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MEDIA RELEASE

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Olmsted County Public Health Services Receives “Model Practice Award”

The National Association of County and City Health Officials (NACCHO) honors Olmsted County Public Health Services’ on July 13, 2005 at the NACCHO annual conference in Boston for “excellence and continual improvement” in the County’s food protection program. Olmsted County joins a special group of public health agencies that exemplify the forward thinking, proactive attitude of our nation’s public health system,” said NACCHO President Michael Caldwell, MD, MPH. “NACCHO congratulates Olmsted County Public Health Services on this important recognition.”

Olmsted County’s food protection program entry, titled “Discovering Previously Unidentified Foodborne Illness Risks Through Discussion,” summarizes the County’s process of assisting food establishment managers develop their policies and systems that address conditions most often associated with food-borne illness. This approach typically results in longer lasting food safety improvements and it identifies about 50% more risk conditions associated with employee health, hand-washing, cooking, and cooling than traditional facility inspection models.

The methods, initiated in the late 1990’s, are under continued development with assistance by a local Food Safety Advisory Task Force that includes local food service establishment, Olmsted County Environmental Commission, and County Public Health representatives. Environmental Health Director and food program manager, Rich Peter, attributes the program’s success to “the community’s commitment to continual improvement that is shared by our local food service industry and State & local public health for protecting the public’s health.”

NACCHO’s Model Practice Awards program honors 39 initiatives in 2005, that demonstrate how local public health agencies and their community partners can effectively collaborate to address local public health concerns. A committee of peers selected Olmsted County from 106 local public health agency applicants. All award winning programs will become part of a NACCHO online, searchable database of successful public health practices including immunization, infectious disease, emergency preparedness, and maternal and child health.

Samuel J. Crumbine Consumer Protection Award

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Executive Summary

This is the Information Age where change is a constant, and we know that well in Olmsted County, Minnesota. Many people here make their living as innovators, at places like the Mayo Clinic and the IBM AS400 facility. In this progressive environment, we in the Environmental Health division began to question the purpose to our assigned work. We concluded that preventing foodborne illness is a job for the people who work with the food. Our job is to assist them in this prevention work.

Before it was common for local public health agencies to do so, this division developed the capability to investigate outbreaks of foodborne illness. But reacting to an outbreak is like a fire department arriving on the scene after the house has burned down. Like a fire department, we needed to focus on prevention, and we needed a way to do this practically.

This method would have to zero in on health risks--those conditions and practices that are known, through epidemiology, to cause foodborne illness. This was difficult to do during a traditional, unannounced inspection geared toward code compliance and enforcement. Too much time was spent on low risk conditions, adversarial relationships tended to develop, and communication was poor. Food service operators didn't listen to us--our message was of little value to them.

But when the message was focused on risk reduction, restaurant operators were willing to listen, and when they continued to hear us talking about food safety, they began to see us as allies. And then we could begin working with them to prevent foodborne illness in their establishments.

A pilot project to build these lessons into a risk-based inspection format was proposed, and was supported by the Minnesota Department of Health, with funding assistance from the University of Minnesota, Food Science Department. Other local agencies joined us in a week-long training exercise led by D.J. Inman.

After the training, the pilot was expanded to more food service sites, and we developed a practical and systematic method for assessing health risk. It is called Food Safety Systems Review, or System Review for short. It is a HACCP-based screening tool that doesn't need plans or manuals to be put into use. With the cooperation of the operator the practices that increase the risk of illness are identified, and with the sanitarian's assistance, safer procedures are developed. The operator is left to put these changes into practice, and our experience tells us that these changes are taking place.

An ongoing challenge is to quantify our results to track this progress over time, and ironically, return to unannounced inspections; this time as a partner, not an adversary.

We didn't do this alone...

We would like to express our appreciation for the permission, help, and encouragement we received from the people of: the 6 restaurants that agreed to participate with us in our training and pilot project; the Olmsted County Environmental Commission; the Olmsted County Board; Joellen Feirtag, PhD, at the University of Minnesota; the public health agencies of Brown-Nicollet, Waseca, and Winona Counties; the Minnesota Department of Health, especially Mary Sheehan; the US Food and Drug Administration; and people working outside of government, especially D.J. Inman.

But most of all we would like to thank the food service operators of Olmsted County. They were generous enough to take the hand we extended to them and join us in a partnership dedicated to preventing foodborne illness. They have told us we can accomplish this work *together*.

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Part I: Who We Are

Our Community

Olmsted County is located in southeast Minnesota, a mainly rural, agricultural area. Its population is a study in contrasts: here are people from all over the world who have recently made a new home, as well as people who have farmed the same land for generations. Its population is concentrated in the largest city, Rochester, with 70% of the county's approximately 115,000 people.

