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Title: Interpersonal Interaction between Public Health Sanitarians and Food
Service Establishment Personnel: Examining the Influence on Food Safety

Outcomes

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Interpersonal Interaction between Public Health Sanitarians and Food Service Establishment Personnel: Examining the Influence on Food Safety Outcomes

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Purpose

To investigate the influence of the interpersonal interaction between Registered Sanitarians (RS) and Food Service Establishment (FSE) personnel on the outcome of food safety inspections.

Background

There is a lack of credible evidence regarding the types and levels of workforce, infrastructure, related resources, and financial investments in public health. The rationale for such research is to offer evidence to provide a rational approach to changing the public health system in the face of health reform.

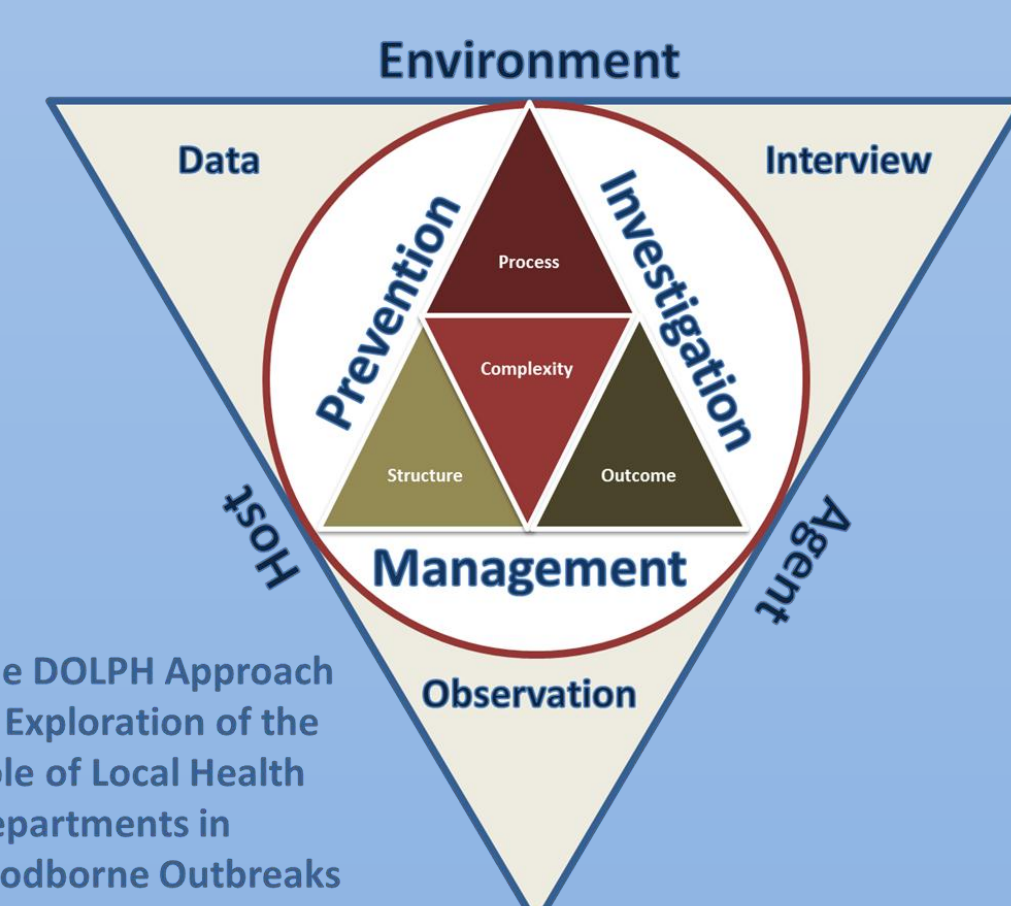
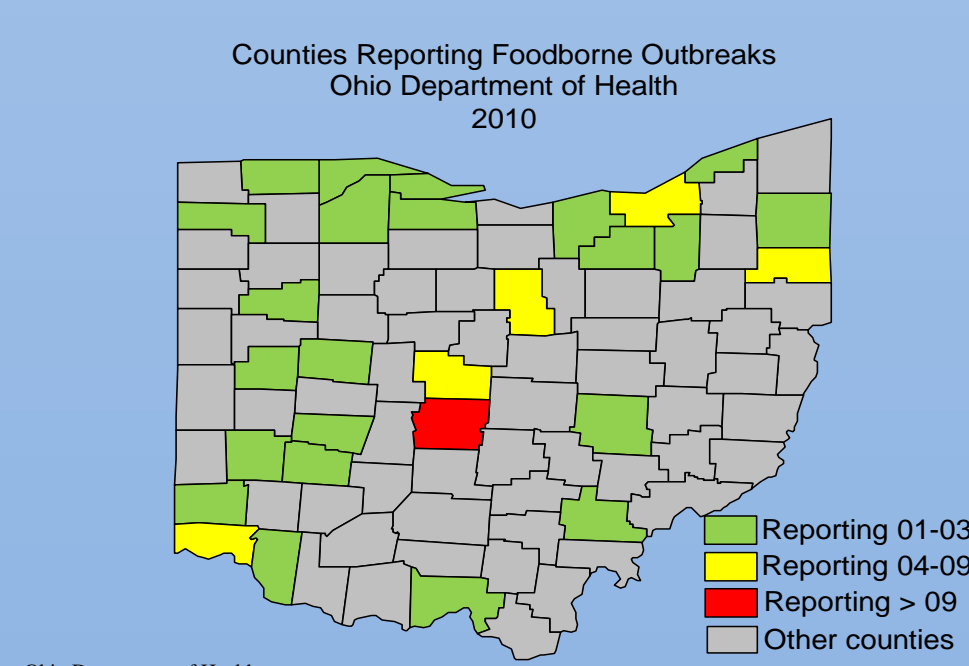
Enforcement is among the 10 essential public health services, while food safety is among the CDC's 6 winnable battles. Food safety represents the face of public health to much of the public.

