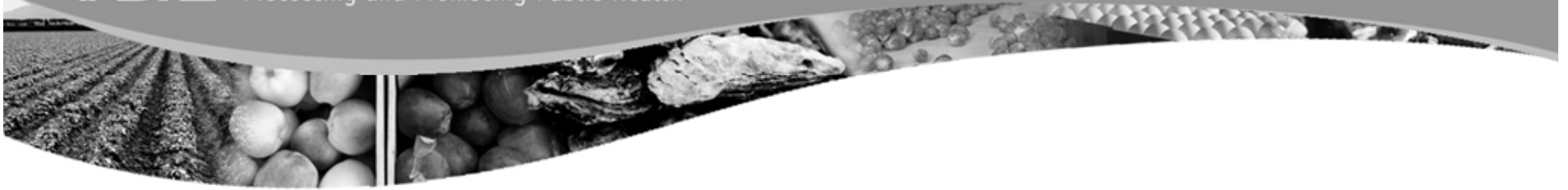




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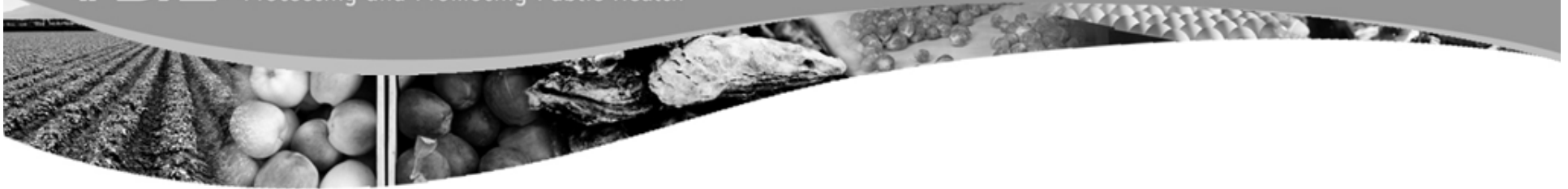


Food Safety Trends at Foodservice and Retail

Kevin Smith, MPH

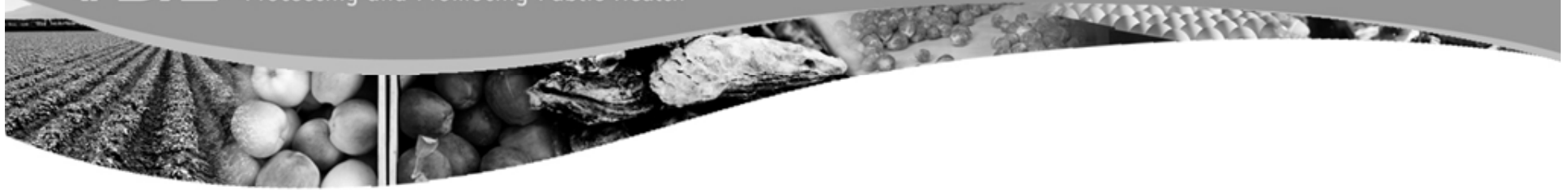
FDA / CFSAN / Office of Food Safety

AFDO Annual – June 20, 2011



Scope of Retail Food Protection in US

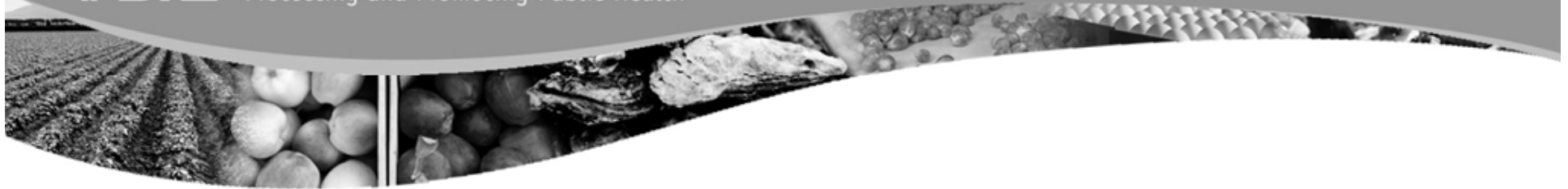
- Growing Retail & Foodservice Industry:
 - ~1M restaurants serving 70 billion meals/year
 - ~250,000 supermarkets, grocery stores, c-stores
 - ~100,000 schools
 - ~24,000 nursing homes and hospitals
 - Mobile vendors
 - Temporary events
 - Farmers markets
 - Vending operations



FDA Retail Risk Factor Study

Key Objectives:

- Establish Performance Measures and Target for National Retail Food Protection System
 - Control of Risk Factors / Food Code Compliance
- Establish National Baseline and Analyze Trends & Assess Progress
- Focus on In-store Practices that demand attention of the Industry and Regulatory Community



Foodborne Illness Risk Factors in Retail/Foodservice Operations

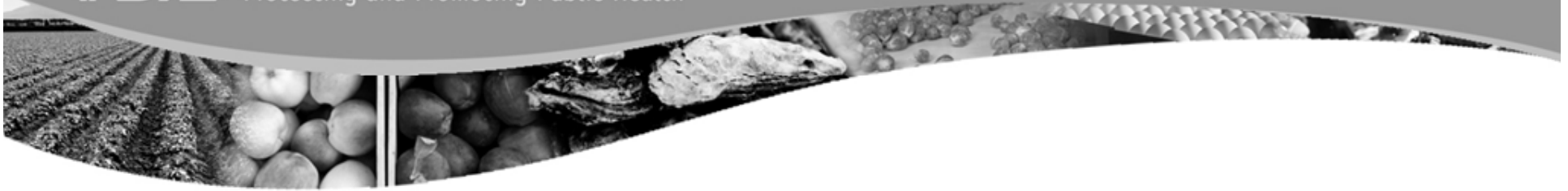
- **Food from Unsafe Sources**
- **Inadequate Cooking**
- **Improper Holding Temperatures**
- **Contaminated Equipment/Inadequate Protection of Contamination**
- **Poor Personal Hygiene**