Rochester is the home of the Mayo Clinic, which gives it the distinction of having the greatest per capita concentration of physicians in the world. IBM and its AS400 computer assembly facility is the second leading employer. Together, with a strong Convention Bureau, they annually attract over 1 million visitors to Rochester from all over the world. Rochester's leaders and citizens are also proud of being named the "Best Place to Live in America" by *Money Magazine*.

As well as attracting visitors, Olmsted County and Rochester have become a new home for thousands of immigrants and refugees. This influx began in the 1970's with arrivals from Cambodia, Laos, and Vietnam. More recently, Hispanic migrant workers, and people from Ethiopia, China, Bosnia, Russia, Somalia, Sudan, and Zaire have settled here. As a result, the unique cuisine of these cultures has become a part of the 300+ food establishments in our community.

Olmsted County is also host to over 30 community celebrations and special events annually. Most notable are Rochesterfest, the Olmsted County Fair, Gold Rush Antique Flea Markets, and the Viola Gopher Count. These events attract several hundred thousand people annually.

Our Public Health Challenges

At OCPHS we feel we are carrying on the work of our department's founder and first health officer, Dr. William Mayo. Of special concern is the large number of Mayo Clinic patients who come to our community for treatment. Many suffer from illnesses that make them more susceptible to foodborne illness. Some of these people are here for months at a time, staying in and eating at licensed facilities.

Our Resources

A strength of our division is the diversity of our staff: 3 ½ Sanitarians, 2 Senior Sanitarians, 1 Health Educator, 3 Technicians, 1 Secretary, 1 Environmental Health Services Coordinator, and 1 Director. The Sanitarians, Coordinator and Director, all registered sanitarians, obtain an average of 15 continuing education units each year, enhancing not only their food safety knowledge, but also communication and presentation skills, and even a "Thinking Outside the Lines" seminar. We regularly participate in external committees and project work, including state committees and presentations (see Appendix for staff CEUs and presentations). The addition of an epidemiologist to the department staff in 1991 enhanced disease surveillance, improved communication with the medical community, and helped uncover many local, statewide, and even national outbreaks. In addition to the conventional inspection equipment, staff now carry, or have access to, thermocouples, infrared thermometers, a computerized data-logging thermometer, and pH meter. Each sanitarian also has a personal computer with e-mail and access to the Internet.

Part II: Our Story

We are a group of food safety professionals, united in the belief that we have an important job to do. We used to think it was our job to prevent foodborne illness. By trial and error we discovered that we cannot prevent foodborne illness--at least, not by ourselves. What we can do is to work with the people who work with the food. They can prevent foodborne illness.

We started out doing traditional inspections: walk in unannounced, see what there is to see at that point in time, write up correction orders, and briefly discuss the results with the operator (if they were there). Over nearly 10 years we evolved, trying to sharpen the focus on disease risks and communicate effectively with food service operators. The change process intensified during the last 3 years, resulting in an inspection approach that has reached new levels of risk assessment and communication. What follows is the story of our journey - a journey through three main issues and challenges: focusing on risk, improving communication, and measuring outcomes (these issues and challenges are discussed in more detail in Part III).

The Early Years - Consistency and Education

In the early 1990s, we made a major effort to improve consistency between inspectors by doing “standardization” inspections, where every observable violation was cited. Crumbs in a corner became a dirty floor, and one dirty spoon was written up as soiled utensils. We felt that if the operator knew all of the code provisions (through our thorough, standardized inspections) at the same time we de-emphasized the inspection scores (because many restaurants had lower scores as an outcome of this approach), in the long run, we should see safer food establishments.

To achieve consistency in reporting and to avoid illegible handwritten reports, we used pre-written standard orders that were stored in a computer database. There were several hundred orders, which attempted to cover every situation likely to be encountered. We added the public health reason to each of the corrections in an attempt to persuade operators we had the highest motives in asking them to make all the changes. Unfortunately, the educational content of the reasons was lost in reports that often ran to twenty pages. Also lost in the bulky reports was the first attempt to emphasize the high risk items, which had their own section at the beginning.

But because of our standardization style, many low risk items were left uncorrected. The method for dealing with these was to ask the operator to draw up a Plan of Action, which was a description of how and when the owner was going to fix or correct them. Follow-through was inconsistent, both by operators and sanitarians. Again, we hoped a long-term written plan would lead to improvement.

