Environmental Health Specialists' Practices and Beliefs Concerning Restaurant Inspections

Laura Green[1*] and Carol Selman[2]

[1]RTI International, Atlanta, GA
[2]Centers for Disease Control and Prevention, Atlanta, GA

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*Atlanta Koger Center · Oxford Building, Suite 119
2951 Flowers Road South ·Atlanta, GA 30341
Phone: 770-488-4332 · Fax: 770-488-7310
Email: lrgreen@cdc.gov

1. Introduction

The public relies primarily on environmental health programs in federal, state, and local regulatory agencies to ensure that the food served by restaurants is safe. To that end, environmental health program personnel (i.e., environmental health specialists, inspectors, sanitarians) conduct mandated restaurant inspections throughout the United States to ensure compliance with food safety regulations. These inspections are the primary method available for identifying and correcting unsafe food handling procedures and practices in restaurants.

Some public health practitioners and researchers have argued that inspections have been limited in their improvement of food safety. Some cite research indicating an inconsistent relationship between inspections and food safety (as measured by inspection scores, illness complaints, and outbreak rates) (Cruz, Katz, and Suarez, 2001; Irwin et al., 1989; Mathias et al., 1994). Some argue that inspections must not be effective because restaurant-related foodborne illness outbreaks continue to occur (Bryan, 2002). Others have argued that inspections are not as effective as they could be because environmental health specialists face substantial barriers during inspections and do not always incorporate practices into their inspections that would most contribute to restaurant food safety (Bryan, 2002; Ehiri and Morris, 1994).

The Environmental Health Specialists Network (EHS-Net) is a collaborative project focused on the study of restaurant food safety and is comprised of epidemiologists and specialists from the Centers for Disease Control and Prevention (CDC), the Food and Drug Administration (FDA), the U.S. Department of Agriculture (USDA) and nine state health departments (CA, CT, GA, IA, MN, NY, OR, RI, TN). Given the role inspections play in restaurant food safety, EHS-Net conducted this study to gain a better understanding of specialists' inspection practices.

2. Purpose

This study was designed to collect qualitative data on specialists' practices and beliefs concerning restaurant inspections. Qualitative data can provide detailed descriptions of participants' practices and beliefs that can be difficult to acquire through quantitative research methods, such as surveys.

2. Study Design

Six focus groups of five to eight environmental health specialists each were conducted (42 participants total) in the spring of 2004. (See Table 1 for participant demographics.) Participants were recruited through telephone calls to randomly selected specialists working in state or local environmental health programs in the eight states that were a part of EHS-Net in 2004 (CA, CO, CT, GA, MN, NY, OR, TN). The focus groups were conducted through conference calls; participants dialed a toll-free number and were connected to the group discussion by an operator. Participants received a $60 reimbursement for their time and effort. The focus group discussions were audiotaped by reviewing the transcripts.

Participants discussed several topics, including:

- inspection activities,
- violation documentation,
- the most and least important inspection activities,
- the difficulties they faced when conducting inspections, and
- their beliefs about the effectiveness of their inspections at identifying foodborne illness risk factors.

2. Study Design (Cont'd)

Table 1. Participant Demographics (N=42)

Characteristic	%	Characteristic	%
Gender		**Education**	
Male	50	Some postsecondary education (e.g.	
Female	50	Associate's degree)	2
Age		4-year college degree	74
18-24	2	Postgraduate degree	24
25-44	52	**Employer**	
45-54	38	City/township	17
55 and older	8	County/district	57
Hispanic/Spanish origin	7	State	19
Race		Other	7
White	86	**Certifications**[a]	
Black	10	NEHA[b] registered sanitarian/specialist	31
Other	4	NEHA[b] certified food safety professional	7
		Registered sanitarian/specialist in state[c]	57
		FDA standardization[d]	36

[a] These figures total to more than 100%, because participants could answer yes to any or all of these questions.
[b] NEHA=National Environmental Health Association. [c] To become registered, specialists must pass a state exam.
[d] FDA standardization is a process through which specialists are trained in consistent food service inspection by the FDA.

4. Findings

Inspection Activities

Participants:

- Spent most of their time identifying violations, particularly critical violations (those related to foodborne illness risk factors).

Participant quote: "*You really concentrate on identifying the critical items first. And then if you don't identify any of them, you look at the other stuff…*"

- Frequently described focusing on identifying time and temperature control (e.g., checking temperatures) and personal hygiene violations (e.g., observing food workers).
- Frequently reported educating restaurant workers about food safety.
- Less frequently reported conducting Hazard Analysis Critical Control Point (HACCP) activities, reviewing previous inspection reports, and conducting non-food safety activities.

4. Findings (Cont'd)

Violation Documentation

- Many said they did not always document noncritical violations (e.g., dirty floors), particularly if there were a lot of critical violations.

Participant quote: "*You've got to pick your battles.*"

- A few said they did not always document critical violations, particularly if there were a lot of them and they were corrected immediately.
- Several said some inspectors in their jurisdiction did not conduct thorough inspections and rarely documented or explained violations.

Participant quote: "*We have some sleepwalkers.*"

4. Findings (Cont'd)

Inspection Activity Importance

- **Most important** activities included:
  - Educating restaurant managers, because they were responsible for the restaurant's food safety.

