

# **CDC's Food Allergen Study: Knowledge and Practices of Restaurant Managers and Staff**

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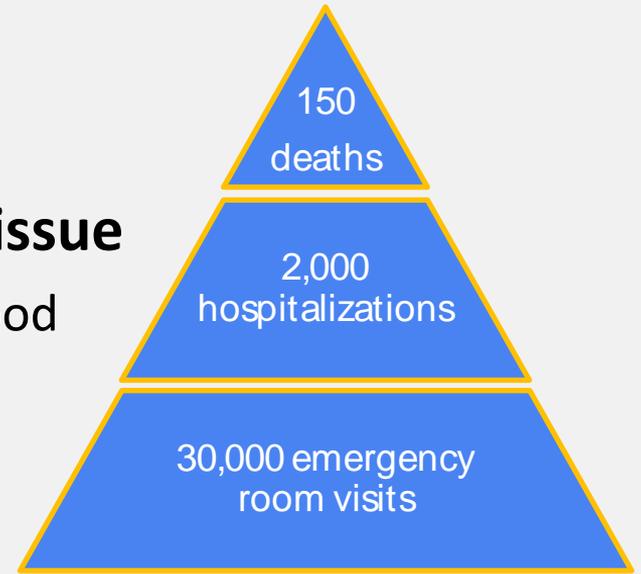
Environmental Health Services Branch

Division of Emergency and Environmental Health Services

# Background

- **Growing public health and food safety issue**

- Approximately 15 million Americans have food allergies
- Each year in the U.S., anaphylaxis from food results in an estimated:



- **Restaurant food is a significant cause of allergic reactions**

- About 1 in 7 people registered in the U.S. Peanut and Tree Nut Allergy Registry reported having an allergic reaction in a restaurant
- A survey administered at the 2007 Food Allergy & Anaphylaxis Network conference found that, of the 294 respondents, 34% had experienced at least one restaurant reaction

# Purpose

- **Collect descriptive data on restaurant manager, food worker, and server:**
  - Risk management: ex) Does this restaurant have a plan for answering questions from food allergic customers?
  - Cross-contact: ex) How often does kitchen staff wash their hands before making the order?
- **Determine which restaurant and staff characteristics are associated with having good practices**

# Methods

Data collection conducted in 2014 -

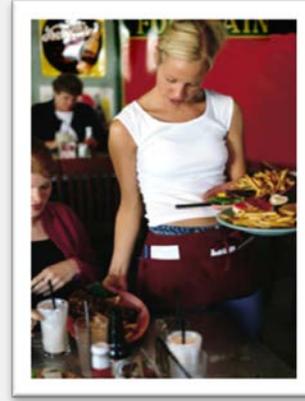
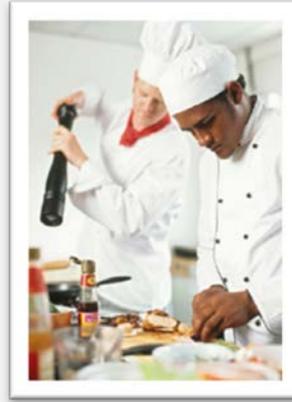
▪ **By 6 sites participating in CDC's Environmental Health Specialists Network (EHS-Net):**

- California
- Minnesota
- New York State
- New York City
- Rhode Island
- Tennessee



▪ **In 278 randomly selected restaurants**

# Methods



## Manager interview (N=277)

- Restaurant and manager characteristics
- Food allergen knowledge and practices

## Food worker interview (N=211)

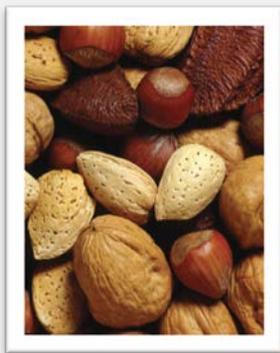
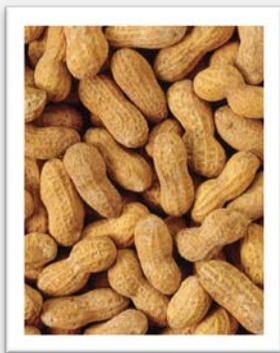
- Worker characteristics
- Food allergen knowledge and practices

