

Becoming the Healthiest Nation in a Healthier World

ASTHO-NACCHO 2008

September 9 – 12, 2008

Sacramento, California

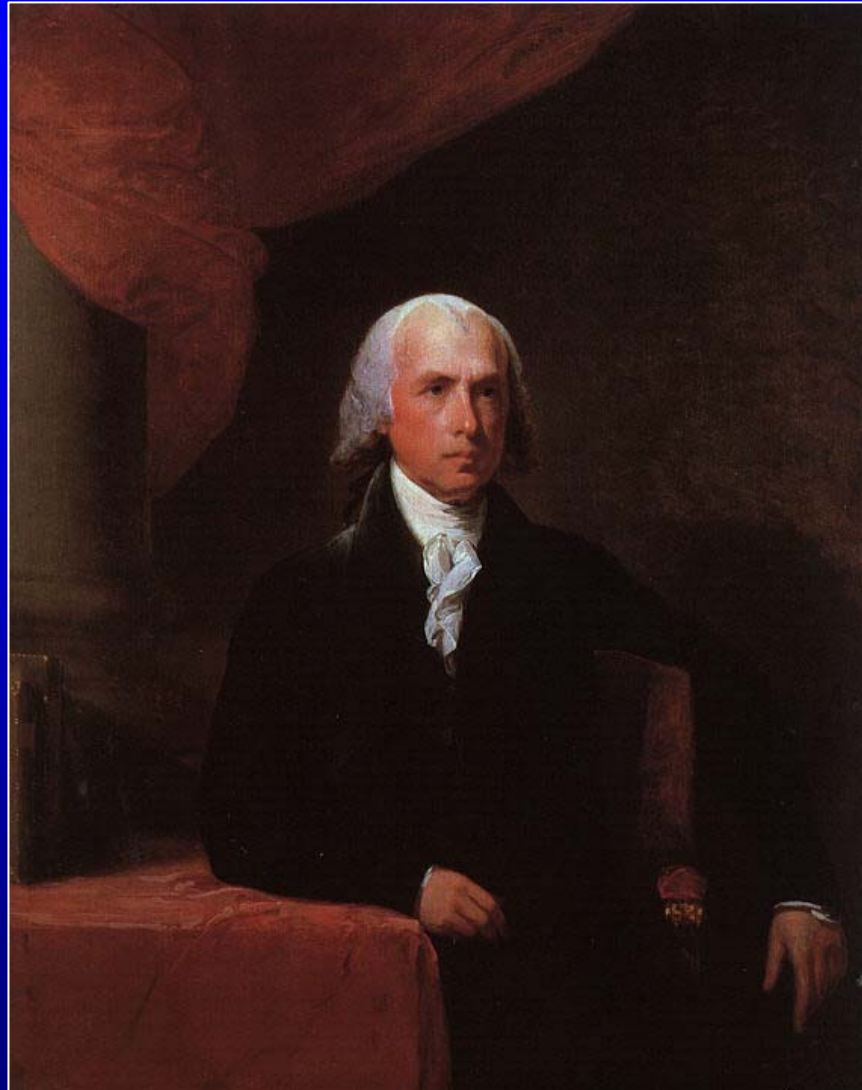
Collaborating for Food Safety in the 21st Century

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Centers for Disease Control & Prevention

Collaborating for Food Safety in the 21st Century



George Mason



James Madison



Alexander Hamilton

Philadelphia, 1787

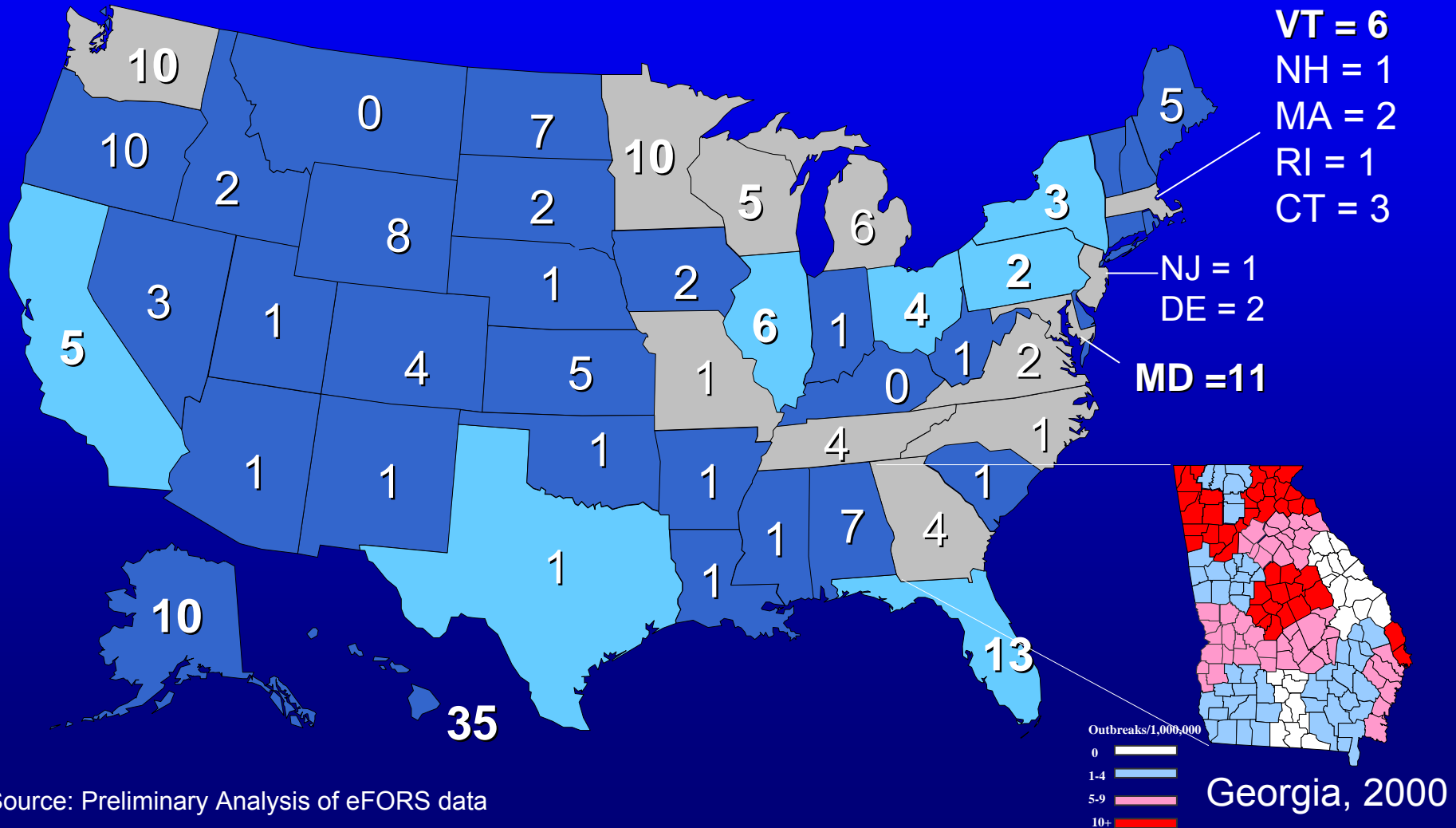
Collaborating for Food Safety in the 21st Century

