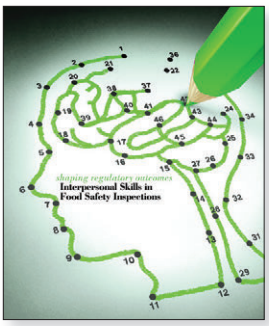

Interpersonal Skills in the Practice of Food Safety Inspections: A Study of Compliance Assistance

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Abstract **Conducting food safety inspections requires interpersonal skills and technical expertise. This requirement is particularity important for agencies that adopt a compliance assistance approach by encouraging inspectors to assist industry in finding solutions to violations. This study describes a study of inspections that were conducted by inspectors from the Michigan Department of Agriculture and Rural Development Food and Dairy Division at small-scale processing facilities. Interactions between inspectors and small processors were explored through a qualitative, ethnographic approach using interviews and field observations. Inspectors emphasized the importance of interpersonal skills such as communication, patience, empathy, respect, and consideration in conducting inspections. This study examines how these skills were applied, how inspectors felt they improved compliance, the experiences through which inspectors attained these skills, and the training for which they expressed a need. These results provide new insights into the core competencies required in conducting inspections, and they provide the groundwork for further research.**

Introduction

There is growing evidence that interpersonal skills—such as communication, patience, empathy, respect, and consideration—are integral to conducting regulatory inspections. Studies indicate that inspectors exercise interpersonal skills while applying technical expertise in a range of public services (Lipsky, 2010), including enforcement of occupational safety laws (Scholz & Gray, 1997) and building codes (May & Wood, 2003). Enforcement is shaped by interpersonal interactions: inspectors take into account their prior experience of a facility and the intentions that they perceive in clients as they interpret and implement regulatory requirements.

The effective use of interpersonal skills increases compliance. Pautz (2009, 2010) found that environmental inspectors in Ohio and Virginia improved compliance by adopting a collaborative, interactive approach with personnel at landfills, dry cleaners, and other facilities. Other research on the dry cleaning industry also has pointed toward the importance of communication and assistance in regulatory interventions (Whittaker & Johanson, 2013).

Similarly, wholesale food manufacturers in Colorado voiced "a desire for a supportive approach" from regulators (Berzins, 2015; Buckley, 2015). Interpersonal skills may be particularly important in specific cultural contexts. The guidance and education that inspectors provide reinforce what food service workers learn in native-language-based food safety training, increasing compliance (Potopsingh, 2015). Research on women-operated ethnic food establishments in Iowa finds that operators value the time that inspectors take to explain violations, instill knowledge, and build relationships (Nguyen, 2015). In a study of food safety training of Chinese restaurateurs, Liu and Kwon (2013) indicate that development of relationships of respect and trust is critical in restaurateurs' receptivity to health inspectors.

Food safety regulatory agencies are increasingly recognizing the value of interpersonal skills in enforcement. Some state-level food safety agencies expressly encourage a compliance assistance approach, encouraging inspectors to assist industry in finding solutions to violations. At the federal level, skills such as communication and relationship building appear likely to become core competencies for food safety investigators. In implementing the Food Safety Modernization Act (FSMA), the Food and Drug Administration (FDA) has signalled a cultural shift, articulating an enforcement strategy of "educate before we regulate" and highlighting regulator training priorities that focus on behavior and technical knowledge (FDA, 2014; Taylor, 2015; Wagner, 2015).

This study describes a field investigation of food safety inspection practice aligned with the aforementioned transformation in FDA strategy and corresponding revisions to state- and local-level approaches. It presents a qualitative, ethnographic study of food safety inspections in Michigan that aimed to characterize interactions between inspec-

TABLE **1**

Inspectors' Participation and Demographic Information (*N* = 19)

	#	%
Section		
Food	13	68
Dairy	6	32
Participation		
Field observations with interviews*	10	53
Interviews only	9	47
Gender		
Female	9	47
Male	10	53
Years of experience**		
Minimum	3	
Maximum	26	
Average	15	
Median	18	

*Twelve field observations involved 10 inspectors; one inspector was accompanied to the inspection of three facilities.
**Values missing for three inspectors.

tors and small food processors, focusing on their experiences dealing with each other, beneficial outcomes, challenges, and training desired. During interviews and field observations, inspectors emphasized interpersonal skills—such as communication, patience, empathy, respect, and consideration—as critical to improving compliance. The sections that follow describe the study's research method, present and discuss results, and consider implications for regulatory agencies and for further research.