Participant quote: "*We only get in there once or twice a year and we are going to identify some hazards, but if we don't educate and explain, who knows what's going to go on when we leave.*"

  - Identifying and correcting critical violations.
  - Identifying and correcting time/temperature control and personal hygiene/ handwashing violations.
  - Building good relationships with restaurant managers, because good relationships were important to specialists' effectiveness.

- **Least important** activities included:
  - Identifying and correcting noncritical violations.
  - Calculating and explaining the inspection score, as it was "meaningless."

Participant quote: *"A place could have cooling, reheating…violations and still have the same points marked off as if they had a dirty floor and a cracked base coating."*

4. Findings (Cont'd)

Inspection Effectiveness

- Many felt inspections were effective at identifying foodborne illness risk factors that occurred while they were in the restaurant, but since they were not there often or for long, it was important to educate managers to control risk factors on their own.

- Several felt inspections were not effective, given the high numbers of repeat critical violations.

- Some believed that to be more effective, they needed to inspect more frequently and to have more time to observe practices.

- Several believed inspections were good at identifying and correcting structural violations and temperature control risk factors, but not procedural violations (e.g., handwashing).

4. Findings (Cont'd)

Inspection Difficulties

Difficulties discussed by participants were associated with three factors: restaurant industry, inspection structure, and environmental health organization (see Table 2).

- **Restaurant industry**
  - **Language differences** between inspectors and restaurant managers made communication difficult.
  - **Lack of cooperation from restaurant workers** made it difficult to assess restaurants' food safety practices.
  - **Lack of restaurant worker food safety knowledge** resulted in specialists spending a lot of time educating managers and workers about food safety and food safety regulations.
  - **High turnover among restaurant workers** was problematic because specialists had to educate new managers and workers on a frequent basis.
  - **Repeat violations,** violations seen over and over again in the same restaurant, were frustrating for specialists.

4. Findings (Cont'd)

Inspection Difficulties

- **Inspection structure**
  - **Time constraints**, caused by factors such as paperwork, inspection quotas, travel time, and non-food safety responsibilities, made it difficult for specialists to spend as much time conducting inspections as they needed.
  - **Time at which inspections are conducted**, usually daytime, was problematic because it was not possible to observe night-time food handling practices (e.g., cooling).
- **Environmental health organization**
  - **Lack of enforcement tools**, such as fines and restaurant closings, resulted in restaurant operators neglecting to act on inspection recommendations.
  - **Lack of support from environmental health management** in health departments made it difficult to pursue enforcement actions.

Findings (Cont'd)

Table 2. Inspection Difficulties

Restaurant Industry	Language differences
	Lack of cooperation from restaurant workers
	Lack of restaurant worker food safety knowledge
	High turnover among restaurant workers
	Repeat violations
Inspection Structure	Time constraints
	Time at which inspections are conducted
Environmental Health Organization	Lack of enforcement tools
	Lack of support from environmental health management

5. Summary and Discussion

- For many specialists, working with restaurant managers to improve food safety is an integral part of the inspection process. Participants said:
  - Educating restaurant employees about foodborne illness risks was a common and important inspection activity.
  - It was important to educate managers, so they could control foodborne illness risk factors on their own.
  - Developing good relationships with managers was an important inspection activity.

These findings are in line with FDA's recommendation to specialists to establish a dialog with operators in which risk factors and control measures are discussed.

- Identifying and correcting critical violations (those related to foodborne illness risk factors) were common and important inspection activities.

These findings are in line with FDA's recommendation that risk factors be the primary focus of inspections.

- Some specialists indicated that in inspection scoring, critical and noncritical violations received equal weight.

These findings suggest some environmental health programs do not adequately address the differential importance of critical and noncritical violations.

5. Summary and Discussion (Cont'd)

- Many specialists said that identifying time and temperature violations and personal hygiene violations were important inspection activities.

FDA identifies these as the most frequently occurring risk factors. Thus, participants focused on appropriate items during inspections.

- Some specialists said they did not always document noncritical violations, and a few said they did not always document critical violations.

These findings suggest that inspection records may not be valid indicators of the prevalence of foodborne illness risk factors in restaurants.

- Specialists identified inspection difficulties associated with the restaurant industry, the inspection structure and environmental health organizations.

These findings suggest that some difficulties, such as those associated with the restaurant industry, may be beyond the scope of a specialist's or program's ability to influence. However, environmental health programs may have some influence concerning difficulties associated with inspection structure and organizational issues. Establishing a dialog among specialists and environmental health managers about these difficulties is an important step in addressing them.

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6. References

1. Bryan, F. 2002. Where we are in retail food safety, how we got to where we are, and how do we get *there*? *J. Environ. Health*. 65*:*29-36.

2. Cruz, M., D. Katz, and J. Suarez. 2001. An assessment of the ability of routine restaurant inspections to predict food-borne outbreaks in Miami-Dade County, Florida. *American J. Pub. Health*. 91*:*821-823.

3. Ehiri, J., and G. Morris. 1994. Food safety control strategies: A critical review of traditional approaches. *Int. J. Environ. Health Res*. 4:254-263.

4. Irwin, K., J. Ballard, J. Grendon, and J. Kobayashi. 1989. Results of routine restaurant inspections can predict outbreaks of foodborne illness: The Seattle-King County experience. *American J. Pub. Health.* 79:586-590.

5. Mathias, R., R. Sizto, A. Hazlewood, and W. Cocksedge. 1995. The effects of inspection frequency and food handler education on restaurant inspection violations. *Canadian J. Pub. Health*. 86: 46-50.