Outbreak Investigations

- In 2006, nearly 1300 outbreaks reported
- CDC: ~90 foodborne outbreaks / clusters
- CDC: 15 Epi-Aids

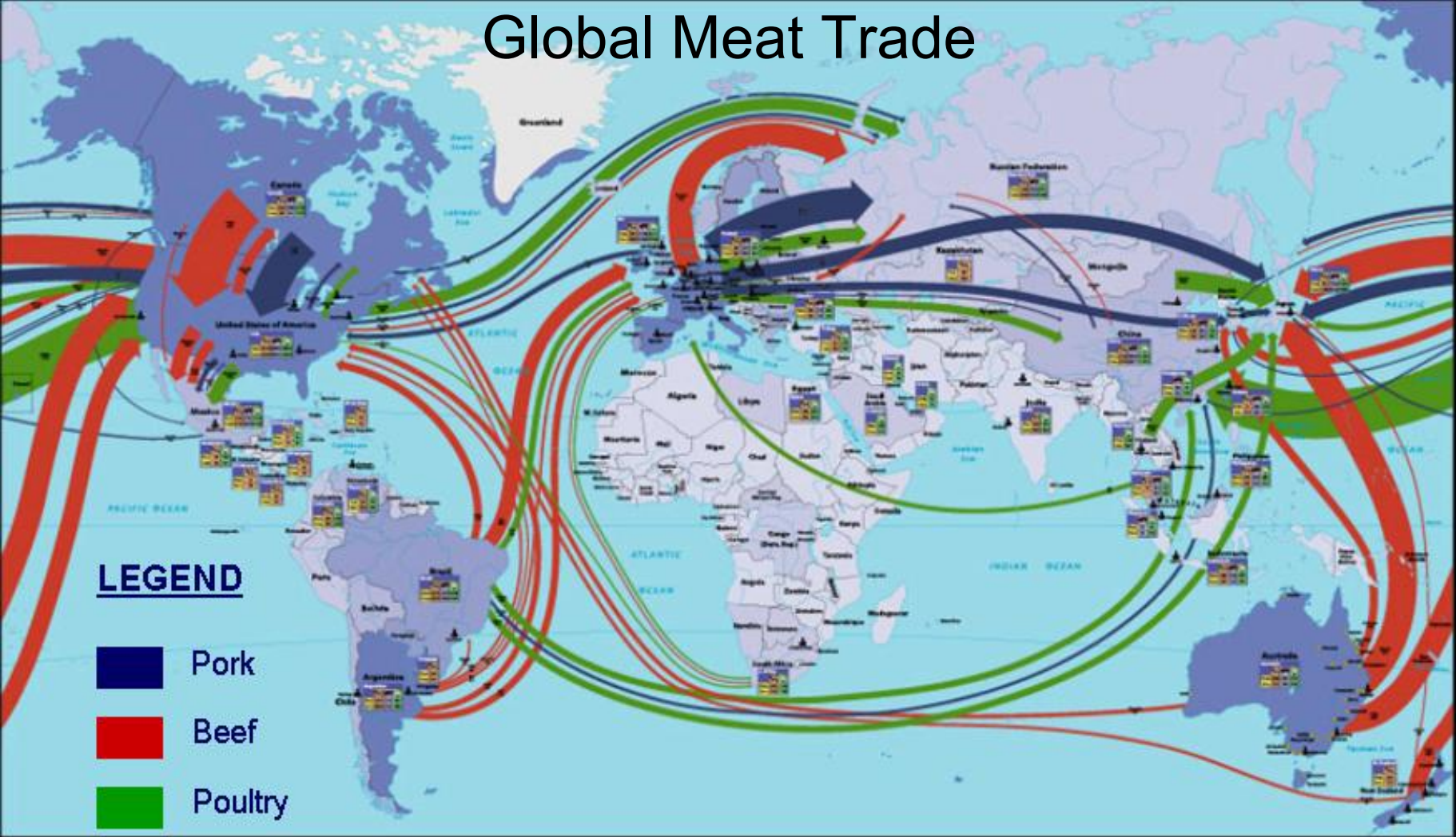
State Performance Highly Variable

FB Outbreaks / 1,000,000 population by State, 2001 - 2003



Source: Preliminary Analysis of eFORS data

Becoming the Healthiest Nation in a Healthier World



Source: Center for Global Food Issues

A Multinational Loaf

Amy Schoenfeld: New York Times, June 15, 2007



- **Wheat gluten** – France, Poland, Russia, Netherlands, Australia
- **Honey** – China, Vietnam, Brazil, Uruguay, India, Canada, Mexico, Argentina
- **Calcium proprionate** – Netherlands
- **Guar gum** – India
- **Flour enrichments** – China
- **Beta-carotene** – Switzerland
- **Vitamin D3** – China