We thought long-term compliance would improve if we increased the rate of scheduled reinspections. High risk items and “Repeat” items were given priority. We did get better compliance from operators, however, we often saw the same or similar problems at the next inspection. We started asking ourselves, “Are we preventing disease?” “Are we reducing the risk?” “Are we confident that the minute our inspection is over the food served in that restaurant is safe, or at least safer?” **We concluded that this system of inspection encouraged operators to correct items temporarily to satisfy the inspector, instead of incorporating the corrections as changes in their day-to-day operations.**

The Mid 1990s – Customer Service and Reorganization

We received a boost of energy from our county management when they adopted Total Quality Management principles. They asked us to work as teams, and view both our fellow employees and outside contacts as customers. This encouraged us to try to see things from the operator's point of view. We decided to tailor our inspections to fit their needs. We wanted them to see the inspection process as a "valuable product," so they would improve their compliance.

These county directives fueled a reorganization. We got training in teambuilding. We split the county into three districts and assigned a team of two sanitarians to each. We set a goal of inspecting all our establishments at least once per year, stored inspection dates in newly available computer software, and tracked our progress with graphs. We set a regular schedule to replace our previously occasional and casual staff meetings, and worked from an agenda prepared in advance.

We also decided to overhaul the standard orders before putting them in a new database, and worked on this project as a team. The number of orders was cut in half and rewritten to cover situations generally instead of specifically. The emphasis became high risk items, now called "Critical Conditions." We spent great care on the wording--another attempt to persuade operators to complete their corrections. Unfortunately, the new orders were no more successful than the old ones.

Throughout the '80s and '90s – The Foodborne Outbreak Inspection

Unlike traditional inspections, the approach used over the last 15 years during foodborne illness investigations has proved successful. Outbreaks are usually threatening to food service operators--a restaurant's future can hang in the balance. From the onset, the

investigation team immediately tries to establish an honest and trusting relationship with management. Our premise is that their undivided attention, cooperation, and honesty are essential in finding the cause of the outbreak.

Not only was our communication style different from a routine inspection, so was the information we were interested in and the way we went about getting it. Our attention was totally focused on health risk. We talked to both employees and management. We asked all food employees questions about their illness history and work duties, and then we listened carefully to their responses to identify suspect preparation procedures or other causes. We helped the manager and the staff identify not just what they were doing wrong, but also what corrections to make, and how to monitor those corrections to prevent future outbreaks. Managers started to ask why this type of focused inspection wasn't being done before an outbreak. Could we switch to an illness prevention program focused on health risk? And even if we could, how could we do it practically? We couldn't go into every restaurant and analyze the preparation of every food.

The Mid 1990s Again – The Change Process Accelerates

Inspired by a food safety plan drafted by the Minnesota Department of Health, our Director developed a tool titled “Food Safety Systems Review.” This “tool” captured the important food safety systems and practices that should be assessed during an inspection. In late 1996 we were making plans to use this hazard analysis-based method (described in more detail in Issue #1), but realized it required a lot of information gathering, which still made it impractical to use during a standard, unannounced inspection. We put this tool on the shelf.

At the same time, we were hearing new ideas from food safety innovators across the country who advocated using hazard analysis and re-tooling the standard inspection format.

As the epidemiology continued to point to more specific food preparation and hygiene errors as causes of disease outbreaks (the foodborne illness – FBI – factors), we concluded that it was important to use hazard analysis to identify the FBI factors in an establishment. But identifying the hazards was not enough. In order to make a significant reduction in the incidence of foodborne illness it was necessary to get food preparers to change their behavior. Once we recognized this, we realized the way we did inspections was one of the barriers to change. We had already been trying to persuade people to change with our carefully crafted standard orders. And people did change, but only until we walked out the door after their reinspection. We needed help to move beyond the regulatory-only “box” in order to impact behavior.

In February of 1997, Mary Sheehan of MDH had the vision to bring the FDA Food Leadership Workshop to Minnesota. There, our Coordinator Pete Giesen, and Director, Rich Peter met D.J. Inman. Just as a chemical catalyst helps drive a reaction to completion, the influence and energy of D.J. helped us to put together the food safety puzzle pieces we had collected: focusing on health risk, improving communication with operators, and giving them a reason to cooperate with us. D.J. is a former FDA food safety specialist and a current food safety consultant. He advocates forming partnerships and building relationships with operators to achieve the common goal of preventing foodborne illness. He promotes a respectful, consultative method where sanitarians ask questions in order to become familiar with the operation and its food preparation methods, especially for high risk foods. Problems will then “float to the top,” and safer methods for food preparation can be discussed. This fit in well with our realization that a code-based inspection is not effective in identifying the real

food safety problems nor at persuading most people to permanently change their practices or behavior.