42 Individual Data items divided among the risk factors plus Other/Chemical Category



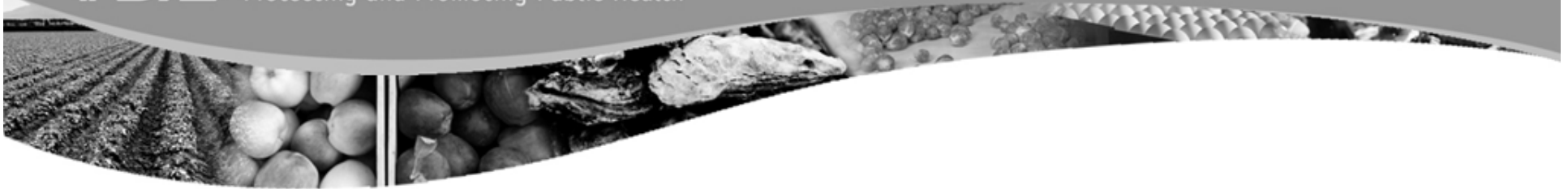
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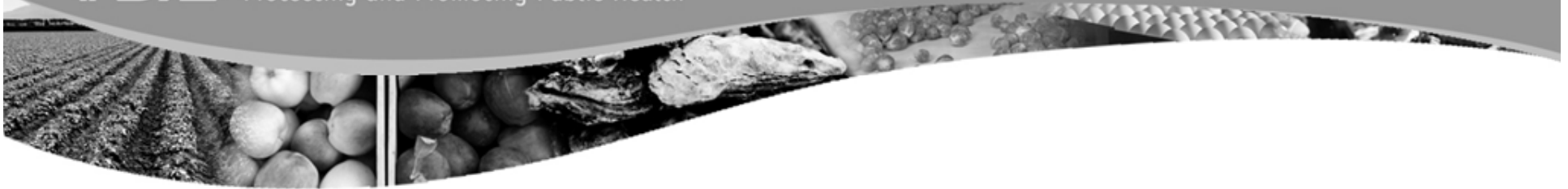
FDA Retail Risk Factor Study

- **3 Data Collection Periods:**
 - 1998, 2003 and 2008
- **Separate Reports Issued For Each Collection**
- **10-year Trend Analysis Report**
 - Issued October 2010
- **All reports available at**
<http://www.fda.gov/Food/FoodSafety/RetailFoodProtection>



Nine Facility Types - Nine Studies

- **Institutional Foodservice**
 - Hospitals
 - Nursing Homes
 - Elementary Schools (K-5)
- **Restaurants**
 - Fast Food Restaurants
 - Full Service Restaurants
- **Retail Food Stores**
 - Deli Departments/Stores
 - Meat & Poultry Departments/Markets
 - Seafood Departments/Stores
 - Produce Departments/Markets

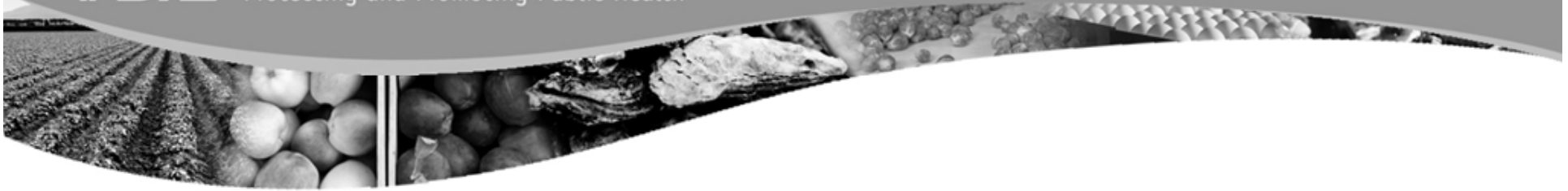


Takeaways from Trend Analysis

- **Significant Gains made over 10-year span**
 - Biggest gains made in areas that were most in need of improvement
 - Efforts on part of industry and regulatory appear to be having impact
- **Significant Improvement still needed**
- **Primary compliance challenges**
 - Hand Hygiene
 - Cold Holding & Cooling of Foods
 - Cleaning and Sanitizing Equipment & Surfaces



Industry Segment	Facility Type	1998 Baseline % IN Compliance for Observations made of ALL DATA ITEMS (rounded to nearest %)	2008 % IN Compliance for Observations made of ALL DATA ITEMS (rounded to nearest %)	2010 FDA Target Improvement Goal (rounded to nearest %)
Institutional Foodservice	Hospitals	80%	81%	85%
	Nursing Homes	82%	83%	87%
	Elementary Schools	80%	84%	85%
Restaurants	Fast Food	74%	78%	81%
	Full Service	60%	64%	70%
Retail Food Stores	Delis	73%	74%	80%
	Meat & Poultry Departments	81%	88%	86%
	Seafood Departments	83%	86%	87%
	Produce Departments	76%	83%	82%



