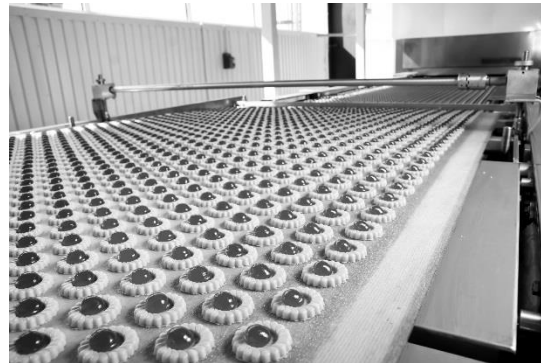




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INTERNATIONAL  
FOOD PROTECTION  
TRAINING INSTITUTE



## IFPTI Fellowship Cohort VI: Research Presentation

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# ***Behavior-Centric Risk Factor Control Between Two Management Groups***

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- Restaurants are associated with a significant number of foodborne illness outbreaks (Cates, et al., 2006).
- The CDC has identified the top five risk factors that are typically responsible for foodborne illness outbreaks.

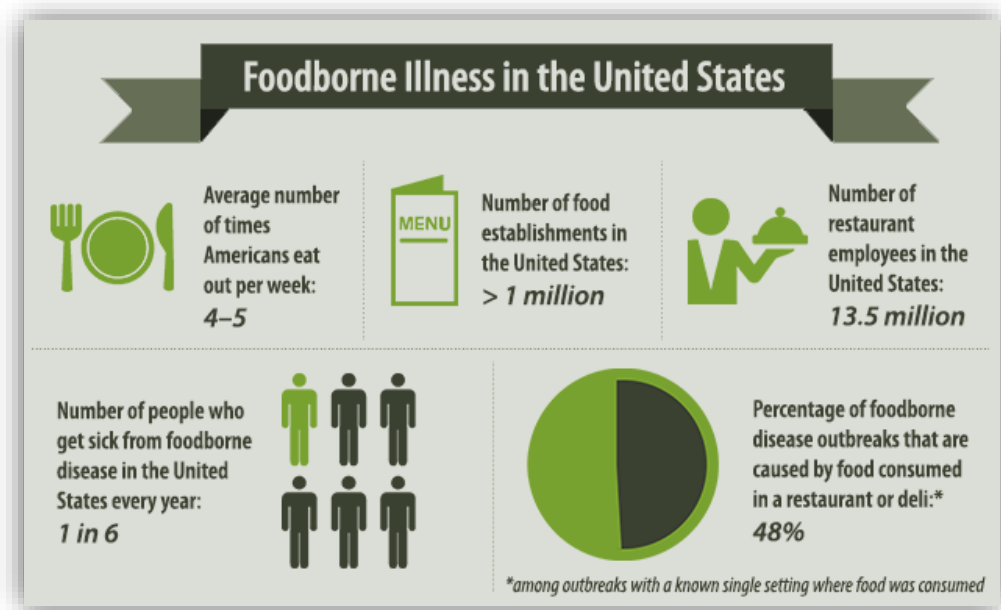


Image source: [nacchovoice.files.wordpress.com](http://nacchovoice.files.wordpress.com)  
"Assessment of CDC Risk Factor Control Between  
Three Management Groups"

- To educate industry and maintain an acceptable level of food safety standards at retail establishments, many states have adopted regulations requiring a Certified Food Protection Manager (CFPM).
- FDA has found that the requirement is improving the overall practices within industry.



- Data from a 2008 study indicated improvement in 4 CDC risk factor categories (excluding proper cooking) when a Food Protection Manager certification was in compliance:
  - Employee Health (including personal health and hygiene)
  - Protection from contamination (including contaminated equipment)
  - Approved source
  - Holding temperatures of time/temperature control for safety Foods

- Latest FDA retail food study still indicates problems in reducing incidents of risk factor violations, even with CFPM (FDA, 2016).
- Little data is available to assess Food Protection Manager's implementation of food safety management system to control behavior in order to reduce risk factors.

- Are managers, achieving active managerial control to reduce employee behavior-centric risk factors within DeKalb County?