1997 Through Today - The Pilot Project

We decided we wanted to try this new way of inspecting. Other nearby local agencies were also interested in the approach. With approval from the Minnesota Department of Health (MDH) and our County Environmental Commission, we embarked on a pilot project with six local restaurateurs. Funding from the University of Minnesota Food Science Department helped us to bring D.J. back to Minnesota to put on a training workshop. Sanitarians from Brown-Nicollet, Olmsted, Waseca, and Winona Counties, and MDH participated.

After the week-long training, the response from both the operators and participating sanitarians was so overwhelmingly positive that a decision was made to expand the number of restaurants involved. But as more staff members joined in, it became apparent that there was not enough structure in the inspection format to satisfy our diverse group, to document our activities, and to have measurable outcomes for assessment.

This is when the Systems Review form was pulled off the shelf. The review is based on Hazard Analysis Critical Control Points (HACCP). HACCP is basically a vertical approach and the Systems Review is a horizontal approach. Think of it this way. Visualize a flow chart of a process or recipe. It starts at the top of the page with ingredients, and ends at the bottom with finished product. Now visualize several flow charts placed side by side. If you go across the pages from side to side, there will be some alignment of common elements. These are food preparation processes such as cooling, cooking, and reheating. When using this method it is not important whether a given process is a critical control point in a given

recipe--all the “systems” are treated as being critical. For example: always use rapid cooling methods, always wash hands before touching food, always avoid cross-contamination, etc. The systems review process (which is further described in the Issues/Challenges section) is the cornerstone of today’s program.

Forming partnerships with the “other side” can be a tough concept for enforcement-oriented people to accept. Our experience confirms that operators are not trying to get away with things when it comes to safe food; they’re not the “other side”. They take pride in their business and are very aware that a foodborne outbreak could cost them their reputation, or their livelihood. They also have strong feelings of loyalty to their base of regular customers, and know that the relationship might not survive our “common enemy”--foodborne illness.

Part III: Our Issues and Challenges

As we journeyed through the last 8 to 10 years, we would like to say our program’s improvements proceeded smoothly from point A to point B, guided by a clear list of goals, objectives, and methods, all tagged with staff assignments and completion dates – but it didn’t happen that way. We seemed to know where we wanted to go but we didn’t know how to get there.

Our Community Health Services (CHS) Assessment and Plan helped. This process, required by Minnesota Statutes, is for communities to help local health agencies to identify and prioritize health problems, and develop goals, objectives, and methods for solving them (see the Appendix for excerpts from our 1996 and 2000 plans). This four-year planning cycle greatly influenced how we approach our work. We started talking about health

problems, not just programs. As early as 1992, we started to recognize some of the barriers to improving health outcomes with a goal to:

“Improve communications with businesses and other organizations to improve efficiency and effectiveness of education, consultation and regulatory services authorized by the State of Minnesota and Olmsted County.” (1992 CHS Plan).

But focusing on the health problems within a regulatory framework was a huge challenge (we could no longer say, “By enforcing the code, we will prevent foodborne illness”). We had to come up with solutions to actually impact the problem. In retrospect, this conflict between the regulatory paradigm and health-outcomes paradigm is why it was difficult to “plan” for the change we went (and are going) through.

However, of the many challenging issues we faced during our journey, three stand out: 1) focusing on risk, 2) improving communication, and 3) measuring outcomes. If we thoroughly assess the foodborne disease risks (1st priority), and effectively communicate them with the food service operator (2nd priority), the public’s health will be better protected and the resulting outcomes can be measured (3rd priority). Any other order has a diminished effect.

Issue/Challenge 1: Focusing on Risk

Traditional food service inspections were not focused on health risks--they were driven by a code-based system whose good intentions became an obstacle to preventing foodborne illness.

OUTCOME: We have instituted a risk-based inspection system that is similar to the investigation of a foodborne illness.

No one can deny that the primary purpose of food service inspections is to reduce the risk of foodborne illness. But it can be argued that the “letter” of the food code often overshadows the “spirit” of the code. This, combined with our early tradition of being the “sanitary police,” has created an image of us as regulators - not educators or consultants.

Add to this a changing epidemiology of foodborne disease that doesn't follow the rules or wait for the next code update, and you have a food inspection program that's soon out-of-date.

Unfortunately, this combination creates many problems: uncertainty among food safety professionals, adversarial relations with operators during inspections, and most importantly, the belief that strict enforcement of the food code is the only effective way to reduce risk. Our focus on risk is our attempt to balance these forces. Our journey continues.