Statistically Significant Improvement 10-year span - Risk Factor Control

One or more Foodborne Illness Risk Factors

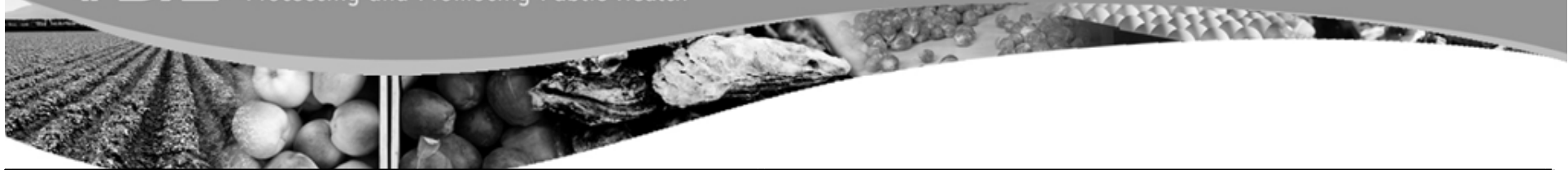
- 8 of 9 Facility Types

Poor Personal Hygiene Risk Factor

- 7 of 9 Facility Types

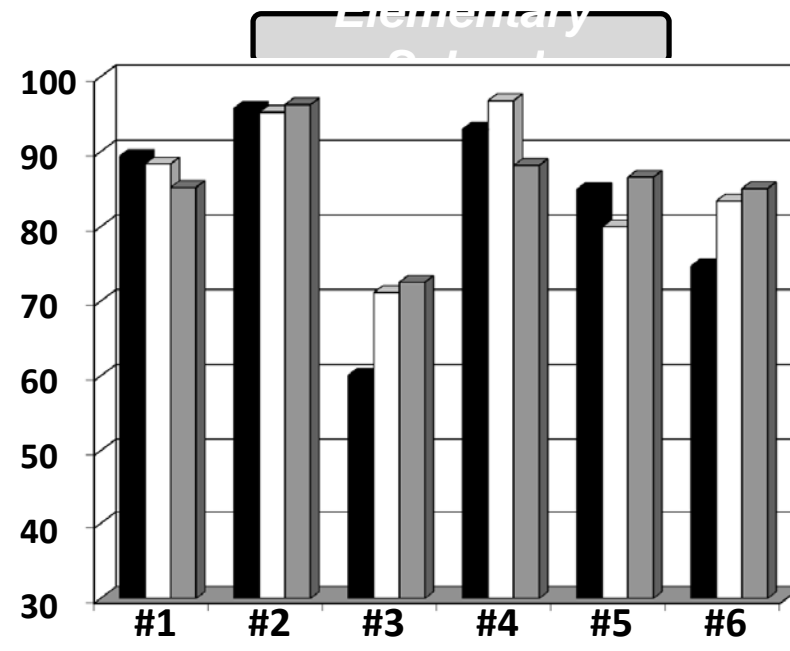
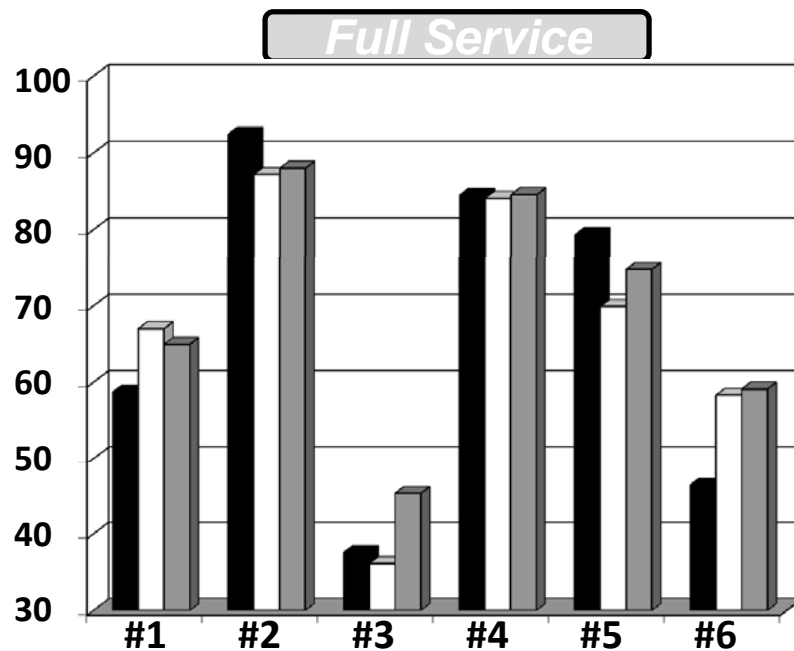
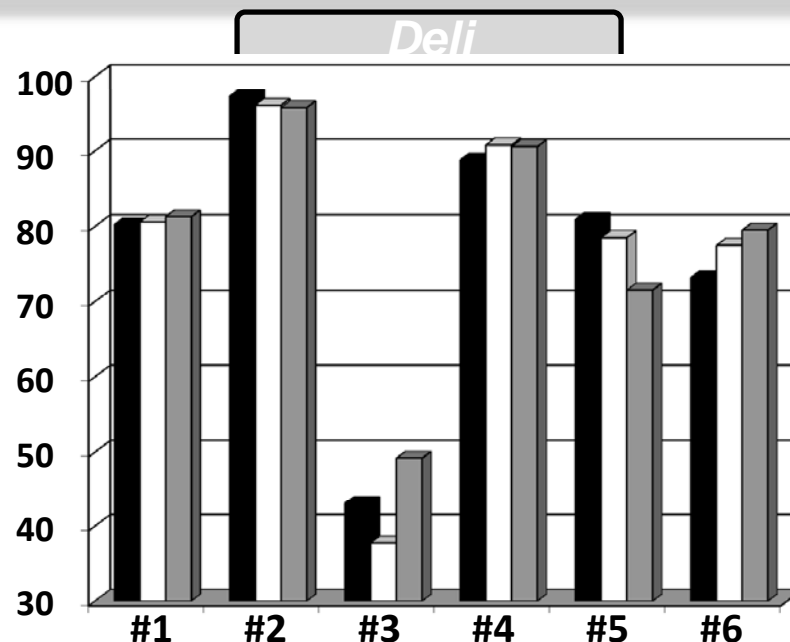
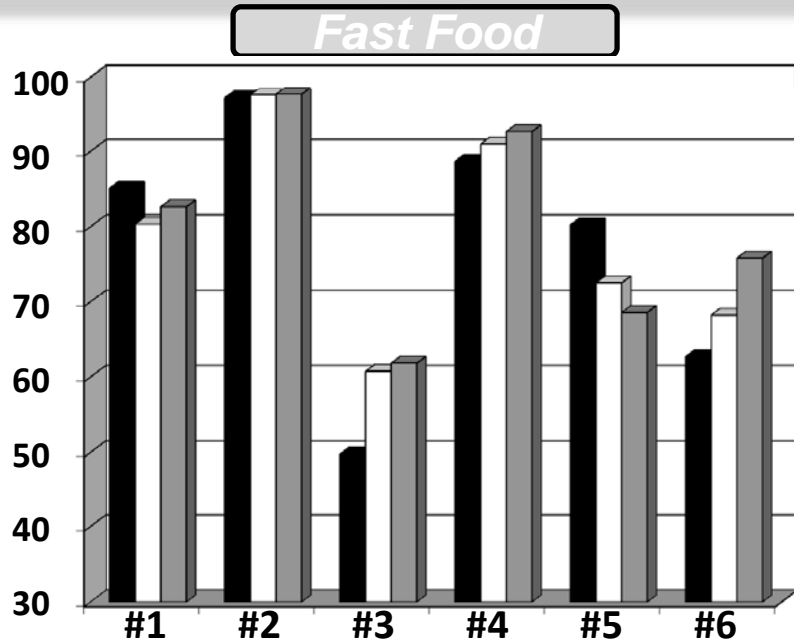
Improper Holding/Time-Temperature Risk Factor