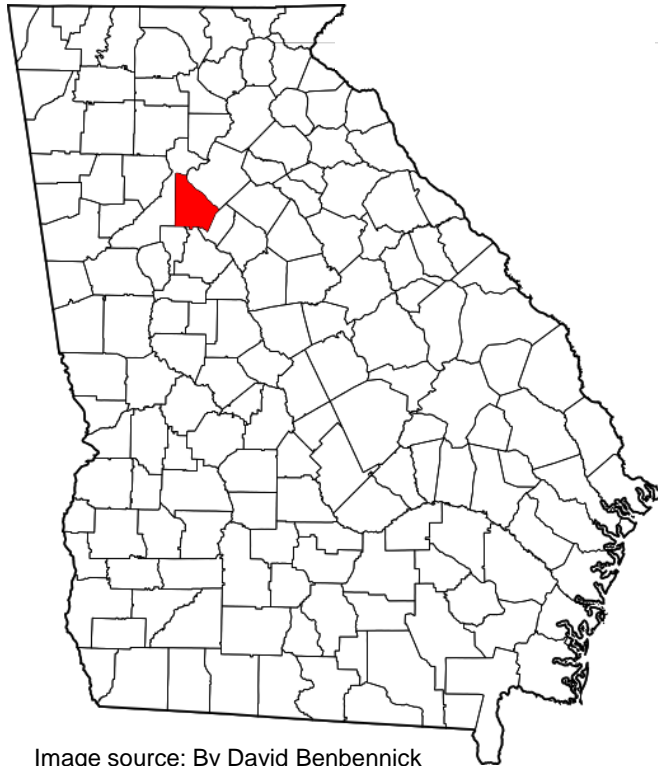


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DeKalb County  
G E O R G I A

Image source: DeKalbCounty.gov



The degree to which employing a CFPM in comparison to utilizing a food safety management system to reduce incidents of two behavior-centric risk factor violations, poor personal health/hygiene and contaminated equipment/protection from contamination within DeKalb County, is unknown.



Image source: [Oilerstateinpatientacute.wikispaces.com](http://Oilerstateinpatientacute.wikispaces.com)  
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Image source [www.fda.gov](http://www.fda.gov)



1. Is there a relationship between the requirement of employing a CFPM and controlling foodborne illness risk factors, specifically personal health/hygiene and protection from contamination/contaminated equipment?
2. Does utilizing a food safety management system make a difference in behavior, specifically personal hygiene practices and protection from contamination?

- 
- Data analysis of facilities within DeKalb County, GA
  - Assessment of the Food Safety Management System used the FDA retail food program Foodborne Illness Risk Factor Study Protocol
  - Data was collected using the FDA Retail Food Program Illness Risk Factor Study Protocol and Data Collection Form

- Certified Food Protection Manager (CFPM)
  - ANSI-CFP accredited program
  - Employed over 90 days
- Occurrence of Two Risk Factor Violations
  - Occurrence of behavior-centric risk factor violations observed during unannounced investigations
  - Collected information using FDA guidelines for data collection:
    - Two Risks: Personal health and hygiene, contamination
    - Four components: Personal health, personal hygiene, contaminated equipment, and protection from contamination

- Assessment of Management System utilizing FDA guidelines

## Three areas assessed:

Procedures

Training

Monitoring

- **Study chose** randomly selected **establishments** using random number generator and Geographic Information System (GIS) mapping of permitted facilities within DeKalb County that have **been** open for at least 2 years
- Study examined **1.2%** (26 establishments) of permitted retail food service establishments in DeKalb County, GA, comprised of:
  - Healthcare facilities
  - Restaurants (full-service and fast food)
  - Schools

