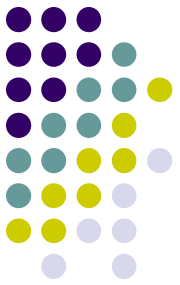
- To aid governmental agencies that are responsible for preventing and managing foodborne disease
- To serve as a foundational resource for anyone involved in food safety programs
- To harmonize foodborne disease investigation work across all agencies
- Not intended to replace existing procedure manuals

Target Audience



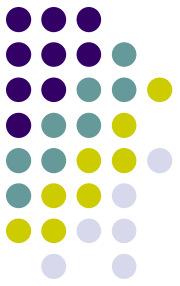
- Primary audience is agencies at the local and state level, since these organizations carry out the majority of foodborne disease outbreak investigations in the United States.
- Also intended to provide support to the federal public health and regulatory agencies that have critical roles in the country's food safety infrastructure.

Development Process



- CIFOR identified a workgroup to take responsibility for the development of the draft, a group of technical experts to provide support and guidance, and a lead author to coordinate the overall effort and merge and revise all elements.

Workgroup Members



- John Besser, MN DOH
- Subha Chandar, NACCHO
- Nausheen Saeed, NACCHO
- Jack Guzewich, FDA
- Tim Jones, TN DOH
- Maria Rishoi, NACCHO
- Michele Samarya-Timm, Franklin Township Health Dept., NJ
- Scott Seys, FSIS, USDA
- Don Sharp, CDC
- Jennifer Lemmings, CSTE
- Marion Aller, FL DOA
- Lakesha Robinson, CSTE
- Carol Hooker, Hennepin County Health Dept., MN
- Ian Williams, CDC
- Kristen Larson, DHMH, MD
- Adam Reichardt, ASTHO

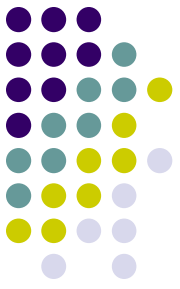


Technical Advisors

- Paul Blake
- Richard Hoffman
- Dennis Perrotta
- Jeanette Stehr-Green
- Craig Hedberg

Overall Coordination

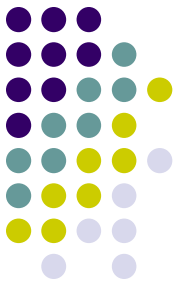
- Jac Davies



Development Process

- Conducted literature review and collection of existing guidelines
- Created draft table of contents
- Conducted 19 key informant interviews
- Created language to describe audience and purpose
- Conducted a round table discussion at 2007 annual CSTE conference

Development Process



- Identified technical experts to serve as leads
- Created chapter drafts
- Drafts reviewed and modified by workgroup, CIFOR and external review group
- Presented for public review and comment in 2008
- Further review and modifications by workgroup and CIFOR members based on comments
- Finalized and approved by CIFOR in March, 2009

General Comments



- Comprehensive but not stand-alone
- Detailed information and recommendations
- Model practices
- To be developed -- tools and training to support agencies that want to use the Guidelines

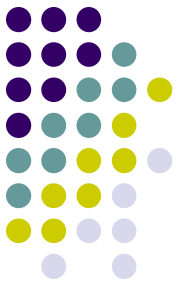
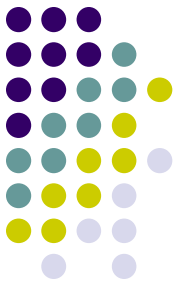


Table of Contents

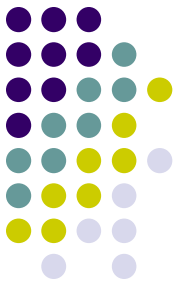
1. Overview of CIFOR Guidelines
2. Fundamental Concepts
3. Planning and Preparation
4. Surveillance and Detection
5. Investigation
6. Control Measures
7. Multi-jurisdictional Outbreaks
8. Performance Indicators
9. Legal Issues

1. Overview of Guidelines



- Provides an executive summary with a brief review of key points from each chapter
- Includes chapter numbers to allow quick reference or linking to detailed sections throughout the Guidelines

2. Fundamental Concepts of Public Health Surveillance and Foodborne Disease



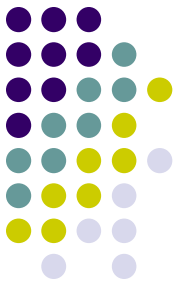
- Trends in diet and the food industry
- Surveillance of foodborne disease within the broader public health surveillance context
- Basic concepts in foodborne disease and disease transmission