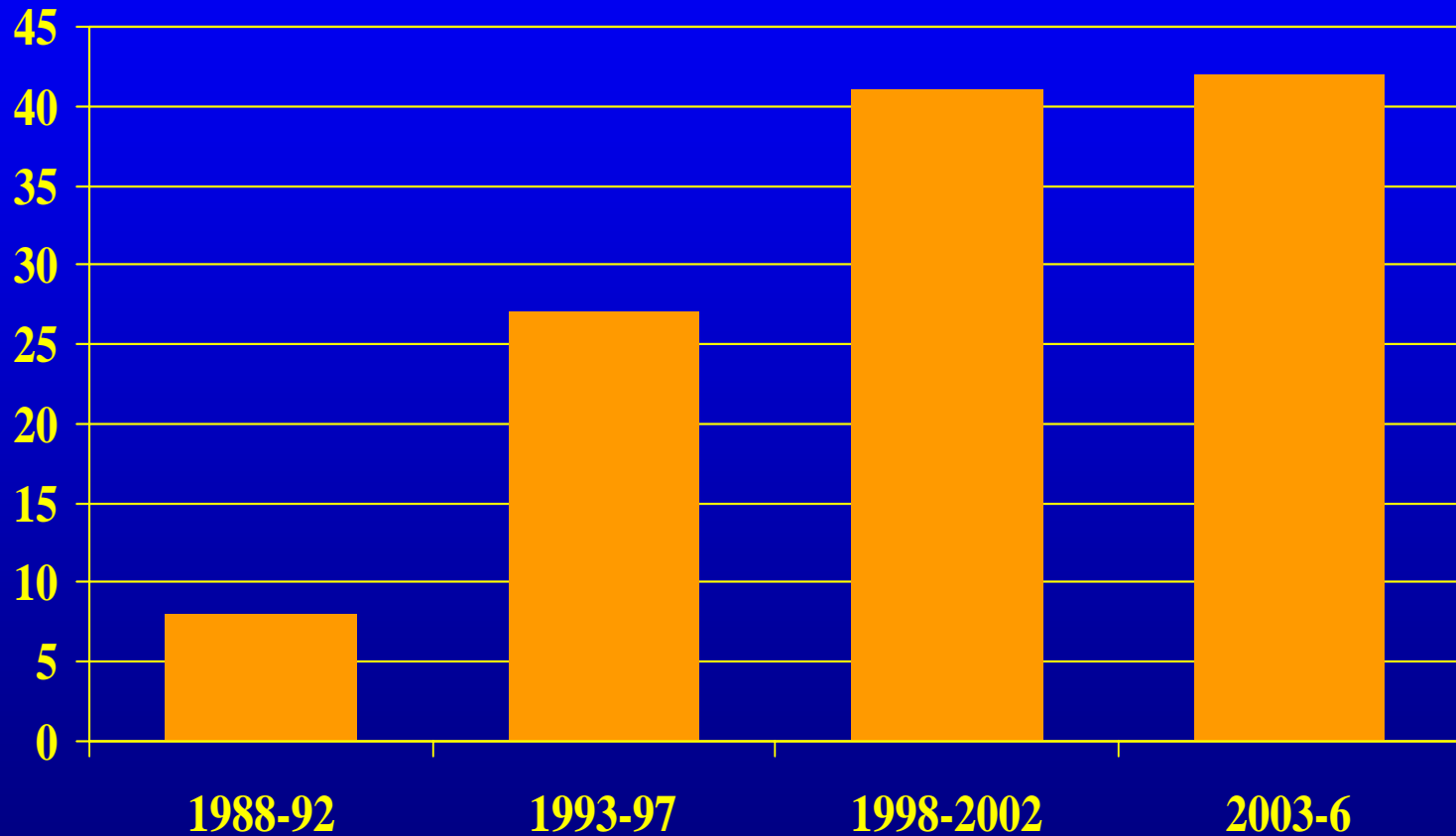


Epidemiology of Foodborne Diseases, USA

- Foodborne diseases & outbreaks are still common.
- Morbidity > mortality; very young, very old, immune deficient
- Norovirus most common, viral; human reservoir; HAV is disappearing
- Campylobacter & Salmonella most common bacterial; animal reservoir
- Declines in Campylobacter, Listeria, Salmonella, Shigella, & Yersinia STEC O157 infections. Little change in, Vibrio & Cryptosporidium.
- Outbreaks increasingly being recognized: Diffuse, Multi-state; Fresh Produce; Eating away from home/Restaurants?
- Please report