Method

This study examined Michigan Department of Agriculture and Rural Development (MDARD) Food and Dairy Division inspection of small food processing facilities that make cheese, bread, and jam. MDARD Food and Dairy Division inspectors evaluate compliance at food manufacturing plants, retail facilities, warehouses, dairy farms, dairy manufacturing plants, and transport vehicles. In 2012, 47 food inspectors were responsible for approximately 2,000 food manufacturers and 16,000 retail facilities, and 18 dairy inspectors were responsible for approximately 2,000 dairy farms and manufacturers.

Senior staff indicated that all inspectors were compliant with applicable retail and manufacturing program training standards and had received ongoing quality assurance checks to assure their consistency. Michigan uses the 2009 FDA *Food Code* for retail and adopts 21 C.F.R. § 100–199 for food manufacturing. Dairy facilities are regulated according to the 2007 Pasteurized Milk Ordinance and the Michigan Manufactured Milk Law.

Participant Selection

Supervisors from MDARD Food and Dairy Division identified inspectors whose areas included small processing facilities. They provided inspectors' contact information, lists of facilities with facility contact information, and inspection due dates. Selection of processors and inspectors was determined in part by their availability during fieldwork. Processors and inspectors participated voluntarily.

This study was exploratory. In the absence of other research on food safety inspection practice, the study aimed to identify issues and develop hypotheses for further research, laying the groundwork for broader, more quantitative work such as surveys (Yin, 2014). The qualitative, ethnographic method—one-on-one interviews with inspectors and direct observation of inspections—created an open-ended approach that allowed inspectors to depict their practices in their own terms.

Participants did not necessarily represent broader populations of inspectors or small processors; the study selected for inspectors who agreed to participate in order to maximize access to field situations that would improve understanding of inspection practice. This selection method likely biased the research toward inspectors who were more comfortable in their relationships with clients than were other inspectors, and who had fewer reservations about being under the scrutiny of a researcher. The implications and utility of this approach in developing further research are discussed in the conclusion section. Inspector participation is summarized in Table 1.

Data Collection and Analysis

Data were collected in field observations of inspections and in semistructured interviews. Field observations were conducted at facilities for which an inspection was scheduled within the period of the study and both the processor and the assigned inspector were willing to participate in the study.

Two sets of observations were conducted. First, processing was observed for between 2–4 hours in order to improve understanding of the specifics of the operations. Second, food safety inspectors were accompanied to these facilities for the facilities' inspections. Inspections lasted between 1–3 hours. Informal one-on-one interviews with processors and inspectors were conducted before, during, and/or after observations. Observations focused on the approaches that inspectors took in working with small processors, discussion of violations, and the ways in which small processors felt that these inspections benefitted or constrained them.

Nine inspectors also participated in separate semistructured, one-on-one interviews between 30–90 minutes long. Discussion focused on the experiences of inspectors in dealing with small processors, what constituted a "good" inspection and a "good" inspector, and training that the participants desired either for themselves or for processors. Most interviews were audio recorded and transcribed. When interviews were not recorded, notes were taken manually. Interview transcripts and notes were coded

for emerging concepts (Corbin & Strauss, 2008) using NVivo, a qualitative data analysis program.

Inspectors' exercise of interpersonal skills was not an initial focus of the study. Evidence of an assistive inspection approach involving relationship building emerged soon after the research began. In early interviews, both processors and inspectors described the benefits of positive interpersonal interaction. Processors described ways in which inspectors had helped them, and inspectors described making efforts to learn about client businesses and taking an interest in the individuals with whom they interacted. These issues were explored in greater depth in subsequent interviews and they were a particular focus of field observations.

Human Subjects Approval

Required approvals for the study were obtained from Michigan State University's Human Research Protection Program. Field observations were approved by the institutional review board (IRB) under an expedited review procedure, and IRB staff determined data collection involving only interviews to be exempt from review.

Results and Discussion

Interpersonal skills emerged as critical in an assistive approach that improved compliance. The majority of inspectors described and demonstrated skills such as communication, patience, empathy, respect, and consideration. These skills are intertwined, and they overlap in the discussion here. This section examines how these skills were exercised and how inspectors felt the skills improved compliance. This section concludes by discussing the experiences through which inspectors developed these skills and describing training for which inspectors expressed a need.

Communication

All inspectors emphasized the communication skills that their roles required and the importance of information sharing to achieve compliance:

> You always have the enforcement stick….Typically you can avoid that with good communication skills and teaching skills and getting them to willingly and voluntarily comply. And appealing to their sense of pride in ownership, their sense of pride in production and quality.