- 5 of 9 Facility Types



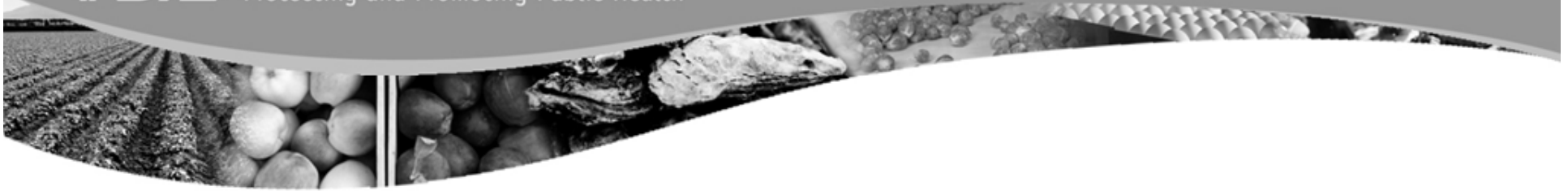
Industry Segment	Facility Type	Foodborne Illness Risk Factor(s) with Statistically Significant Improvement
*Institutional Foodservice	Hospitals	<ul style="list-style-type: none"> ● Inadequate Cooking
	Elementary Schools	<ul style="list-style-type: none"> ● Improper Holding/Time and Temperature ● Poor Personal Hygiene
Restaurants	Fast Food	<ul style="list-style-type: none"> ● Improper Holding/Time and Temperature ● Poor Personal Hygiene
	Full Service	<ul style="list-style-type: none"> ● Contaminated Equipment/Protection from Contamination ● Improper Holding/Time and Temperature ● Poor Personal Hygiene
Retail Food Stores	Delis	<ul style="list-style-type: none"> ● Poor Personal Hygiene
	Meat & Poultry Departments	<ul style="list-style-type: none"> ● Improper Holding/Time and Temperature ● Poor Personal Hygiene
	Seafood Departments	<ul style="list-style-type: none"> ● Poor Personal Hygiene
	Produce Departments	<ul style="list-style-type: none"> ● Improper Holding/Time and Temperature ● Poor Personal Hygiene

In Compliance Percentages (1998, 2003, 2008)



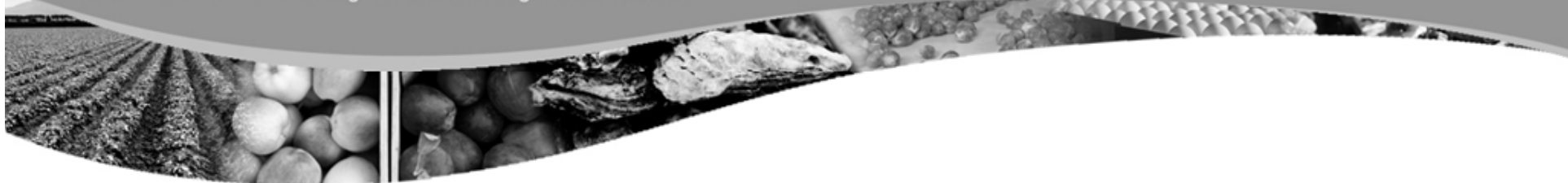
- #1:** Contaminated equipment/protection from contamination
- #2:** Food from unsafe source.
- #3:** Improper holding/time-temperature.
- #4:** Inadequate cooking.
- #5:** Other/chemical.
- #6:** Poor personal hygiene

% IN
 1998
 2003
 2008



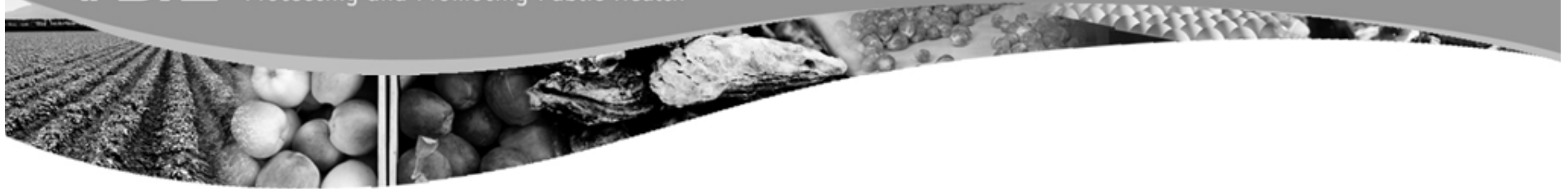
Statistically Significant Improvement - Individual Data Items

- **Proper/Adequate Handwashing**
 - 4 of 9 facility types
- **No Bare Hand contact with Ready-to-Eat Foods**
 - 7 of 9 facility types
- **Date Marking of Ready-to-Eat, Refrigerated Foods**
 - 6 of 9 facility types



Statistically Significant Improvement - Full Service Restaurants

RISK FACTOR	DATA ITEM	% IN 1998	% IN 2003	% IN 2008
Improper Holding/ Time & Temperature	9A - Ready-to-eat PHF/TCS food held for more than 24 hours is date marked as required (prepared on-site)	25.3	26.1	42.1
	9B – Discard RTE PHF/TCS food and/or opened commercial container exceeding 7 days at $\leq 41^{\circ}\text{F}$ (5°C) or 4 days at $\leq 45^{\circ}\text{F}$ (7°C)	47.3	55.6	67.9
Poor Personal Hygiene	13A – Food Employees eat, drink, and use tobacco only in designated areas / do not use a utensil more than once to taste food that is sold or served / do not handle or care for animals present. Food employees experiencing persistent sneezing, coughing, or runny nose do not work with exposed food, clean equipment, utensils, linens, unwrapped single-service or single-use articles	53.9	66.7	75.8
	14A – Employees do not contact exposed, ready-	23.5	42.4	53.7