How did we reach our outcome?

Our Early Efforts to Focus on Risk – A Lesson from a Water Contamination Incident We started to learn about and appreciate the meaning of a risk-based approach back in 1990.

At the Olmsted County Fair, a temporary water distribution system became contaminated (JEH - March, 1996). We thought we'd been doing a good job at the fair because we inspected all the food stands, but we weren't seeing the fair as a community with the same public health risks faced by any large community. We suddenly realized that it wasn't enough to react to problems--we had to anticipate them by looking at all the potential problems and their risks. In this case, a week-long event with 200,000 visitors, animals and their manure, food stands, water distribution systems, waste disposal facilities, and campground on a 50-acre site.

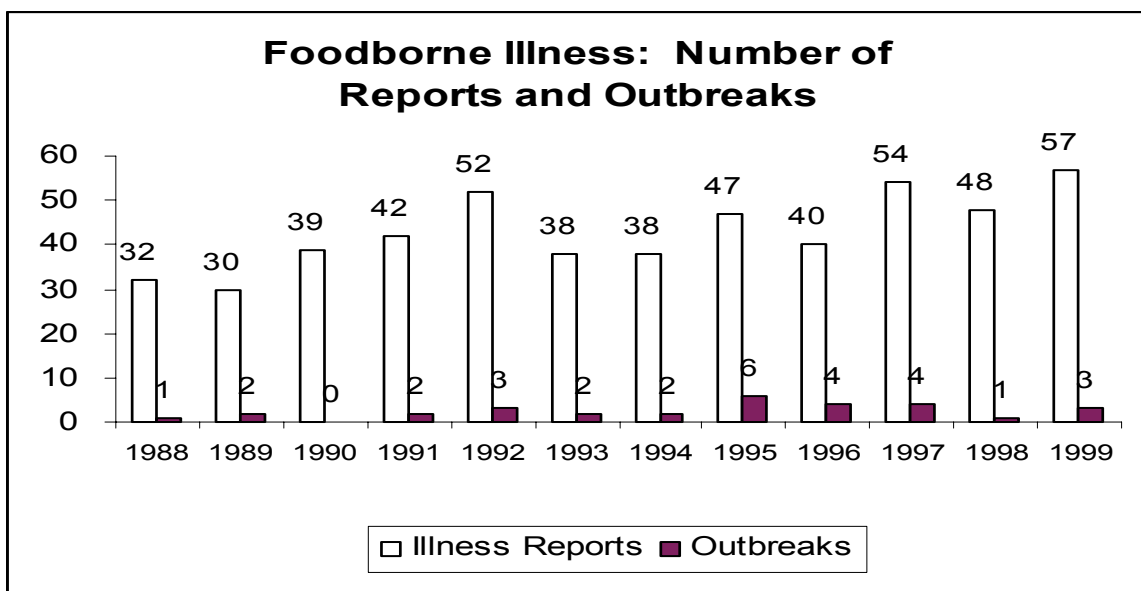
Since then, we work each year with the organizers of over 30 special events to discuss their set-up plans well before the event. We troubleshoot issues during the event, and follow-up afterward to better prepare for the following year. The outcomes of this consultative work have been significant: volunteer organizers have coordinated the design and installation of properly sized water distribution systems; handwashing stations were placed adjacent to portable restrooms and animal handling areas; storm sewer inlets were stenciled with

educational messages about environmentally-safe wastewater disposal; and food vendors were licensed well in advance of events, and were required to describe their menus, equipment, and food preparation procedures. We looked for opportunities to apply this risk-based, consultative approach to other areas of our work.