Methods

This comparative case study design utilizes a mixed methods approach, including:

- Direct observation protocol
- Pre and post inspection interviews
- LHD Profile
- RS Profile
- Ohio Annual Financial Report
- American Community Survey

Original data was gathered through direct observation of FSE inspections in 20 LHDs by 78 RS conducting over 520 inspections support by 7 academic public health programs. Data also includes an RS profile, which details their attitudes about FSE inspection; and pre and post inspection interviews. RS are observed during the conduct of food service establishment inspections, with a structured and validated direct observation protocol completed by trained student observers.



Results

Introduction: While the perception of the RS/PIC relationship is that of tension, findings demonstrate positive interactions (see Table 1). The RS rarely used unexplained jargon, offered feedback negatively, or demonstrated argumentation or conflict. The RS offered positive feedback often. The PIC was cooperative and engaged. Overall, 64% of inspections result in verbal correction (1.9/inspection); 72.5% result in citations (3.2/inspection) and 50% represent critical violations (1.4/inspection).

Table 1: RS Inspection Interactions by RS Characteristics

Sanitarian... n=520	Total	Gender	Race	Experience ≥10 years	>60% Inspections	Generalist v. Specialist
Admits Uncertainty	6.9%	*Female 10.3% Male 5.2%	White 6.7% Black 11.1%	Less 8.5% More 5.6%	Less 5.5% More 7.8%	Generalist 5.9% Specialist 7.7%
Uses humor	60.4%	Female 59.8% Male 61.7%	*White 59.1% Black 83.3%	Less 61.7% More 59.5%	Less 61.3% More 60.1%	Generalist 65.1% Specialist 57.7%
Interrupts	14.4%	*Female 13.4% Male 22.2%	White 18.2% Black 8.6%	**Less 20.3% More 13.5%	Less 13.1% More 18.8%	*Generalist 8.3% Specialist 22.0%
Conflict observed	4.3%	Female 3.0% Male 5.5%	White 4.1% Black 0%	Less 4.7% More 2.6%	*Less 0.6% More 5.3%	Generalist 2.9% Specialist 4.0%
Use jargon	2.0%	Female 3.0% Male 0.9%	White 1.5% Black 5.7%	Less 2.3% More 1.3%	Less 1.2% More 2.1%	Generalist 1.2% Specialist 2.2%
Gives positive feedback	82.8%	Female 81.8% Male 78.7%	White 81.4% Black 91.4%	Less 78.7% More 83.5%	Less 83.8% More 79.7%	Generalist 80.5% Specialist 81.6%
Gives feedback negatively	15.0%	*Female 8.5% Male 16.0%	White 11.7% Black 11.1%	Less 11.9% More 12.9%	Less 12.3% More 12.5%	**Generalist 8.8% Specialist 14.7%