Multi-state foodborne outbreaks

1988-2006

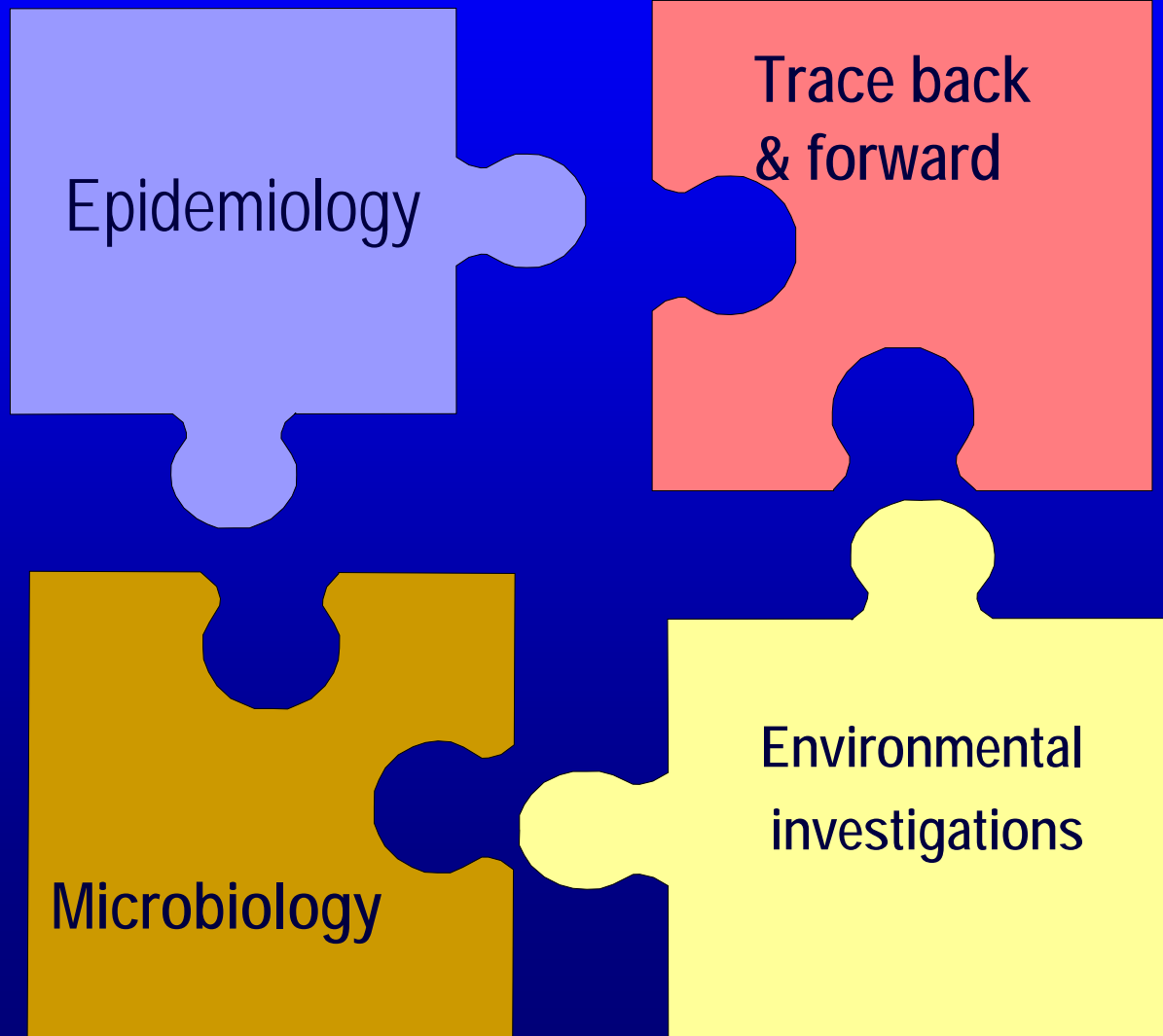


Preliminary data 2008

Source: CDC foodborne outbreak reporting system

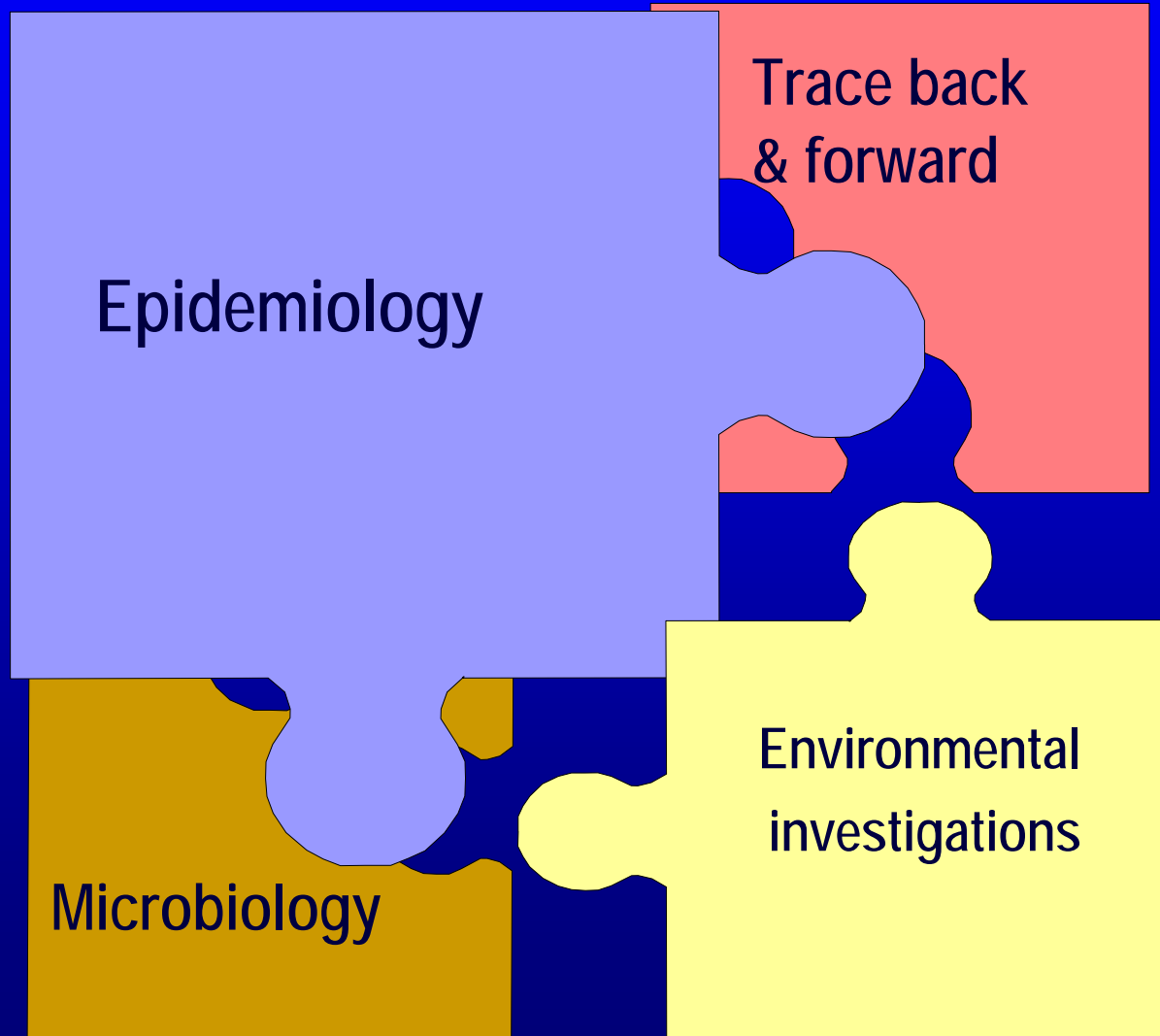
Increase in detection & investigation

Advances in Public Health



Increase in detection & investigation

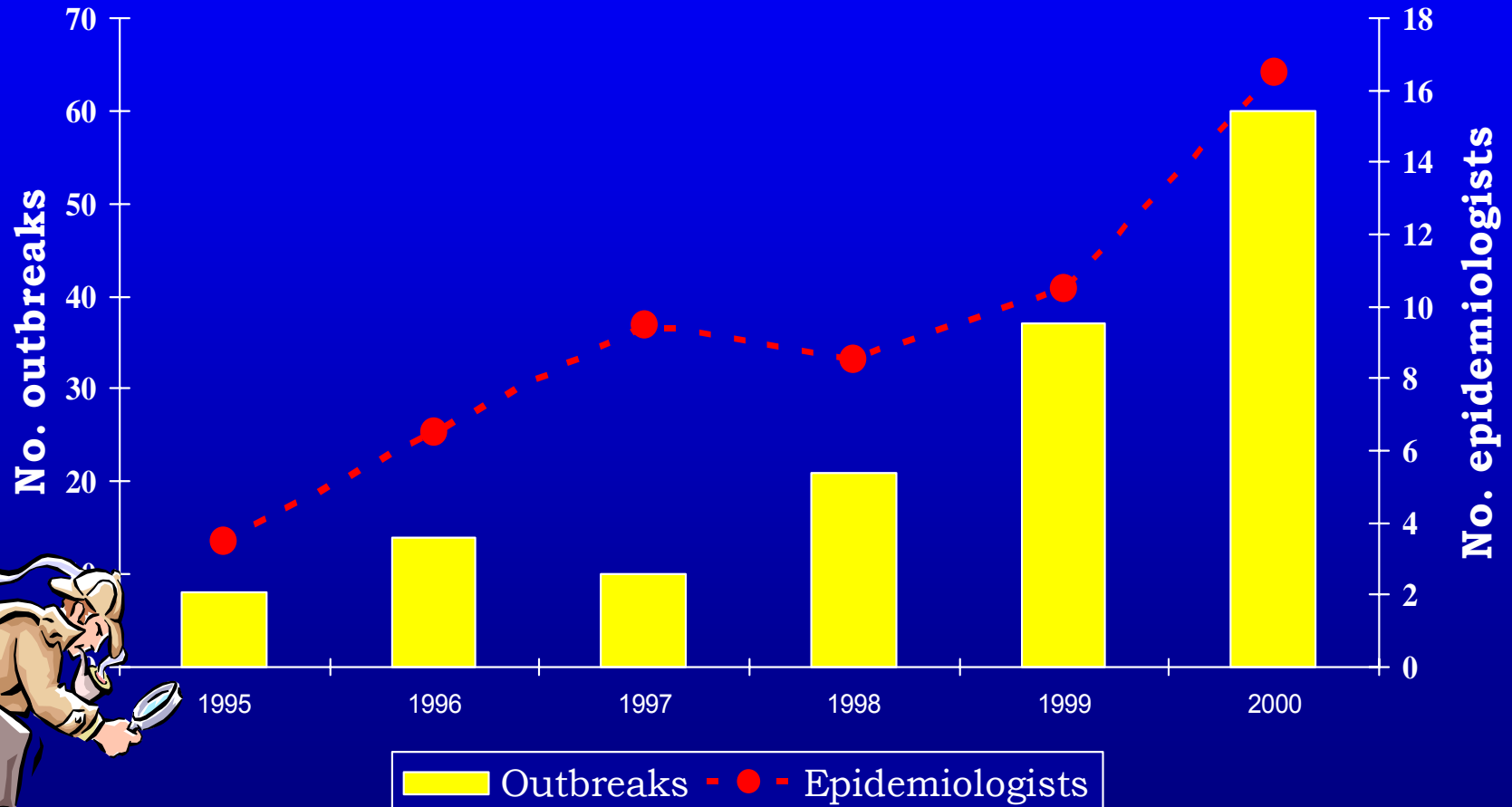
Advances in Public Health



Shoe-Leather Epidemiology

Epidemiologists* & outbreaks identified by year

Georgia Division of Public Health, 1995-2000



*Communicable Diseases, as of December 31, including EIS & PMRs

“Shotgun” Questionnaire & Historic Controls

- Melissa Plantenga, OR Dept of Human Services Begins contacting 5 cases using **Hypothesis-generating questionnaire** 30-45min interview with >400 food items
- Wed A.M., 4 out of 5 OR cases report bagged spinach; **FoodNet Atlas - food surveys = 17.7% eat spinach.**



FOOD PREFERENCE QUESTIONNAIRE
(Foods people ATE (Y), DID NOT EAT (N), or MAY HAVE EATEN (M) the week before their onset of illness.)