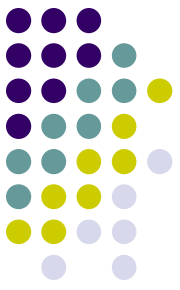
3. Planning and Preparation

- Agency Roles
- Outbreak Investigation and Control Team
- Necessary Resources
- Records Management
- Communication
- Planning for Recovery and Follow-up
- Legal Framework
- Escalation
- Incident Command System

4. Surveillance and Detection

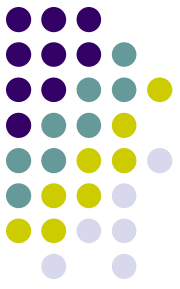


- Pathogen-Specific Surveillance
 - Processes, strengths, limitations, model practices
 - Cluster follow-up
- Notification/Complaint Systems
 - Processes, strengths, limitations, model practices
- Syndromic Surveillance
 - Processes, strengths, limitations



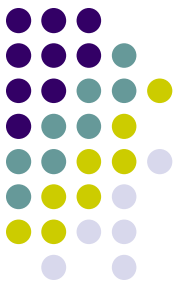
5. Investigation

- Characteristics of Outbreak Investigations
- Outbreak Investigation Procedures
 - Each investigation step described with recommended practices
 - Roles of epidemiology, environmental health and laboratory personnel described for each investigation step



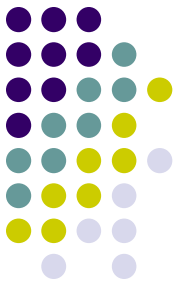
6. Control Measures

- Information-Based Decision-Making
- Control of Source
 - Non-specific and specific control measures
- Control of Transmission
- Communication
- End of Outbreak
- Debriefing
- Outbreak Report
- Future Studies and Research



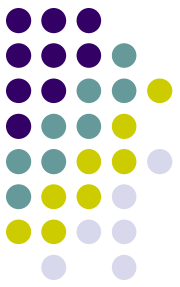
7. Multi-Jurisdictional Outbreaks

- Categories of Multi-Jurisdictional Investigations
- Key Indicators and Notification Steps
- Coordination of Multi-Jurisdictional Investigations
- Outbreak Detection and Investigation by Level (Local, State and Federal)
- After-Action Reports and Reporting to EFORS



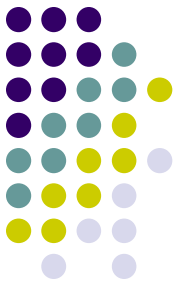
8. Performance Indicators

- Overall Foodborne Disease Program Objectives and Indicators
 - Short, intermediate and long-term
 - Including sub-indicators and metrics
- Key Performance Indicators and Metrics for Program Evaluation
 - By local and state health departments
 - By overall food program and individually for epidemiology, environmental health and laboratory
- Benchmark Data Established by EDITS



9. Legal Issues

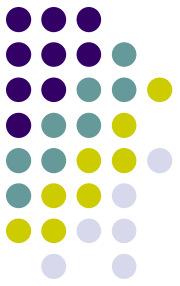
- Legal Framework for Mandatory Disease Reporting
- Legal Framework for Surveillance and Investigation of Foodborne and Enteric Diseases
- Legal Framework for Measures and Methods to Prevent or Mitigate Foodborne Disease Outbreaks
- Public Health Investigations as the Basis for Regulatory Actions or Criminal Prosecution