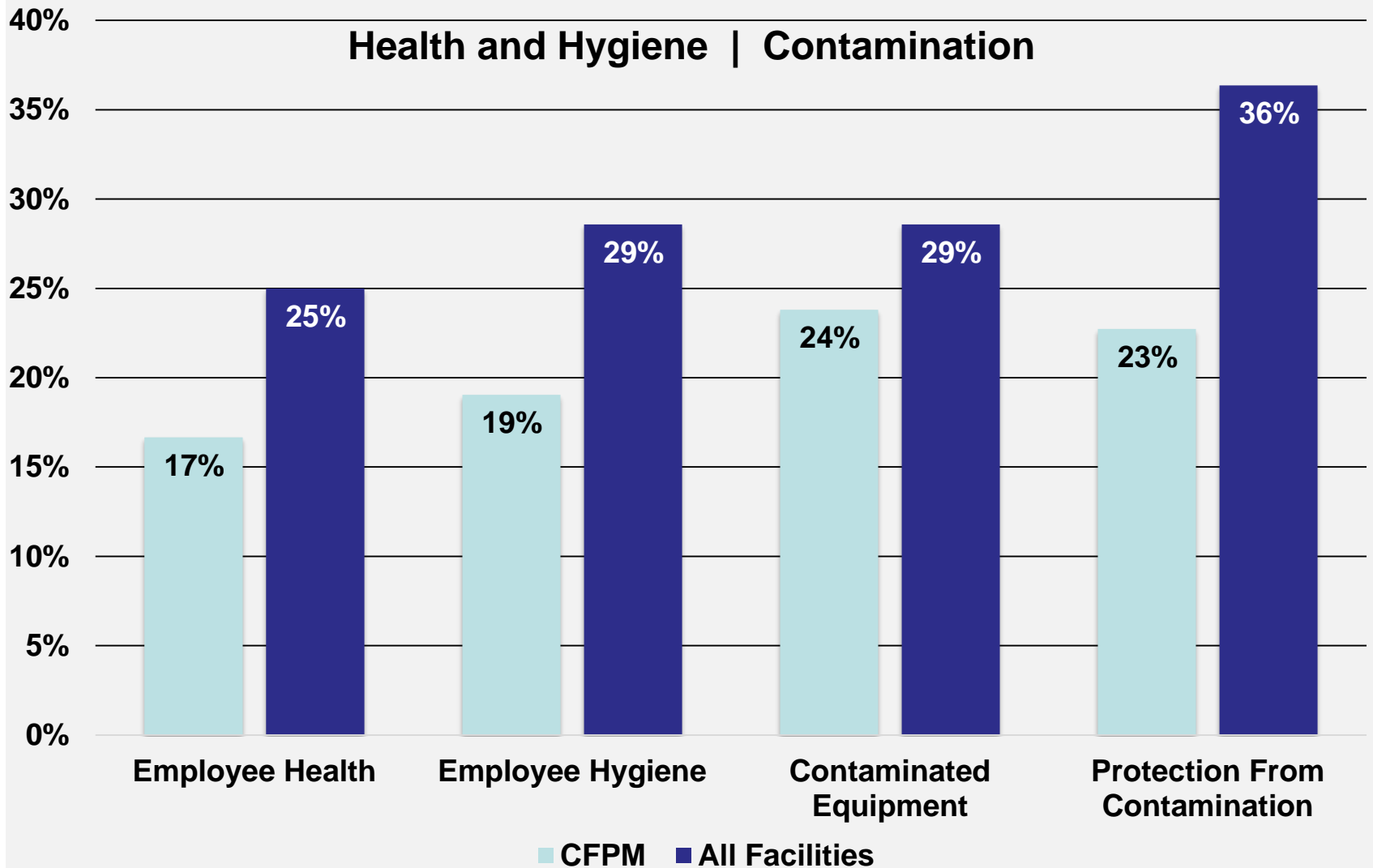
3 of the 26 facilities were removed for lack of proof of CFPM or failure to employ CFPM

19 of the 23 remaining facilities have CFPM

6 of the 23 facilities have additional hazard analysis critical control points (HACCP) and standard operating procedures (SOPs) to ensure food protection in addition to the requirement for CFPM