## Server interview (N=156)

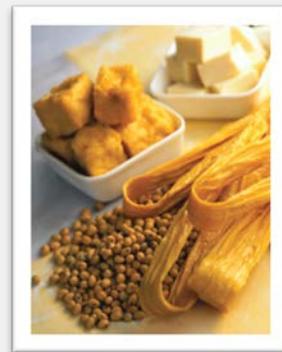
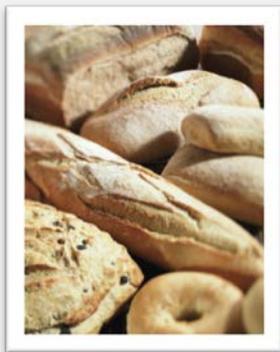
- Server characteristics
- Food allergen knowledge and practices

## Restaurant observation (N=278)

- Restaurant characteristics
- Food allergen documentation

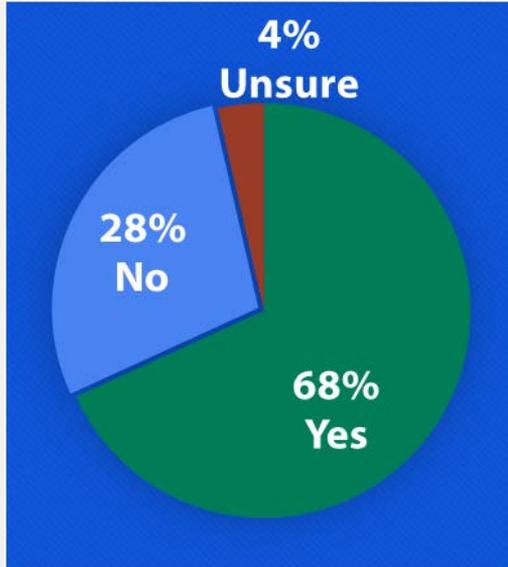


## Results

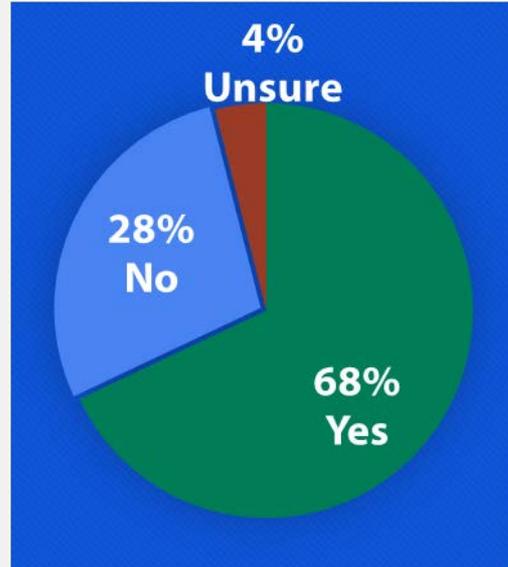


# Risk management: Does this restaurant have a plan for...

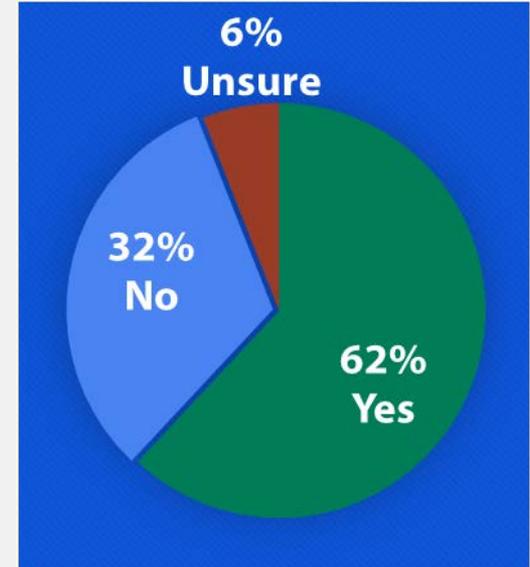
Answering questions from food allergic customers?