Next Steps

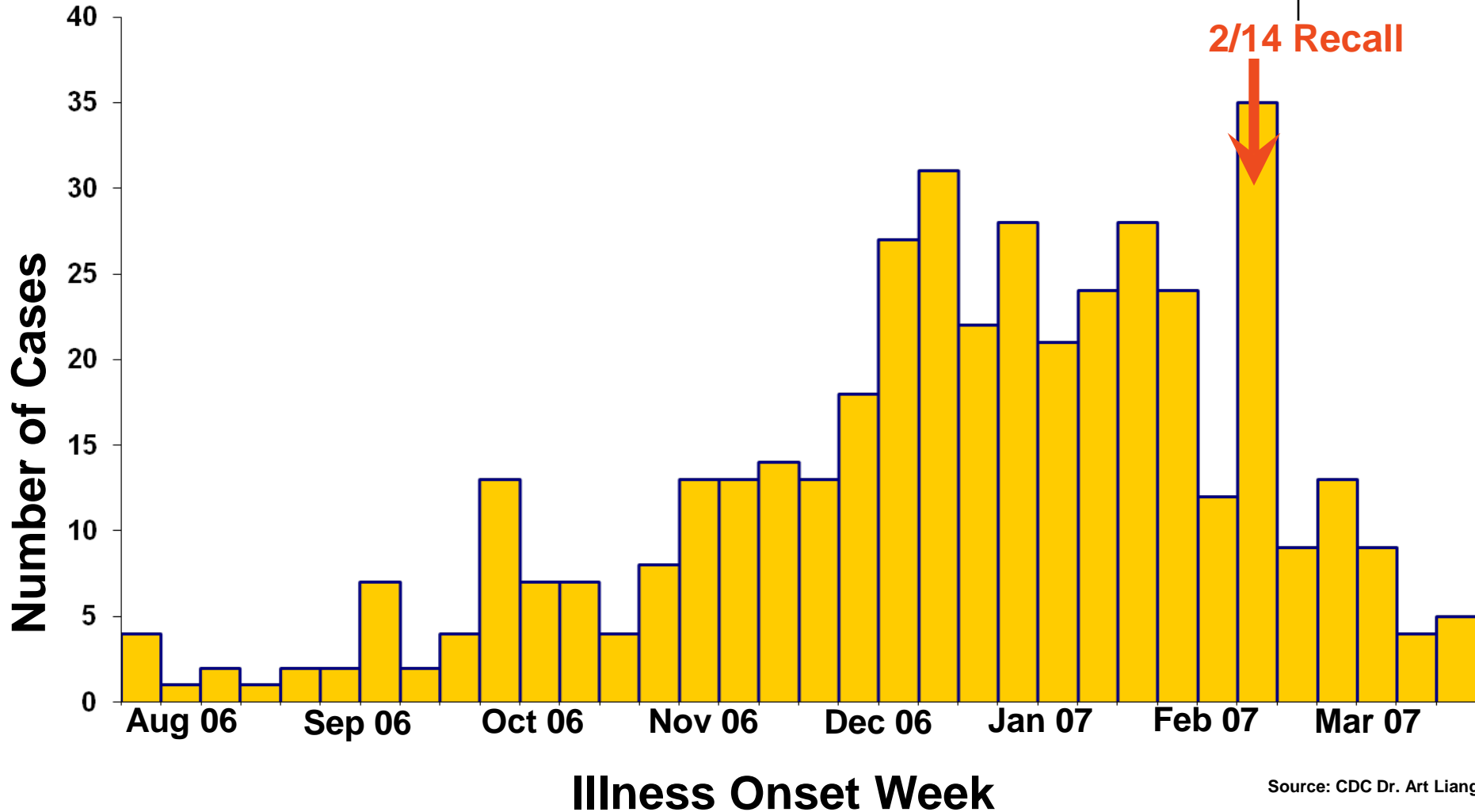
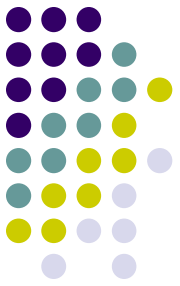
- Presentation of Guidelines at meetings of public health and food safety professional organizations
- Publication and announcement through professional journals
- Making available hard copy and on-line versions
- Development of training and tools to support use of Guidelines
- Establishment of processes for on-going review and revision over time