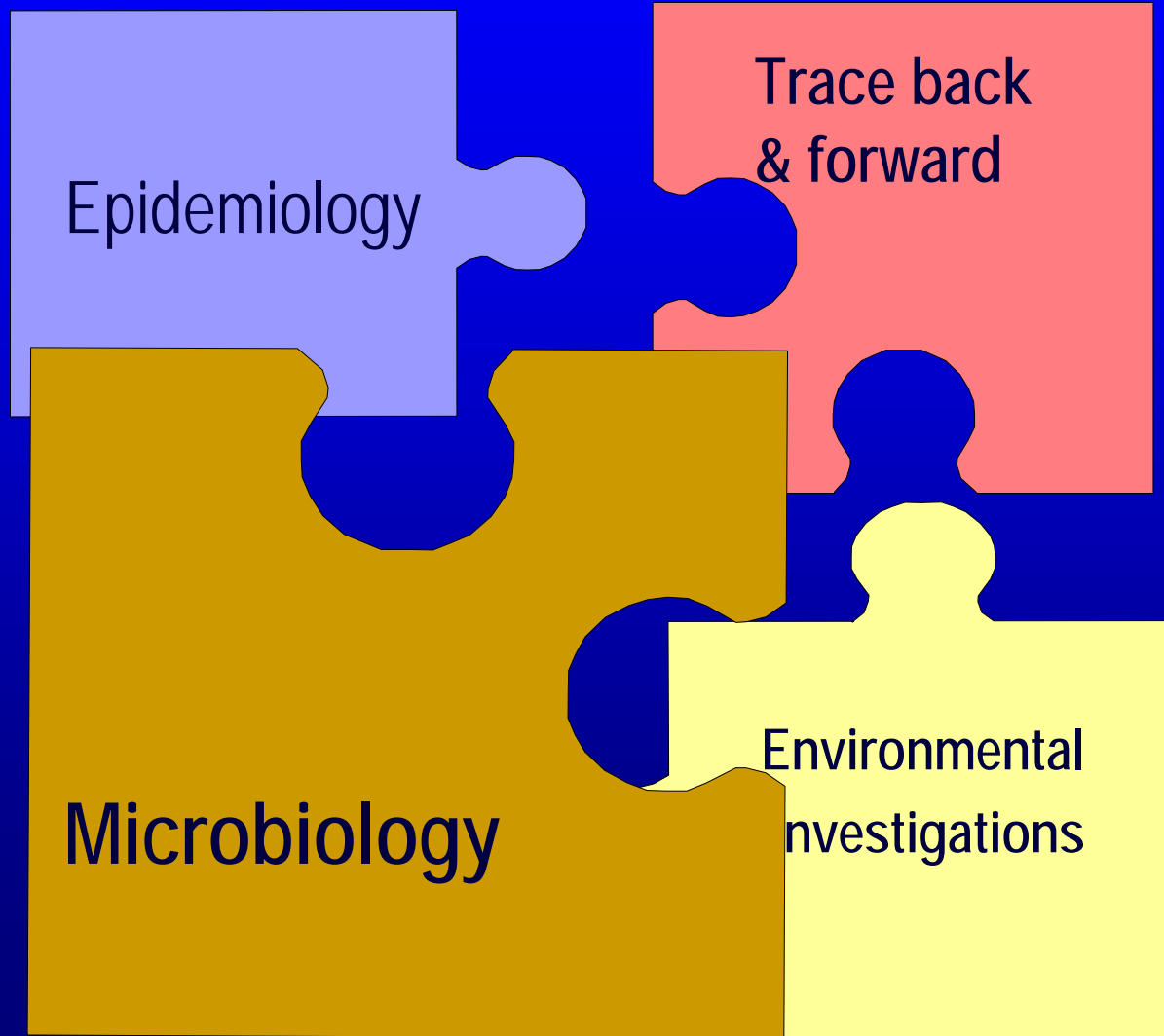
Food Category	Y	N	M	Food Category	Y	N	M
A. DAIRY PRODUCTS				D. VEGETABLES (Fresh Only)			
Eggs				Packaged Salads			
Fried				Lettuce			
Scrambled				Iceberg			
				Leaf			
				Salad Greens			
				Spinach			
				Cabbage			
				Tomatoes			
				Cucumbers			
				Peppers			
				Asparagus			
				Celery			
				Carrots			
				Radishes			
				Pea Pods			
				Egg Plant			
				Squash			
				Onions			
B. MEATS & POULTRY				Broccoli			
Chicken				Mushrooms			
Turkey				Sprouts			
Ground Beef				Alfalfa Sprouts			
Other Beef				Bean Sprouts			
Pork				Broccoli Sprouts			
Lamb				Fresh Herbs			
Sausage				Tofu			
Fish				E. OTHER FOODS			
Shellfish				Peanut Butter			
C. FRUITS				Chocolate			
Oranges				Other Candy			
Grapefruits				F. UNPASTEURIZED BEVERAGES			
Lemons				Milk			
Limes				Apple Cider			
Pears				Orange Juice			
Apples				Other Juices			
Cherries				G. LUNCHEON MEATS			
Plums				Ham			
Nectarines				Turkey			
Strawberries				Bologna			
Grapes				Summer Sausage			
Bananas				Other Sausage			
Cantaloupe Melon				Describe:			
Honeydew Melon							
Watermelon							