When it has to make food for food allergic customers?



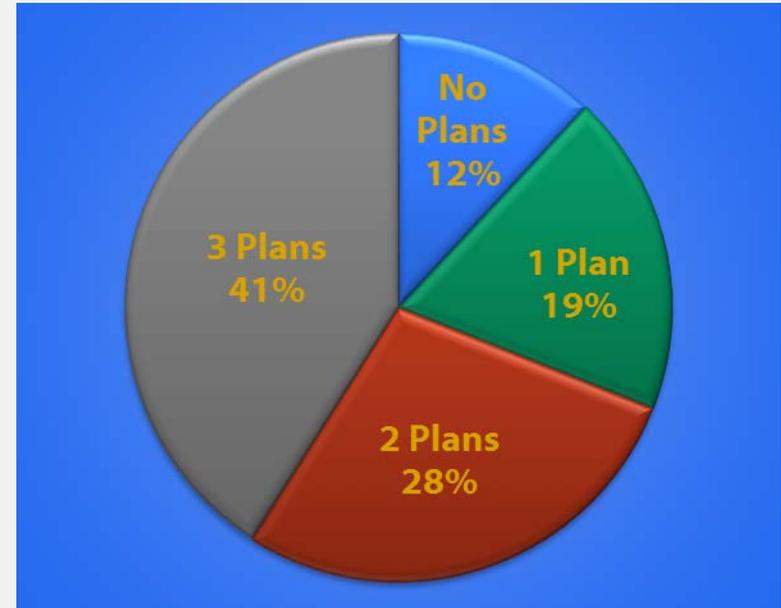
What to do if a customer has a food allergic reaction?



# Risk Management

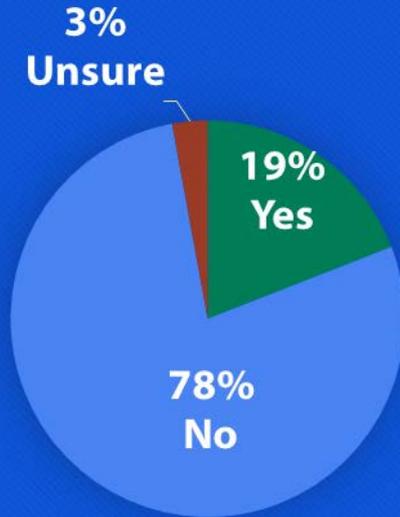
## Percentage of restaurants with $\leq 3$ food allergy plans

1. Plan for answering questions from customers with food allergies
2. Plan for making food for customers with food allergies
3. Plan for what to do if a customer has a bad food allergic reaction

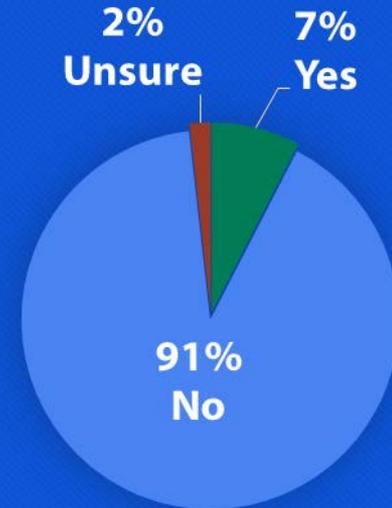


## Cross contact: Does this restaurant have a...

Special set of utensils or equipment for making allergen-free food?



Special area in the kitchen for making allergen-free food?