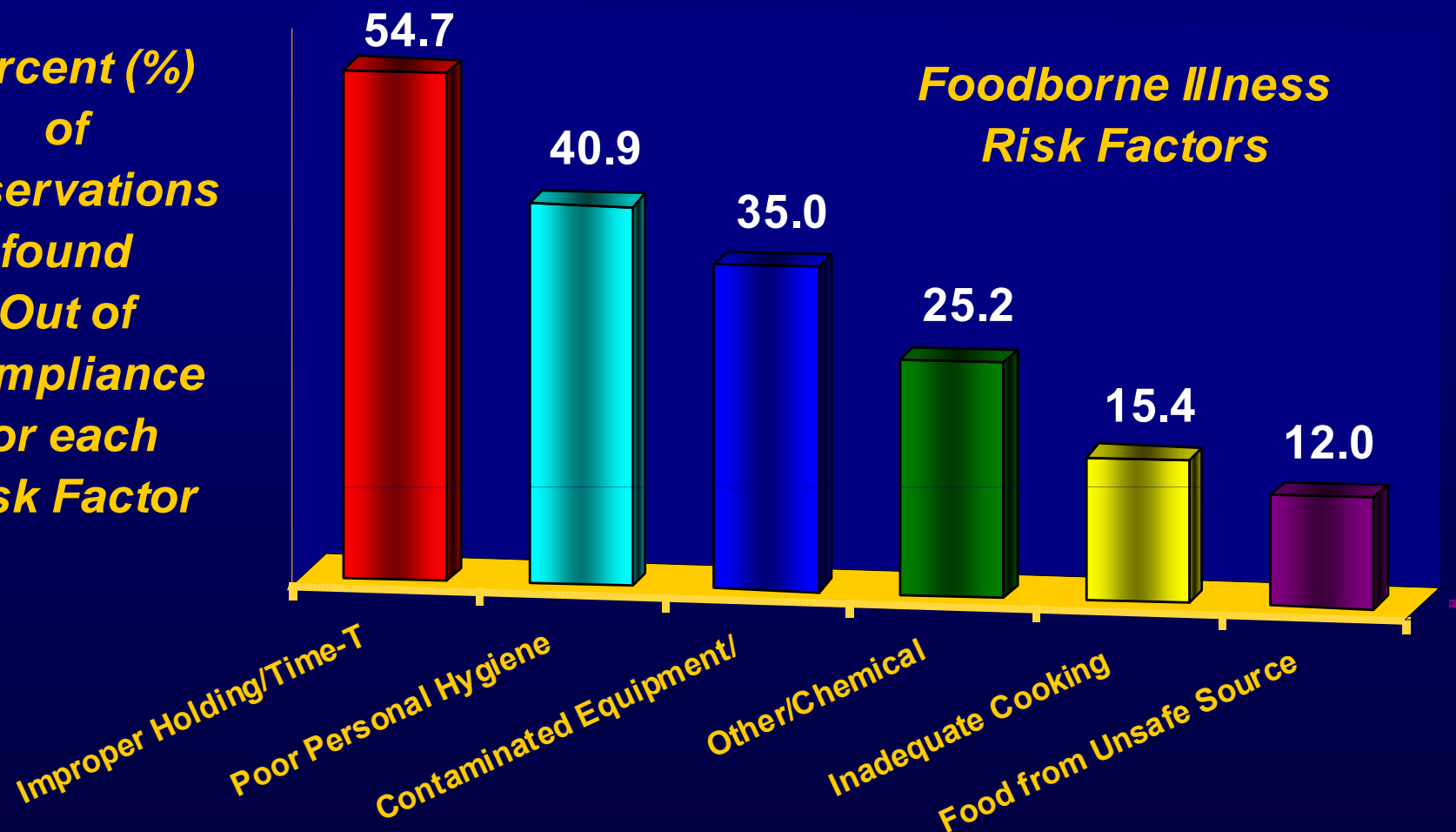
Selected Results from 2008 Data Collection

- Expanded analysis of Data Items that most impacted Overall and Risk Factor Compliance percentages for each facility type
- Highlights Areas in Need of Attention
- Impact of presence of Certified Food Protection Manager