Inspectors explained to clients the rationale behind regulations and provided guidance on how to meet them. For example, they discussed studies supporting pasteurization, and the importance of pH testing in preventing botulism. One stated that he referred to his own training in order to reinforce the importance of hand sanitation, recounting to his clients how he and classmates had inoculated blood agar with washed hands and witnessed the growth of coliform bacteria. Inspectors indicated that they suggested cleaning compounds, guided clients through steps in labeling multi-ingredient products, described less expensive ways of meeting requirements, and provided guidance on reformulating recipes to retain desired product characteristics while meeting regulations.

At some facilities, inspectors became "the unpaid consultant," "their QA department, almost," as two inspectors put it. "We do everything from the shoulder to cry on, to marketing advice," a third stated. Assistance beyond strict matters of compliance included suggestions on business planning resources, facility layout and management, and possible sources of equipment and ingredients. One inspector brought a spare laboratory notebook to an inspection to give to a processor. The processor was developing a traceability system, and the inspector assisted by suggesting a layout for notebook entries.

Patience and Empathy

Patience was required to address such a range of issues. "If you work with me, I will bend over backwards," said one, "I will work with you until I'm blue in the face." Inspectors appreciated clients' consequent willingness to cooperate:

> I think for the most part, I have really good cooperation. I try to explain why we mark it: "Here's your list." And I usually go through item by item, saying, you're using plastic containers, and they're all breaking up…I probably won't mark it if I don't have a good reason or didn't think it was an issue.

Inspectors described establishing a supportive, empathetic dynamic, "letting [clients] know that you're willing to walk through this process with them, shoulder to shoulder. I tell them there's no mountain we can't climb. Let's do it together." Inspectors balanced their position of authority by striking a more person-to-person dynamic with clients. During field observations, nearly all inspectors complimented clients on improvements made since earlier inspections with respect to compliance, as well as business growth. Typical remarks included "Great article about you in the newspaper!" and "I was surprised and glad when I saw the [new] dining area!"

Inspectors also showed consideration for clients' production activities during inspections. A processor was making cheese during one observation, and the inspector checked with her before turning on the hot water to check the temperature, mindful that this might adversely affect the cheesemaking process. Another inspector had taken a cheesemaking short course in order to learn about the practices of new farmstead cheesemakers in his area, and the course gave him an appreciation for the careful attention required during this process:

> When I go to cheese plants, I don't try to talk to the people actually doing the cheese too much, because I don't want them to lose track of where they're at—"I forgot to add this" or "I left it at that temperature too long, now the temperature's too low." I try not to do that.

Taking an empathetic approach helped inspectors "get things done." Although many of the inspectors appeared to genuinely care about client businesses, they also emphasized the strategic benefits of these relationships. They asked about family members or pets by name and, in one case, brought dog treats to an inspection. Showing an interest in clients' lives and families, getting to understand their businesses, and being "human" helped to lower clients' resistance to inspectors' presence, increased inspector credibility, and smoothed potential disagreements. As one described:

> I've known some [inspectors] that really know the laws. If you go in and you offend the people, you're not going to get cooperation….You ask them a little bit about their family and how things are. You get that going, and it kind of lowers their defenses. And I'm amazed at some of the things that people tell you… [I say] "You can't do that!" And sometimes they just don't know.

Respect and Consideration

Exercise of these interpersonal skills established a give-and-take dynamic in which clients felt that they were treated fairly.

Inspectors emphasized the importance of not "nitpicking." They wanted to avoid "overloading" clients. Instead, they gave clients the opportunity to correct minor violations during the inspection or stated violations verbally without recording them. In addition to encouraging compliance, inspectors stated that this approach increased motivation to comply, even at facilities with poor records:

> They're willing to work even extra hard because they've got some recognition…. I get a lot of compliance by, "Hey, I don't have to write it down if you correct it right now. So let's fix it right now." If you've got a light bulb out—hey, do you have a light bulb? "Yes." Well, let's find one.

When determining whether to cite noncritical violations, inspectors took several factors into account, including their prior experience with clients, their trust in key personnel, and the costs that clients would incur in making corrections. "There are times when you have to cut them some slack," one observed when explaining that he focused on incremental improvements. "If you didn't, I go into stores where they're barely hanging on." During an observation, another inspector explained that her experience with the client affected which noncritical violations she recorded; she did not record violations that she was confident the client would address. During a visit to a facility whose physical plant was in need of renovation, a third inspector commented on the manager's cooperative attitude and good compliance history with respect to issues of critical risk. The inspector was sensitive to the considerable costs of improving the physical plant, commenting that she was "focusing on low-cost ways of improving quality."