OutbreakNet

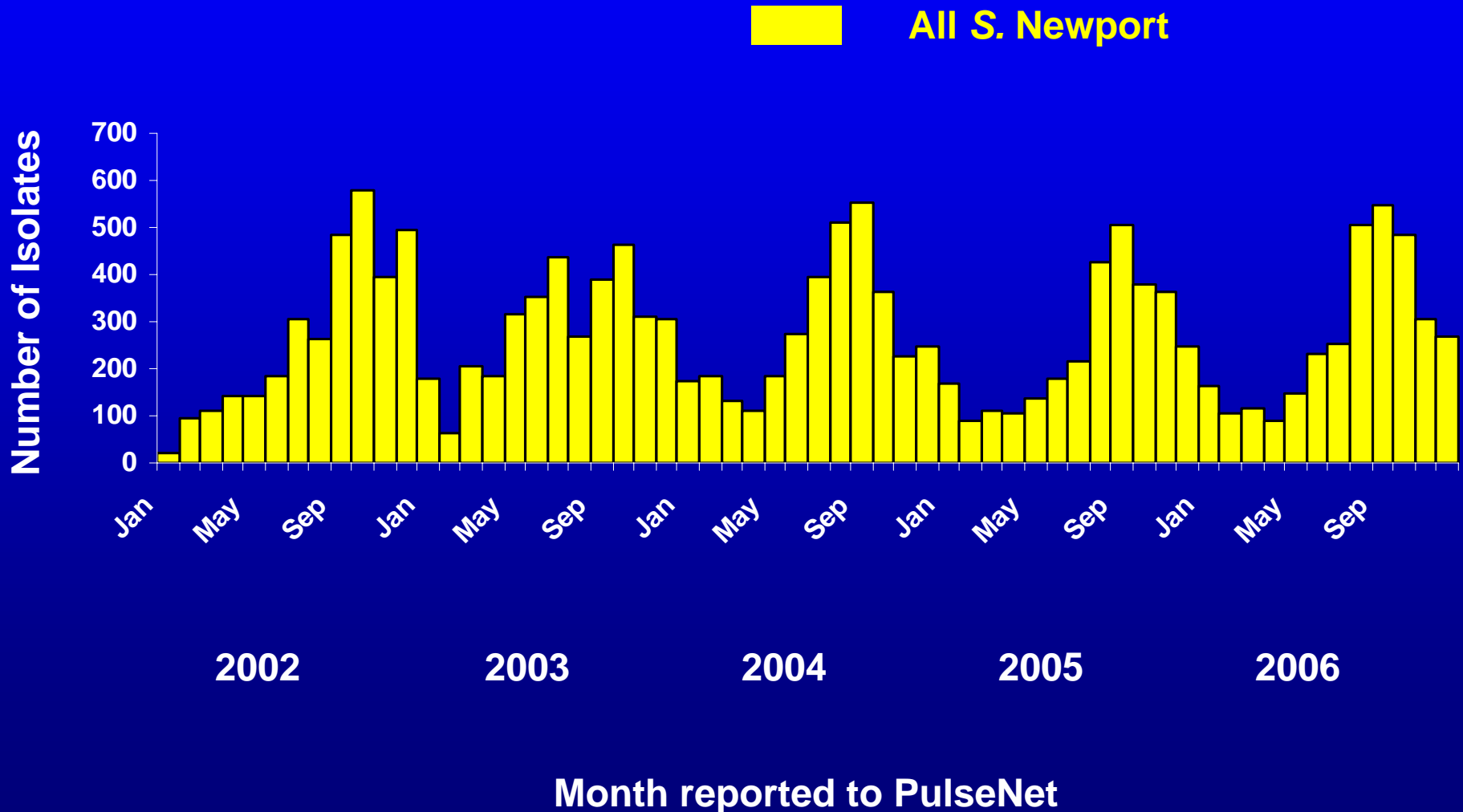
- Network of state & federal public health officials:
 - Epidemiologists, microbiologists, regulatory officials in 50 states
 - Long-standing collaboration formalized
- Coordinates investigation of multi-state outbreaks
- Quarterly conference calls
 - Discuss outbreak issues outside of pressure of ongoing outbreak investigations
- Annual meeting
 - Communications, investigation methods, surveillance