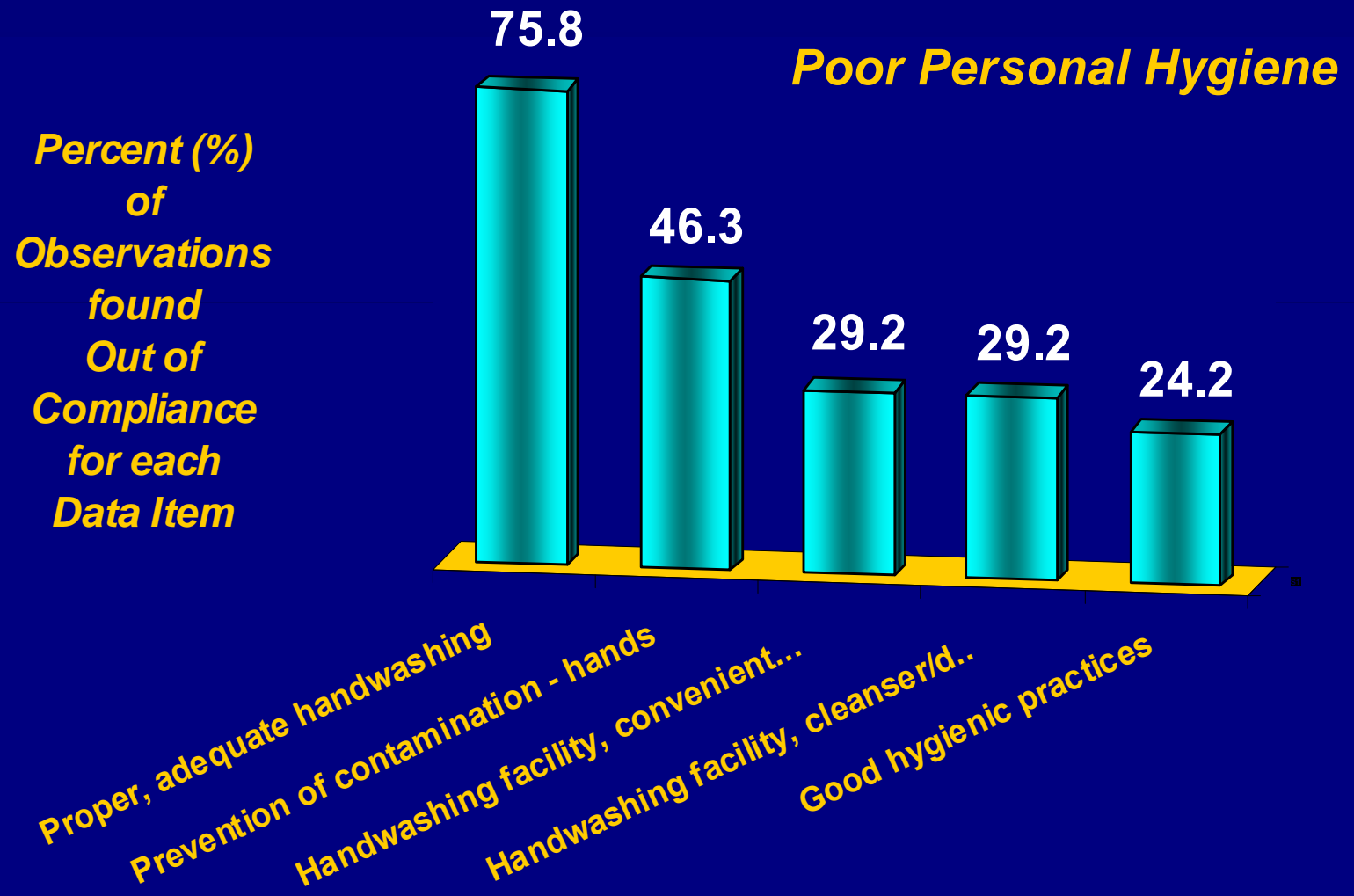
Restaurants - FULL SERVICE

*Percent (%)
of
Observations
found
Out of
Compliance
for each
Risk Factor*

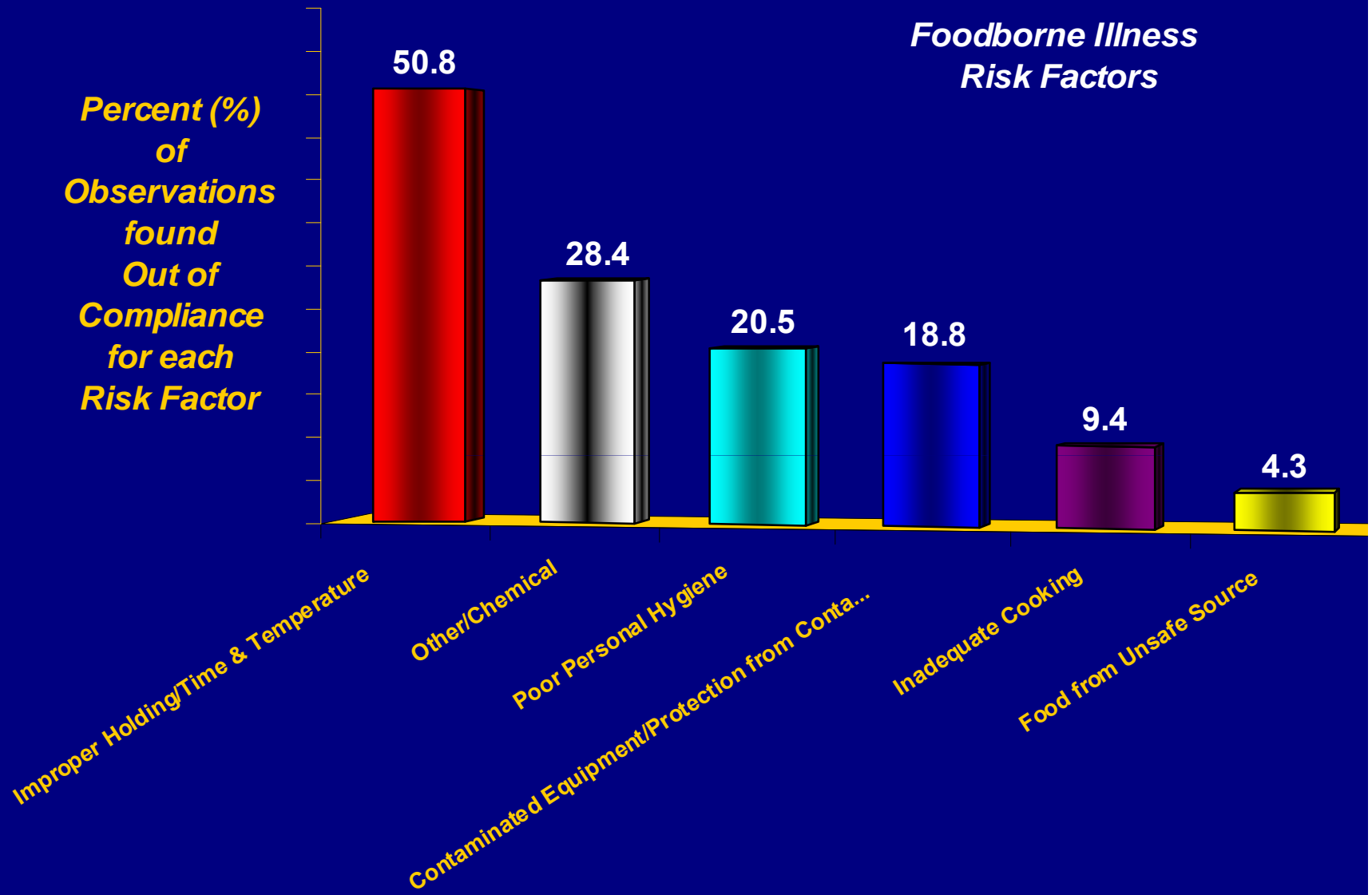
*Foodborne Illness
Risk Factors*



Restaurants - FULL SERVICE



Retail Food - DELIS



Retail Food - DELIS

*Percent (%)
of
Observations
found
Out of Compliance
for each
Data Item*

*Poor
Personal Hygiene*

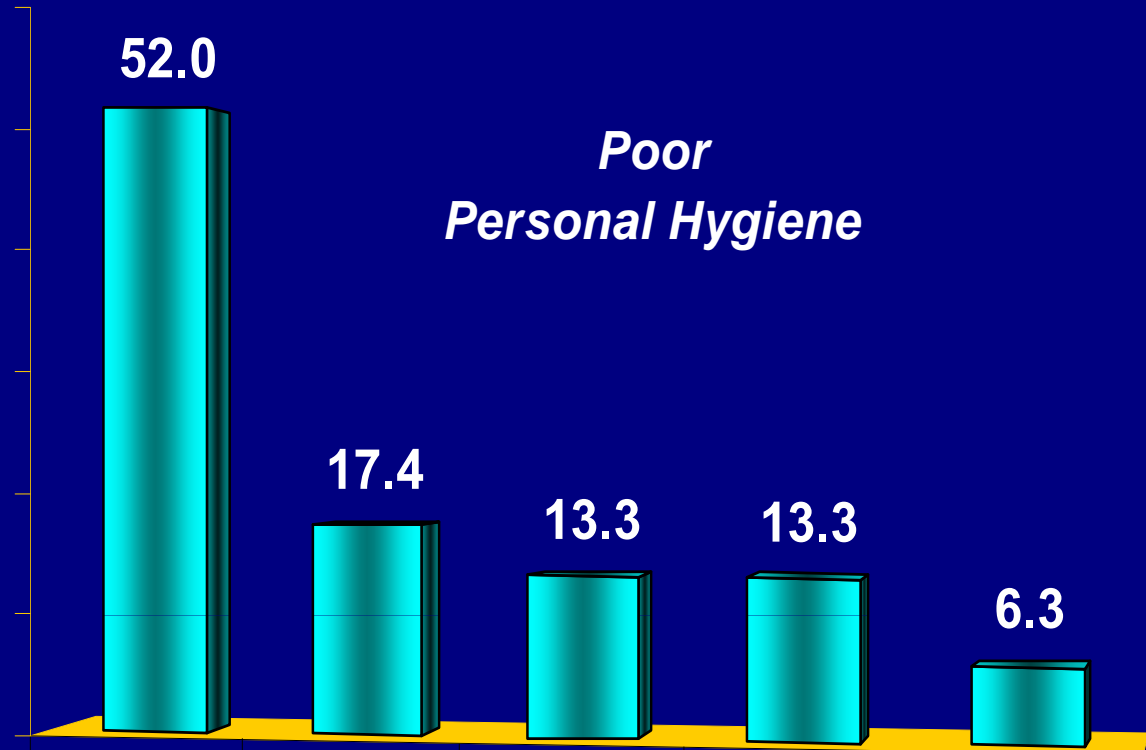
Proper, adequate handwashing

Handwashing facility, convenient/accessible

Good hygienic practices

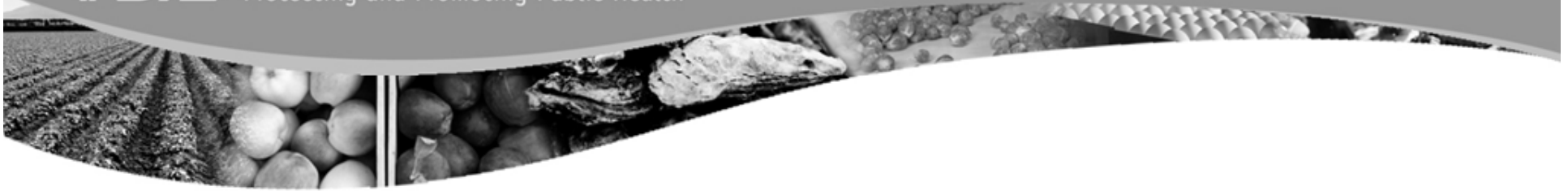
Handwashing facility, cleanser/dry device

Prevention of contamination from hands



Restaurants – FULL SERVICE

FOODBORNE ILLNESS RISK FACTOR in need of Priority Attention	INDIVIDUAL DATA ITEMS in need of Priority Attention
Improper Holding/ Time & Temperature	PHF/TCS cooled to 70°F in 2 hours/41°F in total of 6 hours
	PHF/TCS held cold at 41°F or below
	RTE, PHF/TCS date marked after 24 hours
	Commercially-processed RTE, PHF/TCS date marked
	PHF/TCS held hot at 140°F or above
	RTE, PHF/TCS discarded after 4 days/45°F or 7 days/41°F