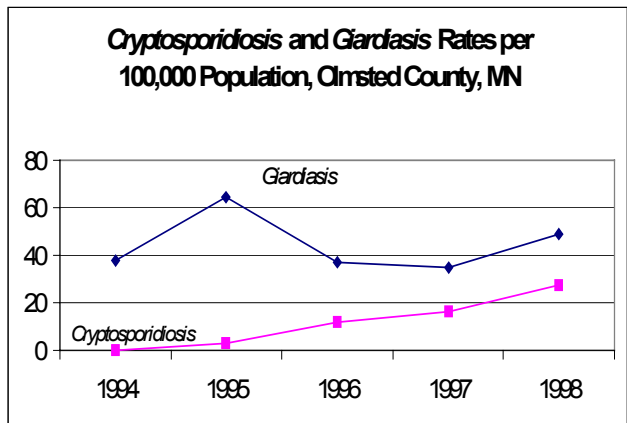
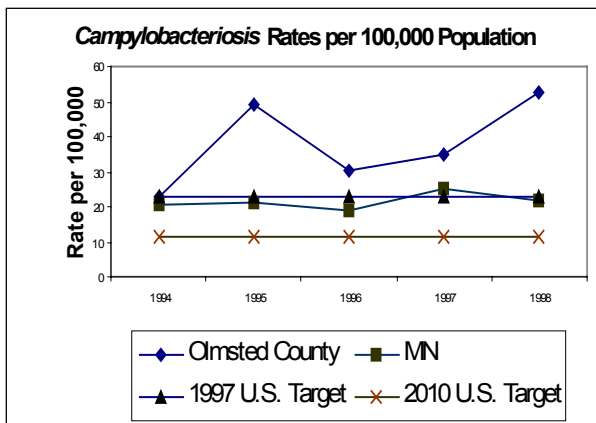
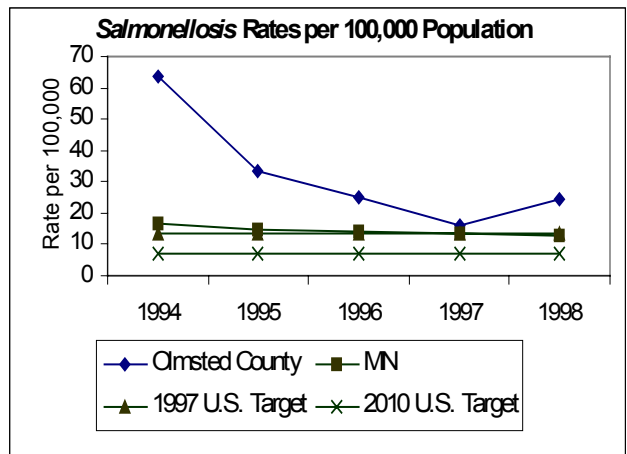
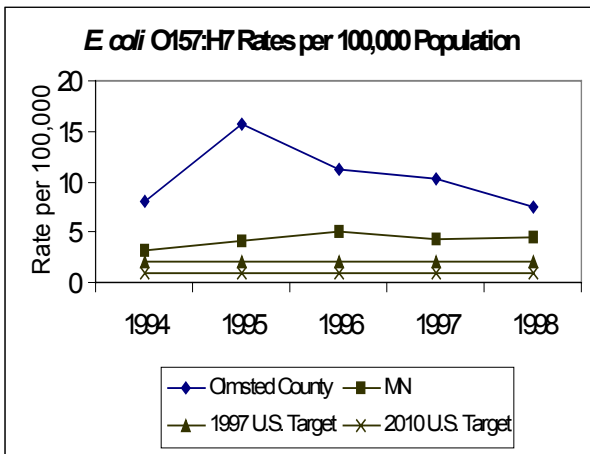
The Foodborne Outbreak Inspection – a Natural Focus on Risk

As mentioned previously, foodborne outbreak inspections also focused us on risk. Since 1984, OCPHS, in cooperation with the MDH Acute Disease Epidemiology Section, has investigated over 35 food and waterborne outbreaks in Olmsted County (see Appendix for summary of procedures and list). Outbreaks that may have gone undetected elsewhere were uncovered through strong statewide disease surveillance (currently Minnesota is a FoodNet site), and ongoing communication between OCPHS, the Mayo Clinic, and Olmsted Medical Center. For example, our epidemiologist was instrumental in identifying an increase in the number of *Salmonella* cases at the local level which was the tip of the iceberg of a nationwide outbreak of *Salmonella Enteritidis* associated with Schwan’s Ice Cream.

Both the number of outbreaks and the number of reports of illness have been increasing in Olmsted County and Minnesota (see graphs below).



Pathogen-specific rates are also higher than Minnesota rates and National goals. We suspect that for most pathogens (but possibly, not all) this is not due to a bigger problem in Olmsted County, but that better diagnosis, improved lab procedures, and increased reporting by physicians and the public has uncovered a larger part of the foodborne illness iceberg.



While these rates are not sensitive enough to measure the impact of our program, they do provide a benchmark for the community.