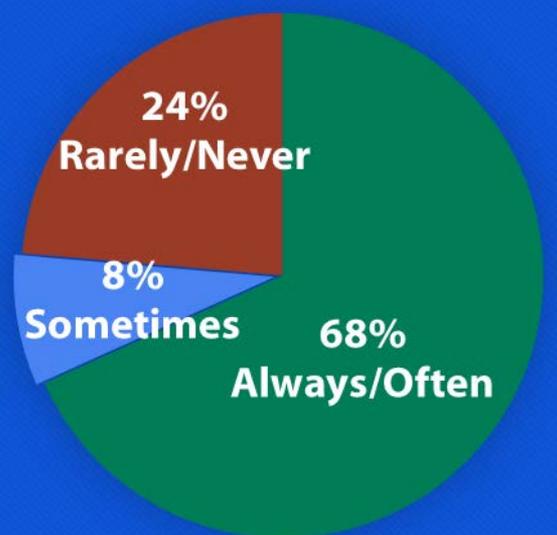
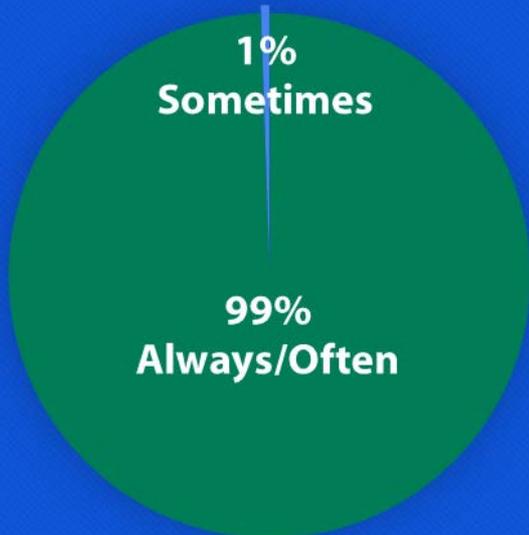


## Cross contact: When you have orders for food allergic customers, how often does kitchen staff...

Change their gloves before making the order?

Use a separate surface, like a cutting board, for making the order?

Use a separate cooking surface or pan for cooking the order?



# Cross Contact

Percentage of workers engaging in  $\leq 5$  preventive food allergy practices

1. Look at ingredient lists
2. Wash their hands
3. Change their gloves
4. Use a separate surface for preparing the order
5. Use a separate cooking surface or pan for cooking the order



# Risk Management

Restaurant served more than 10 meals to food allergic customers in past month  
(OR=3.14, OR=4.39)

Specific person on duty to handle food allergy questions and requests  
(OR=1.95)

Manager received food allergy training  
(OR=1.70)

Manager has at least 4 years experience in this restaurant  
(OR=1.63)



Restaurant has all 3 food allergy plans

# Cross Contact

Restaurant is full service casual/fine dining  
(vs. quick service, fast casual service, take out  
only)  
(OR=2.30)

Food worker received food allergy training  
(vs. no food allergy training)  
(OR=2.91)

Food worker prepared 1-10 or >10 meals for  
food allergic customers in past month  
(vs. no meals)  
(OR=11.3, OR=18.0)

Restaurant establishment type is complex  
(vs. prep serve/cook serve)  
(OR=3.44)



Worker always  
performs at least 4/5  
cross contact  
prevention practices

## Key Findings

- Less than half of restaurants have all 3 recommended plans.
- A quarter of restaurants engage in all recommended allergen cross contact prevention practices.
  - Most restaurants have ingredient lists or recipes for at least some menu items.
  - Few have separate equipment or areas designated for the preparation of allergen-free food, including utensils, a kitchen area, or a pick-up area.
- Restaurants that serve more food allergic customers have better practices
- Restaurants with trained staff have better practices

## Next Steps

**CDC will disseminate these findings through publications and presentations.**

**The goal is to encourage restaurant industry to improve food allergen practices, by addressing the specific gaps identified by this study.**

# Questions?

For more information, contact NCEH  
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