Experience and Training

Inspectors had developed interpersonal skills over the course of their careers and through other life experience. This development informed their judgment in exercising communication, patience, empathy, respect, and consideration. Older inspectors commented on the importance of "real-world experience before you start going out and talking about how to run their business." For example, parenting and teaching children gave them skills to diffuse tense situations, not take conflict personally, and balance "firm, but not too firm, consistent discipline…focusing on the long-term picture instead of the short-term goal." As one inspector explained:

> A new inspector has a lot to develop…. If they're screaming at you, you've got to be able to stand there and let it go. In the beginning, when I was doing restaurants—restaurant people do that—I'd take that home a little bit. And now I don't…[I] say, "I'll be back tomorrow. You'll have a chance to look at the report, and we'll make some decisions then…" Actually, that's worked out a couple times for me. They've had a chance to think about it, kind of cool down.

Several inspectors indicated a desire for training in interpersonal skills, feeling that it would improve compliance rates and reduce client complaints to supervisors. Topics included conflict resolution, de-escalating tense situations, and routine communication skills. During a previous job, one had received Myers-Briggs Type Indicator training on recognizing one's personality type and working with people with different types, and spoke highly of the impact of the training on inspection abilities.

Conclusion

Effective use of interpersonal skills—such as communication, patience, empathy, respect, and consideration—are among core inspector competencies that appear to improve compliance. These study results support findings in other sectors that suggest interpersonal interaction shapes regulatory outcomes. The results also improve our understanding of the practice of compliance assistance in food safety regulatory enforcement. This article concludes with observations on the intrinsically interpersonal nature of facility inspections, implications for inspector hiring and training, and suggestions for further research.

Inspections Are Intrinsically Interpersonal

Facility inspections are intrinsically interpersonal. In the case of compliance assistance, which was the focus of our study, the importance of interpersonal skills is especially evident. Inspectors worked to explain requirements in a way that made sense to clients, in some cases going to great lengths to do so. While maintaining a position of authority, they nevertheless presented themselves as "human" and achieved a dynamic of fairness and of give-and-take with clients. Yet even in agencies and situations in which inspectors adopt a stricter enforcement role and do not aim to provide assistance, effective use of interpersonal skills may nevertheless impact compliance. As discussed above, specific inspection contexts shaped inspectors' application of technical requirements, and inspectors took subjective factors into account when recording violations. Further investigation should examine the roles that interpersonal skills play in a broader range of inspection approaches, including those involving strict enforcement.

Implications for Inspector Hiring and Training

This study has implications for inspector hiring and training. First, it suggests that investments in interpersonal skills training might ultimately improve inspection efficiencies by mitigating disagreements and reducing client complaints. Second, inspectors emphasized the importance of professional, life, and "real-world" experiences in developing their maturity and discernment. This finding suggests that a broad range of experiences shapes the abilities that are required to conduct inspections. Third, the study illustrates the challenges of separating inspectors' roles as regulatory enforcement officers from broader business development roles. This finding suggests that agencies need to prepare inspectors to be called upon for a wide range of expertise, and that agencies also need to strengthen networks with other resource providers.

Suggestions for Further Research

As an exploratory study of food safety inspection practice, this research aimed to identify concepts and develop hypotheses for further study. While the results should not be generalized to all inspectors or inspection situations, they reveal new insights into inspection practice that warrant further, more systematic investigation.

First, compliance assistance should be better characterized among a broader representation of agencies. Agencies may employ different versions of such an approach, and a better understanding of this variety of approaches would inform federal implementation of FSMA, as well as state- and local-level actions. Second, research should correlate inspection

approaches with firm compliance. Third, conditions at different agency levels likely foster or discourage an assistive approach. These may include agency cultures and budgets, supervisory styles, and inspector personalities and other traits. Research on these matters may inform appropriations requests and training priorities. Fourth, expanding research to capture a broader and less-biased selection of inspectors would undoubtedly reveal new aspects of inspection practice.

Acknowledgements: I thank Kevin Besey of MDARD and Jim Bingen of Michigan State University for reviewing earlier drafts of this article and for their ongoing engagement in this work. I am grateful to the study's participants and project advisory committee. I thank Larry Busch, Chris Peterson, and Paul Thompson for their guidance. This project was supported by a University Distinguished Fellowship from Michigan State University; the National Science Foundation under grant number SES-1230878; the Sustainable Agriculture Research and Education program, which is funded by the U.S. Department of Agriculture (USDA), National Institute of Food and Agriculture, under project number GNC10-134; and funds from a grant to Michigan State University from the W.K. Kellogg Foundation to establish a pasture-based dairy program at the Kellogg Biological Station. Any opinions, findings, conclusions, or recommendations expressed within this article do not necessarily reflect the views of the above individuals, participants, or funders. USDA is an equal opportunity provider and employer.

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