With each outbreak, and a better understanding of the epidemiology of each of the pathogens, it reinforces the foodborne disease risk factors in Olmsted County:

- ◆ Food contamination by workers(ill employees/lapses in handwashing)
- ◆ Food time/temperature problems, and
- ◆ Cross contamination

What are the underlying root causes of these factors? Although each outbreak is different, and in some outbreaks the risk factor is not known, in many they are behaviors or practices. These behaviors and practices are difficult to thoroughly assess during a traditional inspection. If identified, it's likely a very small piece of a bigger problem. Issuing an "order to correct a violation" will not likely change the condition in the long term. For example, root causes of risk factors may be:

- ◆ "Bad habits" formed over many years (e.g. not washing hands),
- ◆ Ingrained in how the business is run and common across the entire industry (e.g. hand cross contamination between raw meats and ready to eat foods at a busy cookline),
- ◆ Influenced by outside forces (e.g. I have to work to get paid, even though I'm ill),
- ◆ Due to lack of information (e.g. I never knew I should cool the food quickly)

This ongoing challenge to keep pace with the changing epidemiology of foodborne disease and the underlying root causes has set the stage for the paradigm shift in the inspection process.

The Outcome of Our Focus on Risk: The Systems Review Inspection

A product of our pilot project training was the systems review inspection. This process starts with scheduling the inspection, an important first step in building a relationship with the operator. The call includes a brief explanation of the approach, and a request for an appointment at a time convenient for the operator. Instant rapport can be established simply by saying, "I would like to sit down with you and talk about food safety."

Once at the food service, we meet the owner and/or manager(s) and re-introduce the systems review inspection. We share with them the reason for the change, emphasizing local outbreaks. Non-traditional techniques are crucial in this initial dialogue, such as sitting down with the operator, sharing what's being written on the forms, listening for subtle messages on important issues, and using non-technical language. After this introduction, we conduct the systems review inspection this way:

1. **Build a Profile of the Business**. What are your days and hours of operation? How many meals are served per day? When is food prepared for banquets, parties or happy hours? How many employees do you have? What days of the week are foods delivered? (see Appendix for form used). These and other questions help us learn more about the business and its potential risks.
2. **Discuss the Food Safety Systems**. The Systems Review is the second step, the sitting down and talking. The sanitarian asks open-ended questions about each system, including ill employee policies, cooling procedures, and cross contamination prevention (see Appendix for the listing of systems on the form used). Then we listen, and listen some more.

Most operators realize this is an opportunity to improve their operation. They are actually interested in what we have to say. They are also more likely to make needed changes if we discuss various options for improvements with them so they can pick the one they think will work best for their situation. Our goal is to effectively describe the potential problem and “lead the operator down the path to self discovery” (Inman). That is, the operator solves the problem without us! This makes a permanent change in the practice much more likely.

3. **Evaluate the Preparation of a Food.** From the systems review discussion, a food (or foods) “floats to the top” as a potential problem. Example: When discussing their system for cooling food, we may be told that the vegetable beef soup is cooled in 5 gallon buckets. That’s not only noted on our systems form, but also mentally so we can come back to this system and evaluate the prep in more detail. We’ll discuss and chart the process, from ingredients to service, looking for other possible hazards: reheating temperatures, how many cooling/reheating cycles the food goes through, etc. (see Appendix for form used and an example).
4. **Walk-Through of the Facility.** While going through the facility with the manager, we focus on critical areas: food temperatures, food prep areas, and cooking areas. We’ll see where and how the evaluated food is actually prepped, piecing together what we learned in the discussion with what we see. Our experience has been that people do not alter their work habits just because we are there. And if they’re not cutting up the raw chicken when we happen to be there, we can still discuss it. Depending on what is seen, we may come back to see them prep the chicken in no

more time than would have been spent on a reinspection. We'll also note significant non-criticals observed during the walk-thru.

Along with the manager, we also engage employees in discussion and take advantage of the "teachable moment." If it becomes apparent someone is not well versed in a particular aspect of food safety, we have simple educational information sheets in a 3-ring binder that list the essential information for that system (see Appendix for Info Sheet examples). The 3-ring binder is given to each food service manager to serve as a reference and employee training manual. It's also the time to offer to return and teach an organized class or run a handwashing training session.

5. **Report the Results**. Ironically, we are returning more to handwritten reports (see Issue # 2 and Appendix for forms used) that are left with the operator before we leave. At their request, the report form serves mainly as a quick reference "to-do" list because of the one-on-one education focus of the inspection. The educational sheets discussed during the inspection are also referenced on the inspection form, serving as documentation (if enforcement is needed) that education was provided and the public health reasons were shared. The report form documents the critical system problems and actions taken which will be entered into our database.

Learning from a previous Crumline Award winner, DuPage County, Illinois, we have consolidated this process for chain restaurants since the systems are the same (or should be) for the entire chain. We meet once with the owner, district managers, and store managers to discuss their systems and then follow-up with shorter onsite visits at each store. It has improved both efficiency and effectiveness. We quickly learned that the food safety commitment is established above the store manager level. Working with regional managers

and/or corporate headquarters on a routine basis (rather than only when there is a crisis) gets better results.