*p < 0.05 **p < 0.1

RS less **expressed uncertainty** associated with:

- Clear feedback at checkout
- Contingency planning at checkout
- Higher PIC expressed uncertainty associated with:
- No RS self introduction
- More questioning RS integrity
- PIC stalling
- With someone other than owner or manager
- Among less cooperative and engaged PICs
- Heart sink inspections
- More citations, critical violations and verbal corrections

Less RS **use of humor** is associated with:

- Higher job demands
- More time conflicts
- Problem Health Department relationships
- Problem FSE relationships
- Poorer spoken and receptive English
- More critical violations and verbal corrections

More RS **use of humor** is associated with:

- Shaking hands at onset of inspection
- Existing positive relationship
- Working with owner or manager

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Results

RS **interruptions** are associated with:

- No hand shake at introduction
- Greater PIC Questioning
- Higher levels of RS job strain
- Problem Health Department relationships
- Problem FSE relationships
- Perception of challenging interpersonal PIC interactions
- More citations and verbal corrections
- Fewer RS interruptions are associated with:
- More engaged PICs
- Clear feedback at Checkout

Conflict is associated with:

- More PIC Questioning of RS integrity
- RS disliking PIC interaction
- Heart sink inspections
- Previous negative experience with this FSE
- Dealing directly with the owner
- Poorer spoken and receptive English
- Less cooperative and engaged PIC
- Perception of challenging inspection and PIC interaction
- Lower RS satisfaction with the inspection
- More citations, critical violations, and verbal corrections

Table 2: Inspection outcomes by LHD Structure

Jurisdictional Size	Citations* (mean)	Verbal Corrections* (mean)	PIC Thanks* (mean)	Technically challenging* (mean)	Inter-personally challenging* (mean)
<50K	2.05	0.87	.91	4.34	4.34
50 to 200K	4.04	1.56	.99	3.59	3.83
201 to 400K	4.01	1.36	.94	3.98	4.11
>400K	3.00	1.83	.88	3.93	4.00
LHD Type					
County	2.07	1.91	.87	4.03	4.10
City	3.14	1.07	.91	4.10	4.14
Combined	4.42	1.13	1.00	3.66	3.97

*p < 0.05 **p < 0.1

Giving positive feedback is associated with:

- Introducing self
- Addressing PIC by name
- Shaking hands at introduction
- Higher job decision latitude
- Liking doing food safety education
- Eliciting questions form PIC at Check Out
- Higher RS satisfaction with inspection results
- NOT with citations, critical violations, and verbal correction

Giving lower levels of positive feedback is associated with:

- Heart sink inspections
- Poorer spoken English
- Perception of challenging inspection and PIC interpersonal interactions

Results

Giving feedback negatively is associated with:

- Not introducing self
- Not shaking hands at introduction
- PIC questioning RS integrity
- Higher job demands
- More time conflicts
- Heart sink inspections
- PIC other than owner or manager
- Less check out planning
- Not eliciting questions at check out
- Perception of challenging PIC interpersonal interactions
- NOT with citations, critical violations, and verbal correction

"Thank You" associated with:

- Introducing self at onset of inspection
- Addressing PIC by name or title
- Shaking hands on inspection onset
- PIC perception of RS integrity
- RS liking food safety education
- Effective check out planning
- Eliciting questions at checkout
- Positive RS perception of interaction with PIC
- **NOT with citations, critical violations, or verbal correction**

Discussion

Key Findings

- RS/PIC relationship is uniformly cordial
- Highly positive RS/PIC interaction characteristics
- This positive atmosphere exists despite verbal corrections and citations being usual
- Food safety education is a very prominent part of the inspection process
- Sanitarians interact with a broad number of employees and patrons in addition to the PIC
- PIC generally expresses gratitude at the end of the session

Strengths

- Good inter-rater reliability
- Combine original research with publicly available data
- Decreased error variation

Limitations

- Convenience sample
- Novel methodology for Public Health requires replication
- Student observer influence RS actions (reported at 7%)

Conclusion

Its not just what we do that matters, but how we do what we do. RS demonstrate a high level of professionalism and positive interaction during FSE inspection. These positive interactions do not prevent action being taken when necessary.