### Observed Risk Factor Violations

#### Health and Hygiene | Contamination





## Summary of Risk Factors

### Foodborne Illness Risk Factor

### Individual Data Items

#### Poor Personal Hygiene/Health

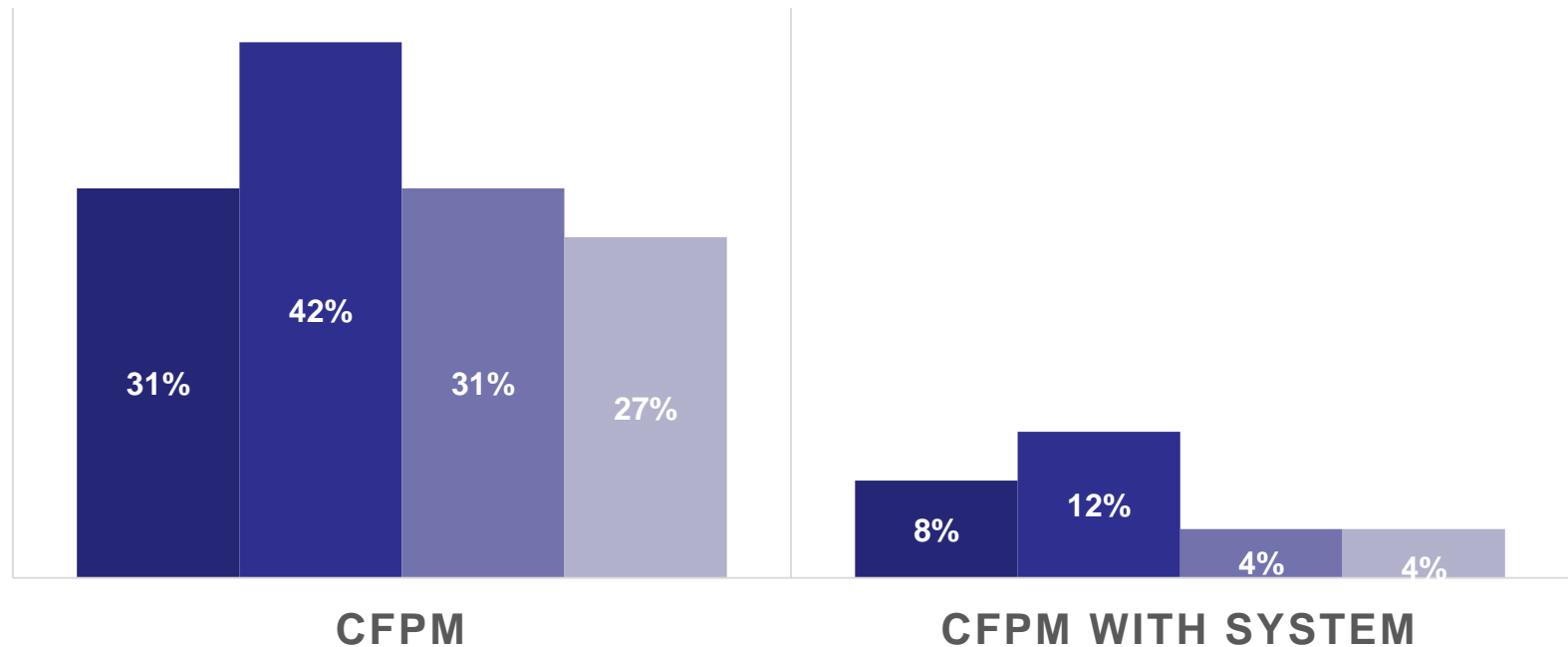
- Proper Handwashing
- Prevent Contamination from Hands
- Handwashing convenient/accessible
- Good hygienic practices
- Restriction and exclusion practices
- Proper eating, drinking, or tobacco

#### Contaminated Equipment/ Protection from Contamination

- Cleaned and sanitized food contact surfaces
- Raw animal foods separated from ready-to-eat foods
- Protection from environmental contamination