CIFOR Website



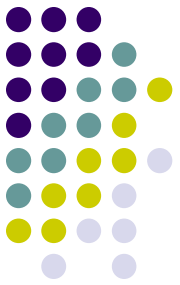
- www.cifor.us

2006 Salmonella Outbreak Due to Peanut Butter



Source: CDC Dr. Art Liang

2006 Salmonella Outbreak Due to Peanut Butter

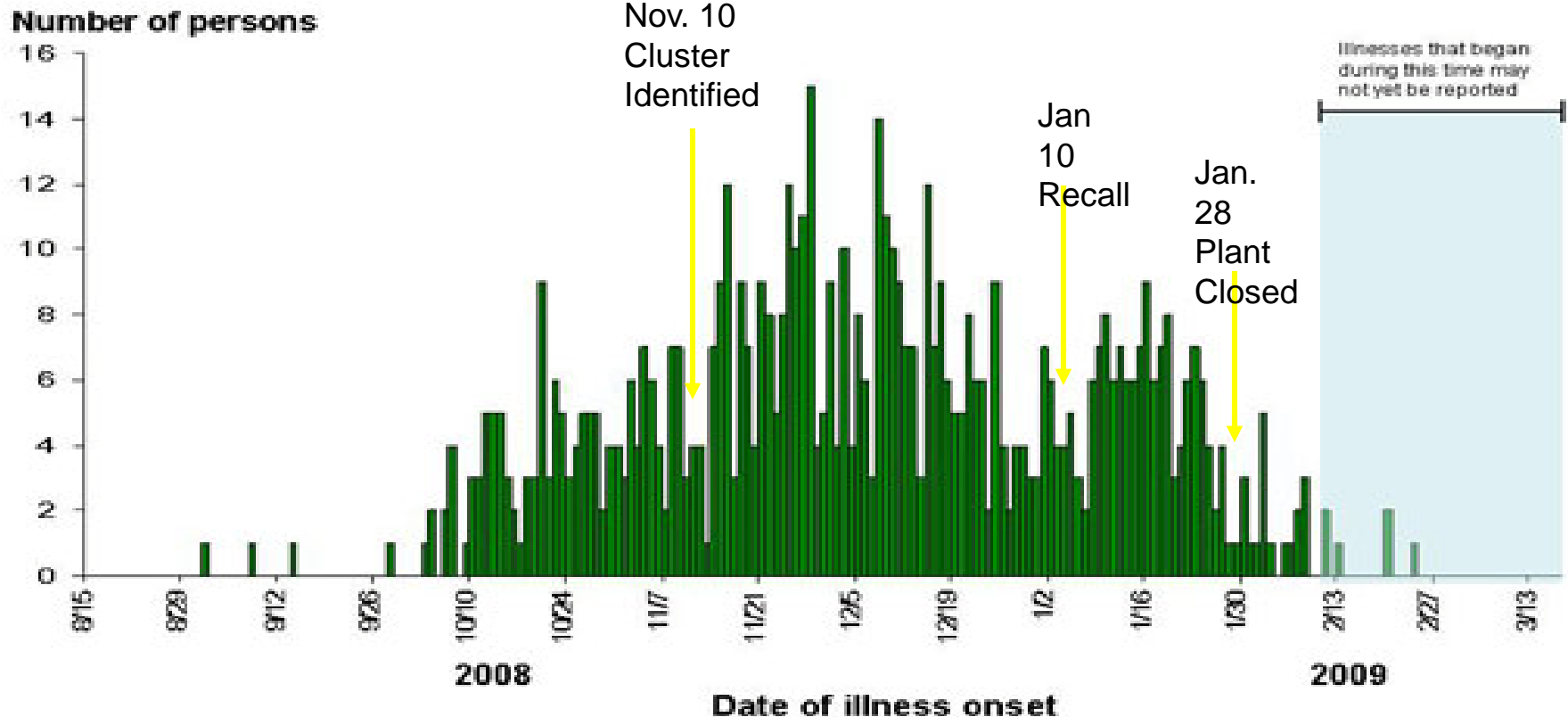


- Over 6 months from first case until recall.
- Over 30 cases after recall.
- How many individuals purchased the product **after** the recall?



Infections with the outbreak strain of *Salmonella* Typhimurium, by date of illness onset*