Poor Personal Hygiene	Proper, adequate handwashing
	Prevention of hand contamination
	Handwashing facility, convenient/accessible
	Handwashing facility, cleanser/drying device
	Good hygienic practices
Contaminated Equipment/ Protection from Contamination	Surfaces/Utensils cleaned/sanitized
	Raw animal food separated from ready-to-eat foods
	Prevention from environmental contamination
	Raw animal foods separated from each other

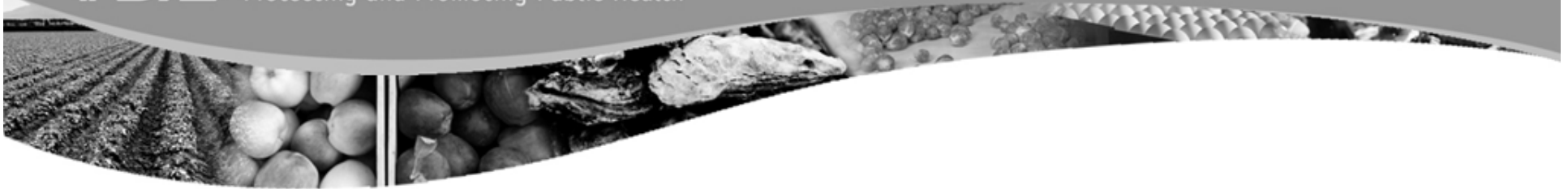


Impact of a Certified Food Protection Manager – Last Two Data Collections

- In each of last two studies, the Presence of a Certified Food Protection Manager was positively correlated to Overall In Compliance Percentages in 4 of 9 facility types
2008- Full Service Rest.; Delis; Seafood: Produce
- For each Risk Factor, the In Compliance % for establishments without a certified manager never exceeded the In Compliance % for establishments with a certified manager in a statistically significant manner

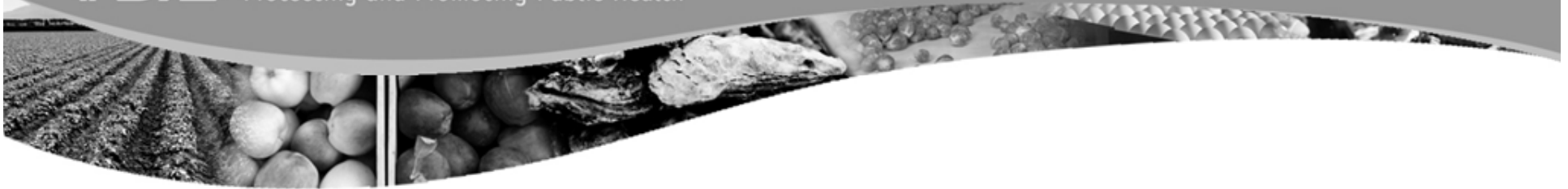
**Risk Factors with Statistically Significant Differences
Between Establishments
WITH and WITHOUT a Certified Food Protection Manager**