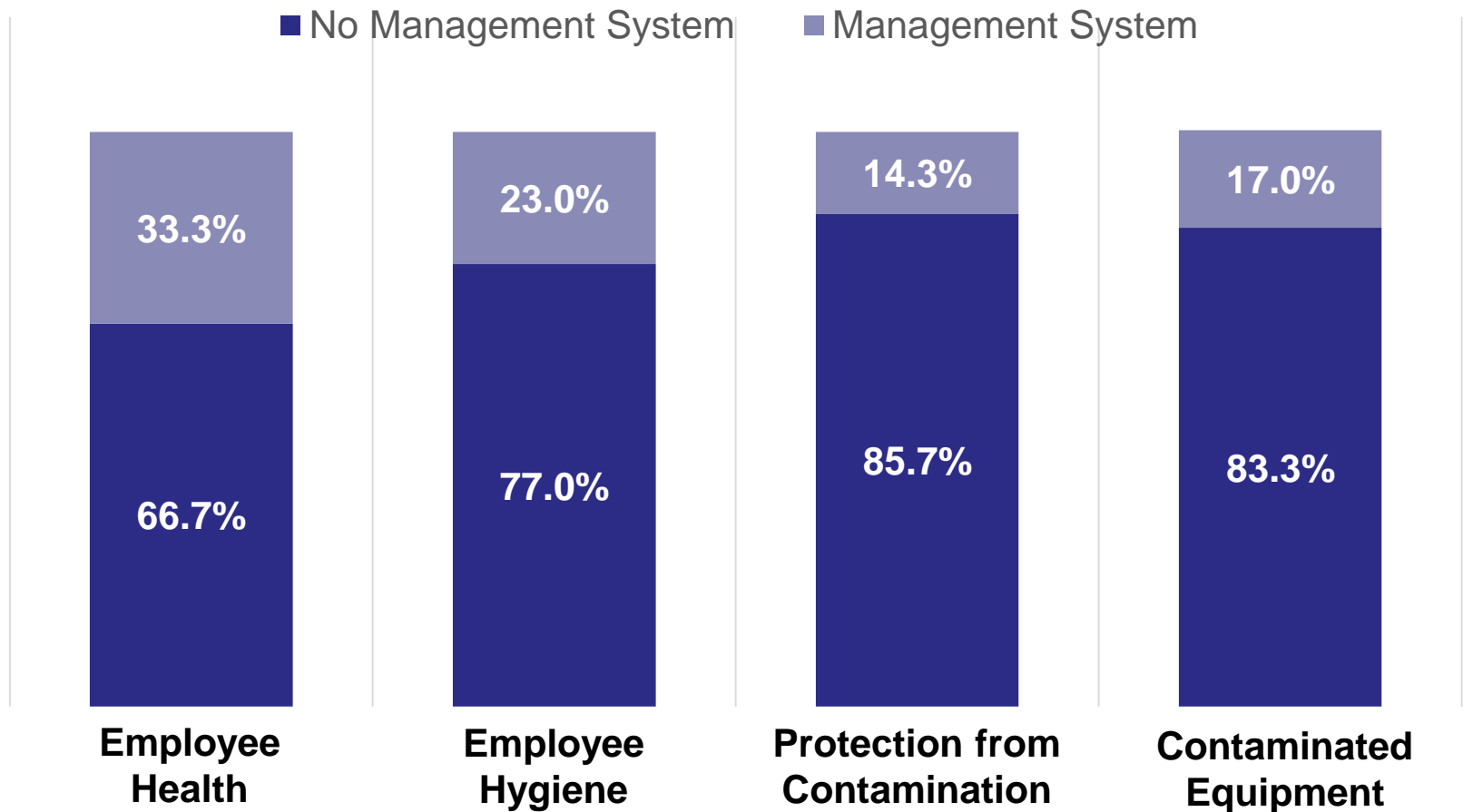
## OBSERVED RISK FACTOR VIOLATIONS

- Employee Hygiene
- Employee Health
- Contaminated Equipment
- Protection From contamination