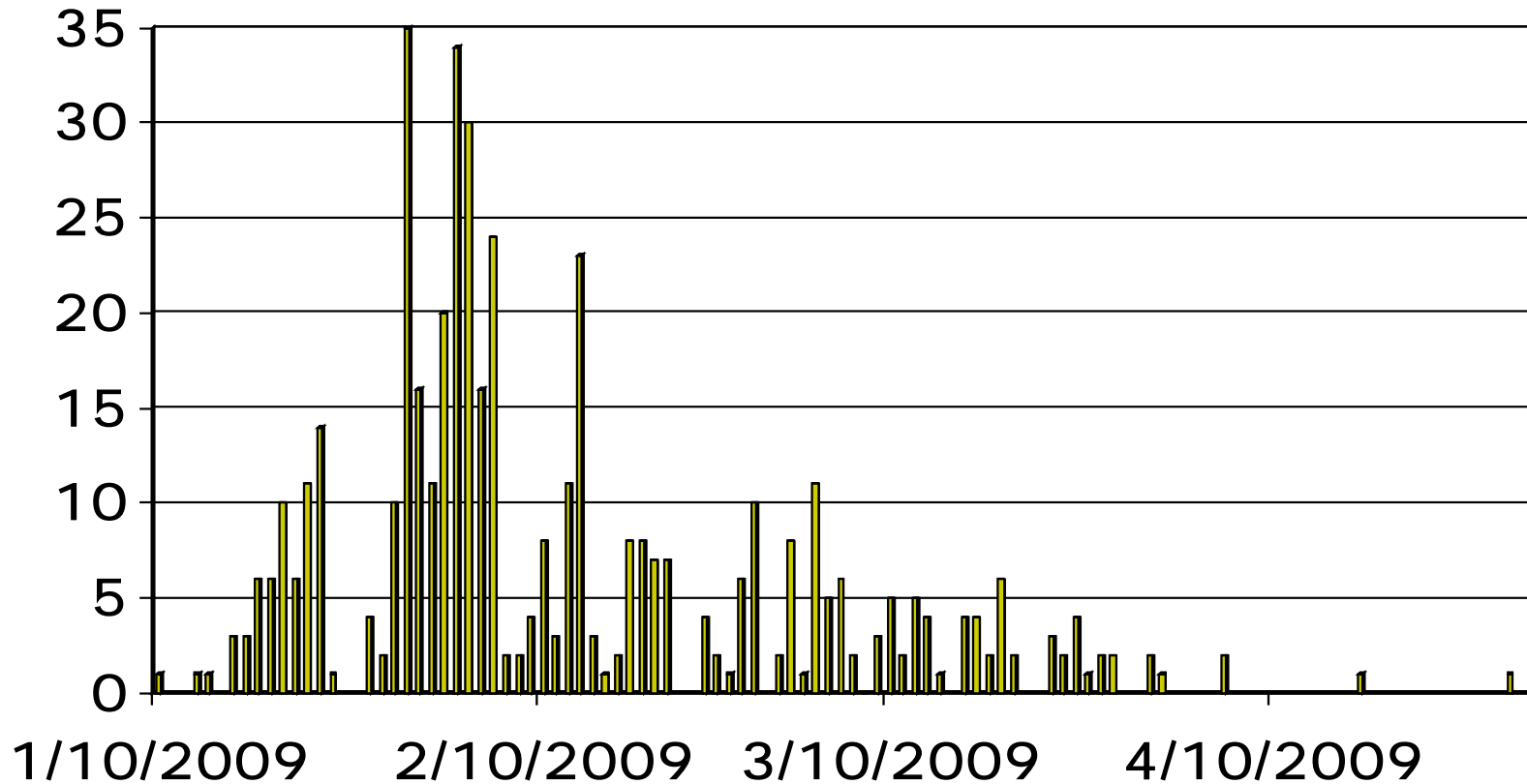
(n=674 for whom information was reported as of March 15, 9pm EDT)



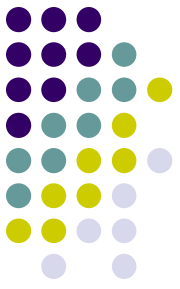
*Some illness onset dates have been estimated from other reported information



Salmonella Typhimurium Peanut Recalls per Day

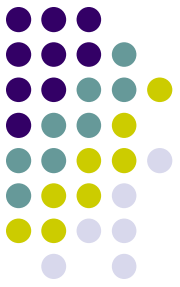


Salmonella Typhimurium Outbreak Due to Peanut Butter



- Recalls and illnesses went on for months.
- Numerous illnesses after recall.
- Must identify the underlying cause to prevent additional outbreaks.
 - Report of raw chicken manure used on peanut fields.
 - Contaminated peanuts could go to a different plant the following year.
 - Processing and transportation equipment difficult to clean.

Barriers to Recall Effectiveness

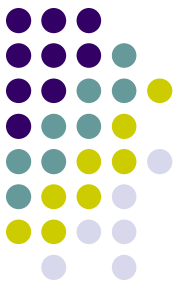


- Recalls are voluntary.
 - There may be no attempt to recall products.
- Communication breakdowns.
- May remove products from only one of several locations in store.
- Returned product may be put back on shelf.

Barriers to Recall Effectiveness

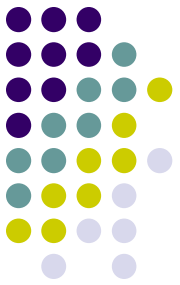


- New shipments arrive:
 - Product safety is assumed.
 - Store employees restock shelves.
- Expanding recalls:
 - Many believe the new recall notice is another copy of the original and take no action.



Conclusion

- Reducing time from the first case to implementation of appropriate controls helps reduce the number of illnesses and deaths and the negative impacts on innocent individuals and food operations.
 - For this to occur requires excellent real time communications and coordination between industry, local, state and federal agencies.
- Need to improve early detection, rapid response, swift recovery, and prevention of reoccurrence.



Questions and Discussion