Increase in detection & investigation

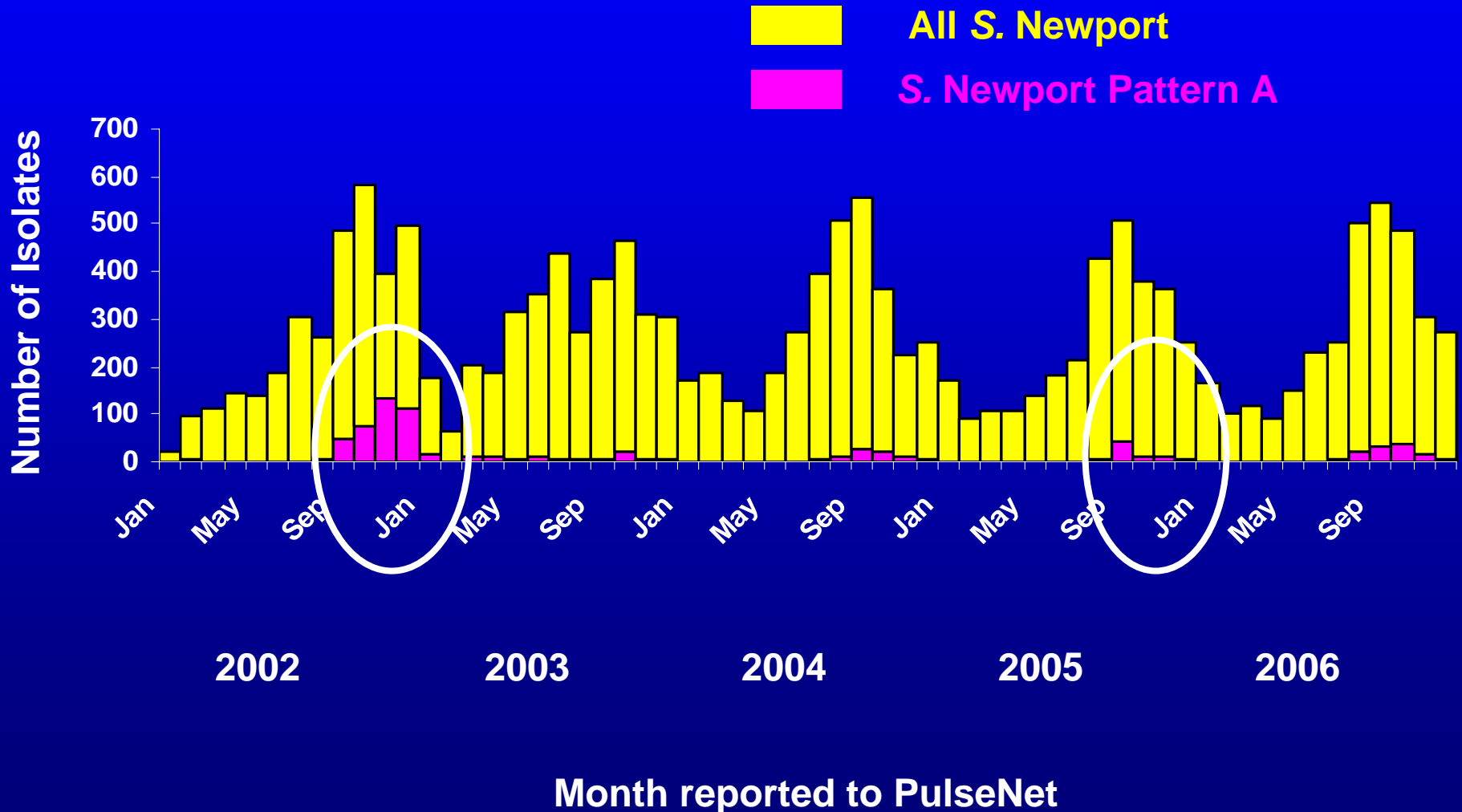
Advances in Public Health

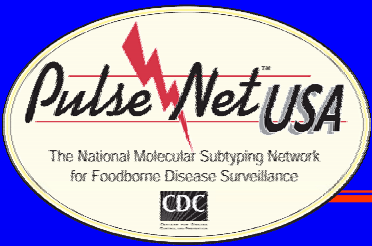


Isolates of *S. Newport* Reported to PulseNet 2002-2006

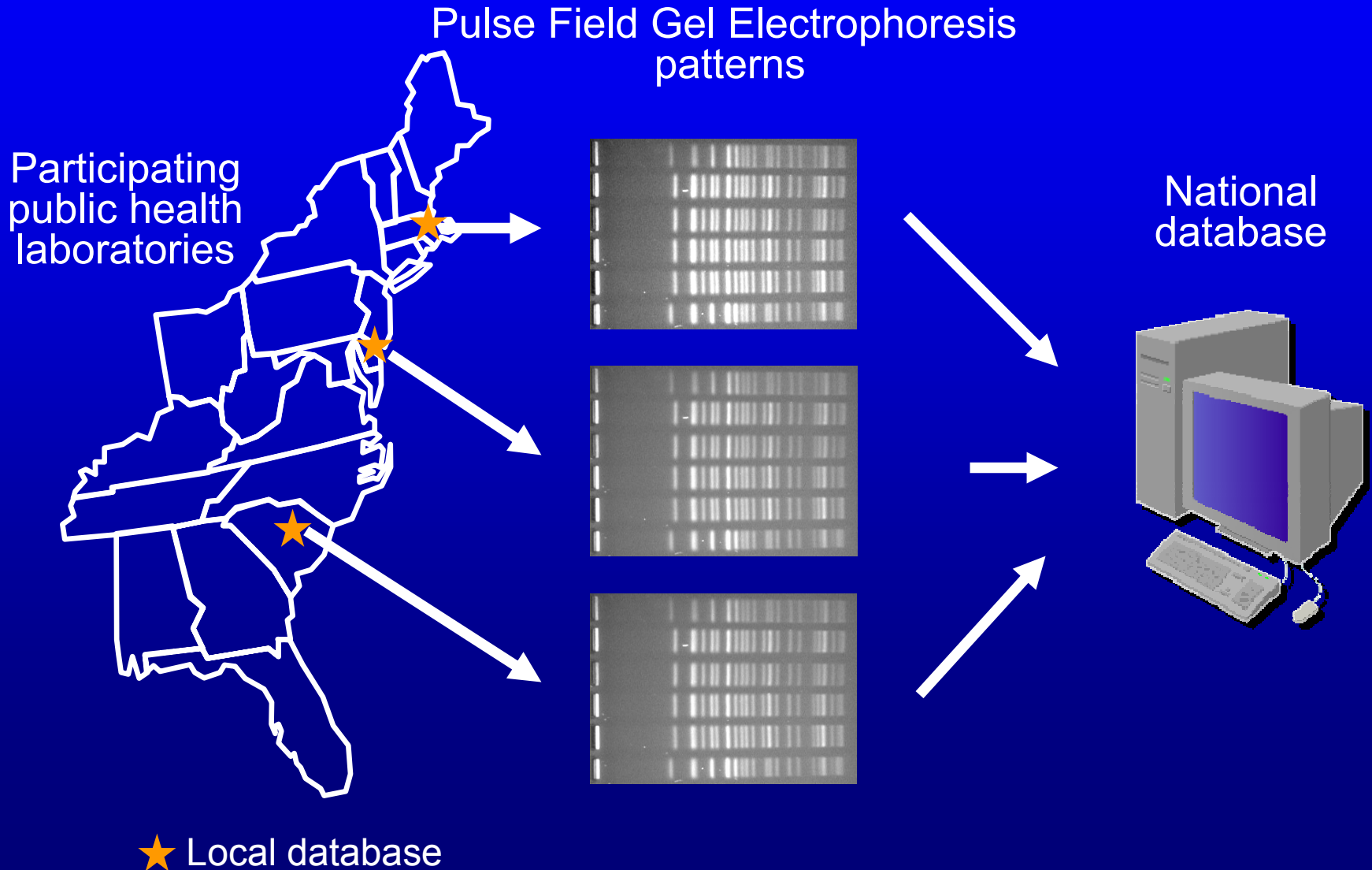


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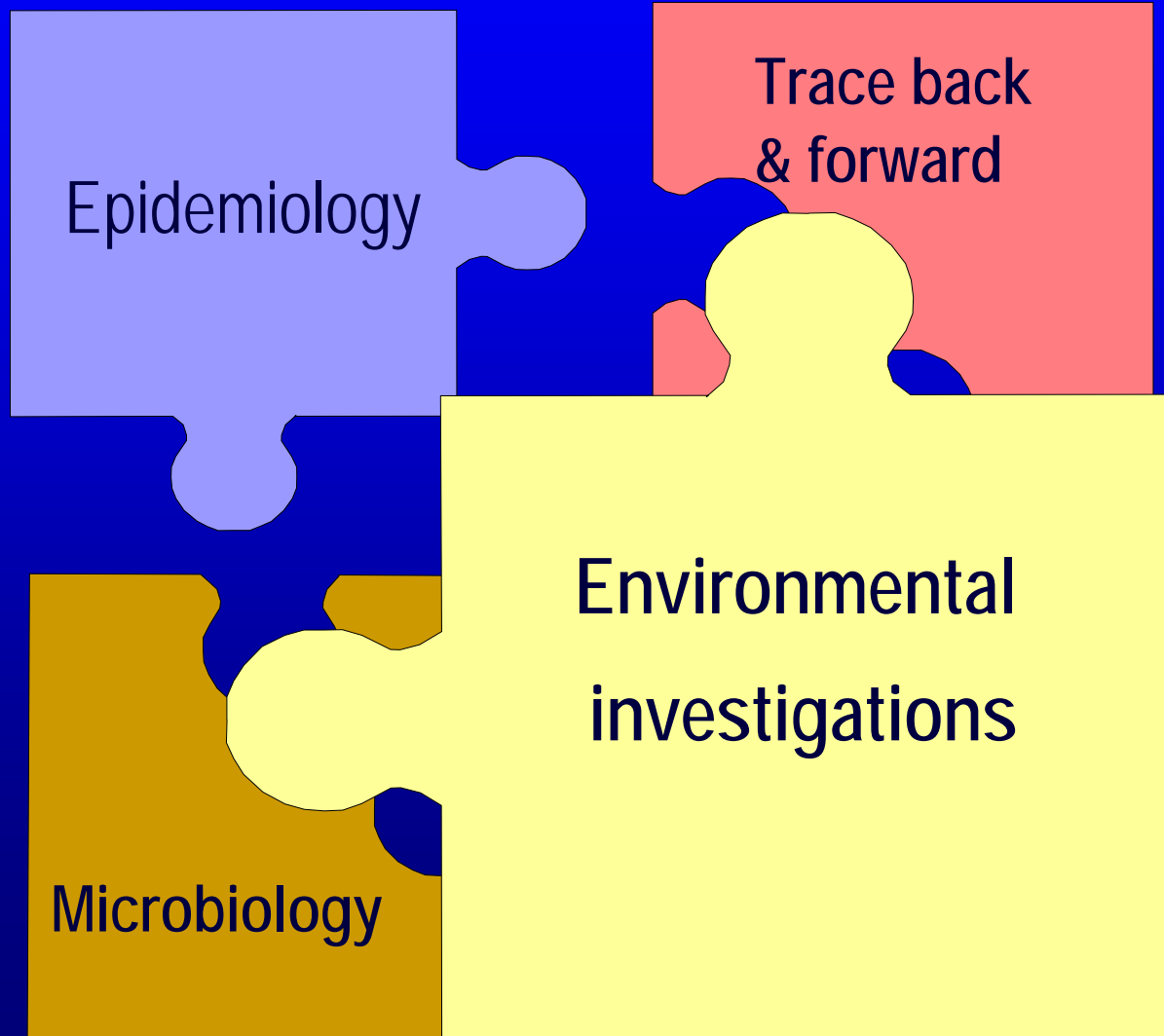