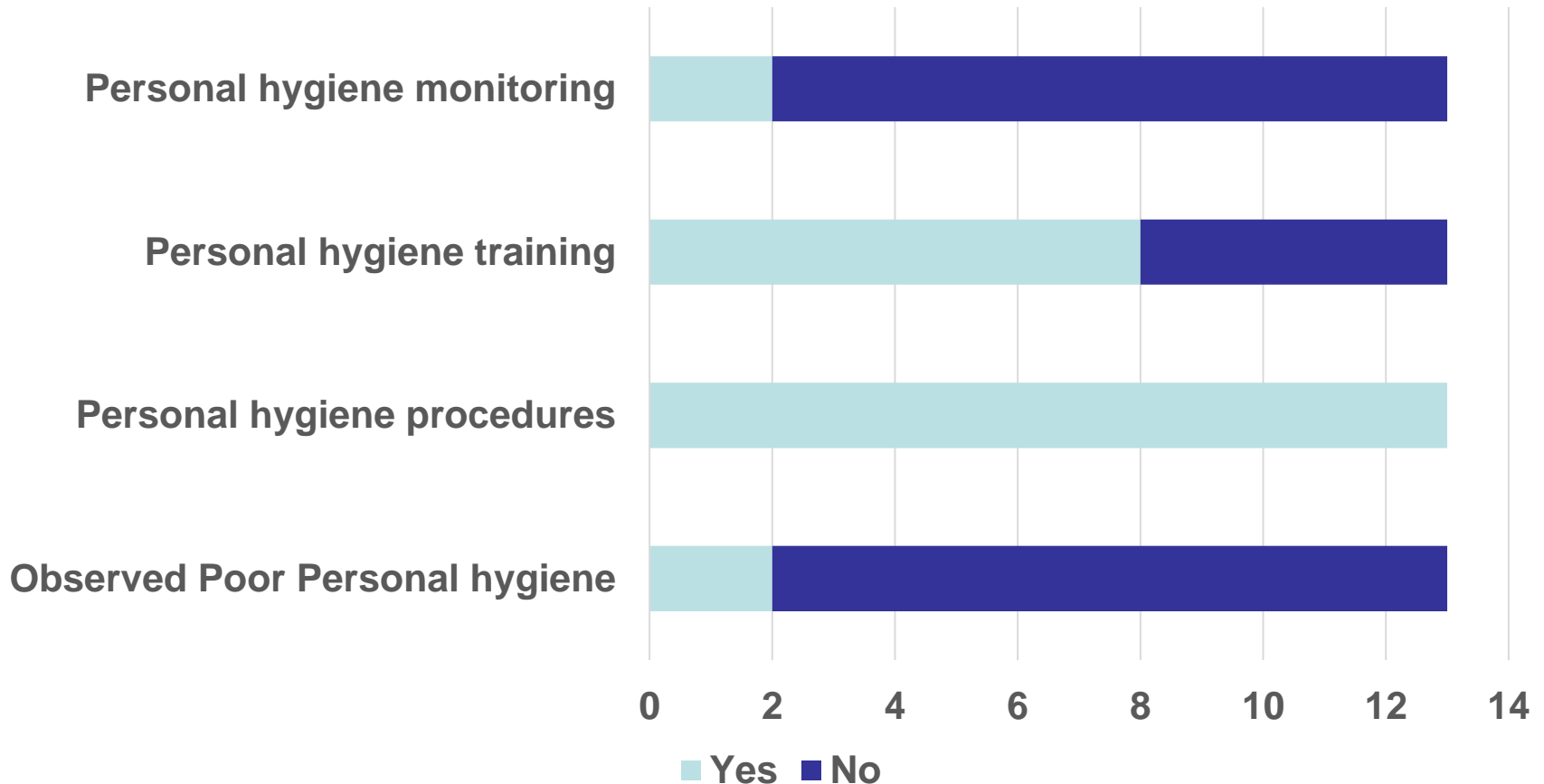
## Certified Food Protection Manager

### VIOLATIONS OBSERVED MANAGEMENT SYSTEM VS. NO MANAGEMENT SYSTEM



## Observed Personal Hygiene Risk Factor Management System

### Observed Violations within FSMS Facilities



- CFPM has an impact:
  - Reduced incidence of violations compared to overall incidence found in facilities
- Facilities with additional measures appear to have better control of 2 observed risk factors during assessment

### **More than just a certificate:**

- Other management systems need to be in place for control of other risk factors, especially contamination control
- Additional written and enforced procedures seem to have an impact on employee behavior
- Monitoring of behavior is crucial in altering of behavior.

1. A CFPM should be on duty at all times.
2. The CFPM should utilize their knowledge to create written SOPs to address risk factors in the establishment.
3. The written procedures should include:
  - Routine monitoring
  - In-depth training
  - Standard procedure



- Jennifer Kirby, Department Manager, DeKalb County Board of Health, GA
- International Food Protection Training Institute (IFPTI):
  - Charlene Bruce, Mentor
  - Dr. Paul Dezendorf, Research Subject Matter Expert
  - IFPTI Staff and Fellows

# Questions?

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- [Data Collection Questions—FDA Retail Food Service Data Collection Form](#)
- [Observed Protection from Contamination Risk Factor Management System](#)
- [Risk Factor Violations When PIC Is CFPM](#)
- [Observed Personal Hygiene Risk Factor](#)