Facility Type	Risk Factor
Full Service Restaurants	<ul style="list-style-type: none">● Poor Personal Hygiene● Contaminated Equipment/Protection from Contamination● Improper Holding/Time and Temperature
Delis	<ul style="list-style-type: none">● Poor Personal Hygiene● Improper Holding/Time and Temperature



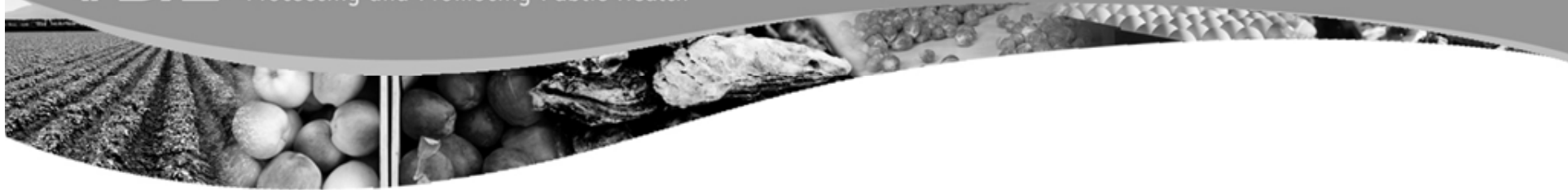
Considerations for Next Risk Factor Study

- Streamline the data collection - fewer data items
- Examine impact of different interventions and regulatory strategies on specific risk factor occurrence
- Establish a performance metric based on percent of establishments with different levels of control
- More in-depth study of practices of greatest public health interest and impact
- Attempt to correlate performance metric with other indicators and industry demographics



FDA's Strategic Direction for Retail

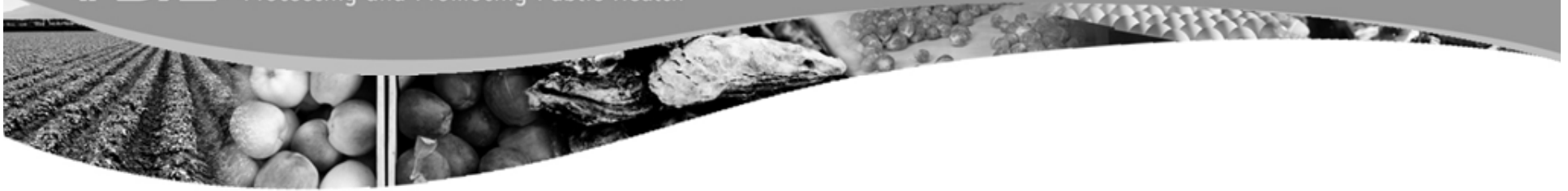
- Make the presence of certified food protection managers a common practice
- Strengthen active managerial control at the retail level and ensure better compliance
- Improve the quality of, and access to, training of retail food personnel by the industry
 - Focus on Changing Behaviors of Food Workers



A large audience to reach

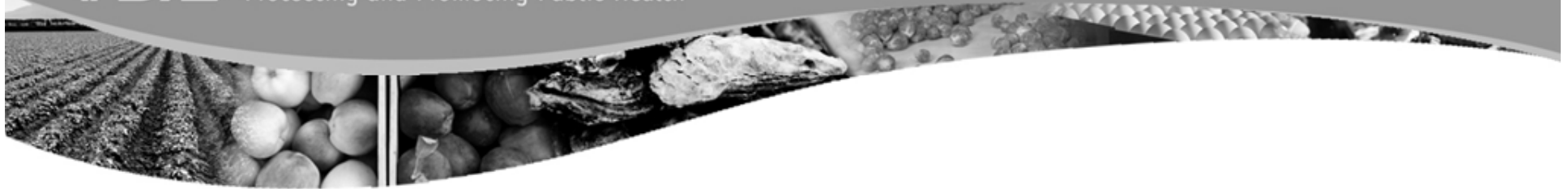
Fullservice & Quickservice Restaurants (2006)

Number of Employees	Number of Firms	Percent of Total Firms	Number of Establishments Operated by Firms	Percent of Total Establishments	Number of Employees Working at Firms	Percent of Total Employees
All	317,100	100%	417,861	100%	8,010,711	100%
Less than 5	121,970	38%	122,228	29%	196,359	2%
5 to 9	60,590	19%	60,839	15%	408,612	5%
10 to 19	59,893	19%	60,686	15%	823,252	10%
20 to 99	66,059	21%	74,586	18%	2,509,033	31%
100 to 499	7,156	2%	30,527	7%	1,247,746	16%
500 or more	1,432	0.5%	68,995	17%	2,825,709	35%



FDA's Strategic Direction

- Promote more widespread, uniform, and complete adoption & implementation of the FDA Food Code
- Ensure prevention-oriented, science-based food safety principles are utilized at the retail level



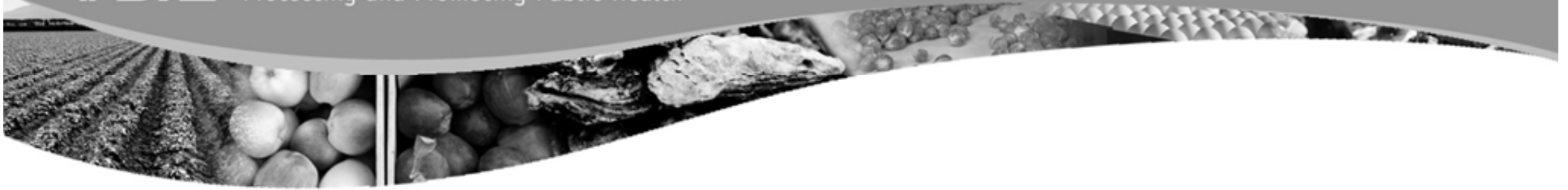
FDA's Strategic Direction

- Create an enhanced local regulatory environment for retail food operations by:
 - o Wider implementation of the *Voluntary National Retail Food Regulatory Program Standards*
 - o Seeking increased multi-year funding for state/local/tribal programs
 - o Developing programs to ensure universal participation by state/local/tribal regulators in consistent, high-quality training



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Questions?

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