PulseNet USA



Increase in detection & investigation

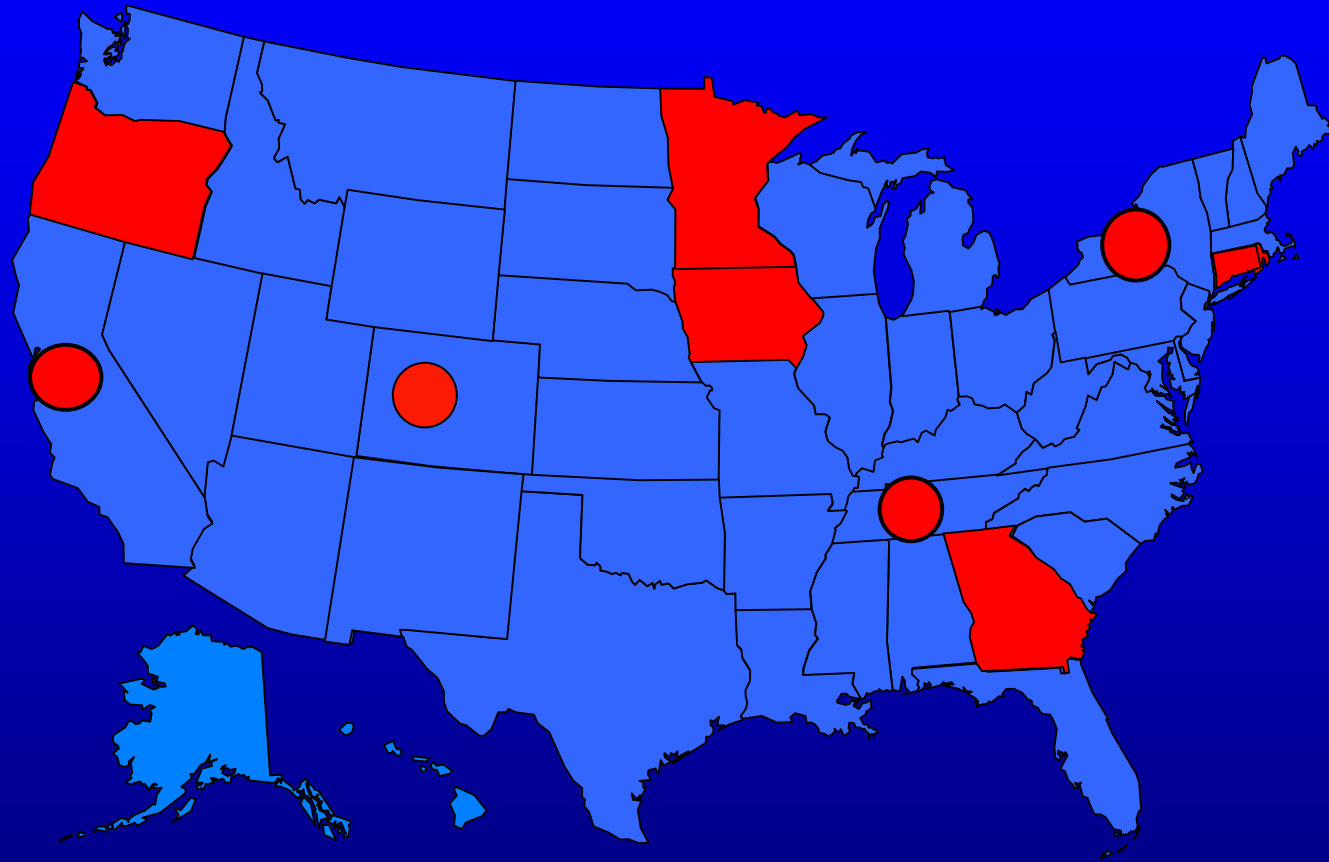
Advances in Public Health



EHS-Net

Environmental Health Specialists Network

- California
- Colorado
- Connecticut
- Georgia
- Minnesota
- New York
- Oregon
- Tennessee
- Rhode Island
- Iowa



Some completed studies

1. Egg handling study

- To determine prevalence of high-risk practices & policies in restaurants serving all-day breakfasts

2. Service worker food preparation practices

- To determine self-reported prevalence of workers' safe & unsafe practices

3. Food worker & managers focus groups

- To identify barriers & facilitators to safe food handling practices.

4. Ground beef study

- To evaluate handling practices & use of irradiated beef in restaurants

5. Tomato study

- To describe handling practices that could lead to contamination and/or proliferation of pathogens



Epi-Ready Team Training Course



- **Multi-disciplinary surveillance & outbreak investigations**
- **Provide up to date, vetted information**
 - Epi, lab, & environmental health modules
- **Classroom setting, 2 or 2 ½ days**



NSF's Food Safety Leadership Awards
2008 Food Safety Leadership Award in Education & Training

Council to Improve Foodborne Outbreak Response

CIFOR

Purpose

- **To improve foodborne disease surveillance, outbreak detection, investigation, control, & reporting at the local, state, & federal levels**
- **Systems approach is used to identify & prioritize components needing improvement**
- **Nine member organizations/agencies**

CIFOR Structure & Membership

- **Co-chaired by**
 - **CSTE**
 - **NACCHO**
- **AFDO, APHL, ASTHO, CSTE, NACCHO, NEHA, USDA, FDA, CDC**
- **Funded by CDC through CSTE, APHL, NACCHO, & NEHA**
- **Initial meeting held in January 2006**

Current CIFOR Projects

- **Long term (2009)**
 1. Performance guidelines for public health foodborne disease control programs

- **Short term (2007)**
 1. On-line repository/clearinghouse of resources, e.g. temporary vendor certification & inspection
 2. Program performance indicators
 3. Guidelines for multi-jurisdictional outbreaks
 4. Food Complaints

Thank you

Disclaimer:

The findings & conclusions in this presentation are those of the author & do not necessarily represent the views of the Centers for Disease Control & Prevention