Once we established this process and became trained in the techniques, the entire process takes only slightly longer than a traditional inspection and reinspection of any “High Risk” category facility. We anticipate even less time will be needed per “routine” visit as communication with operators are enhanced, and we better understand the business and the systems in place. A shorter unannounced visit to directly observe food preparation during busy times can determine if the food safety systems are in place. We even anticipate a return to unannounced visits based on the day of the week or time of day food is being prepared. This time we will be welcome partners and not intruders.

Emergence of a Risk-Based Enforcement Process

Throughout the ‘70s and ‘80s, considerable time and training was spent on enforcement activities, such as violation notices, administrative hearings, board reviews and license suspensions. We saw enforcement as our primary role and considered it so important that each sanitarian was officially deputized by the sheriff, and given a badge and citation book. We narrowly viewed every inspection only as the first step of a potential enforcement action.

But we began to question the effectiveness of this approach. A time study revealed that for the amount of time spent on one enforcement case, almost 10 routine inspections could have been done. Another concern was that enforcement cases often dealt mainly with non-critical conditions. We knew there must be a “smarter” approach.

It wasn’t until our experience with scheduled system inspections that it became clearer how to improve our enforcement procedures. We could finally appreciate the

approach described by Sanford M. Brown (Journal of Environmental Health, 1988). He places enforcement within the context of prevention, describing it as:

“a results-oriented style that is flexible, that emphasizes responsiveness, forbearance, and the communication of information. Conciliatory health professionals utilize discretion in the process of education, consultation, and negotiation to obtain compliance from violators and potential violators.”

We’ve embraced this philosophy. We believe no food service operator wants to make customers sick. Given information instead of orders, most operators (the “90+%”) will improve their food handling procedures. Traditional enforcement is then left for those who can’t or won’t change, or when an imminent health risk is present.

In 1999, we formed an enforcement committee consisting of the Director and senior staff to: review our techniques, update our procedures, and review potential cases. Our procedures include fees for 2nd reinspections, administrative reviews, and referrals to the Board or County Attorney for action. The most significant addition has been adding an unannounced reinspection for establishments that have not demonstrated improvements in their systems. The reinspection is done at a time when major food prep is occurring (see Appendix for enforcement worksheet and flow chart). This approach has allowed us to evaluate the extent to which improvements in food safety systems are actually implemented.

Our documentation for enforcement cases still begins with the inspection, but the prevention focus of the approach provides many more tools to achieve compliance than just “orders to correct violations”. As an enforcement case is pursued, communications with the licensee continue to emphasize the public health concern of the conditions, but also the licensee’s legal responsibilities, and the enforcement options that may be pursued - each step building a stronger case.

We think that placing enforcement within this context of prevention, increases the likelihood that long-term improvements in food safety will take place (for the “90+”), while reserving enforcement for when it’s truly warranted.

Issue/Challenge 2: Improving Communication

Communication was not an important part of our regulatory model. This may have led food service operators to believe we had nothing of value to communicate to them.

OUTCOME: Communication has become the most important part of our work in education and in building partnerships. The content of our communication focuses on practices and procedures that increase foodborne illness risk. We use a non-authoritarian, non-threatening approach that emphasizes consultation, collaboration, and education to achieve long-term changes.

How did we reach our outcome?

We focused on two areas: 1) improving the communication with operators so they value our service and recognize their food safety responsibilities, and 2) enhancing our educational communication and outreach.

1. Improving Communication with Operators

Before our communication with industry was risk based, it focused on compliance with the food code. Communication was basically a one way street. Sanitarians inspected and issued orders for correction, and operators were expected to comply. The unannounced inspection was the only tool available to verify compliance with the code, instilling the “catch-‘em-doing-things-wrong” attitude. This inspection style immediately created barriers between the operator and inspector (even if not intentionally). The operator was in an inferior position, and was “forced” to postpone whatever they were doing, no matter how important. Because inspections focused on what was visible at the time of the inspection, the communication that did take place was limited to the immediately observable conditions.

Little information was obtained about their operation or food preparation procedures. Using this communication style it was impossible to develop trust, much less develop a partnership.

We made several attempts to improve communication with operators over the years:

A. Through Partnerships:

From the following experiences, we began to realize partnerships can't be one-way or forced. They are built one-on-one with each operator beginning at the inspection. If you have a service that is of value, and treat operators with respect, partnership begins to build.

- ◆ **Quality Assurance Council.** As early as 1988, Environmental Health partnered with a food safety consultant and area restaurants to form a Quality Assurance Council. The Council's charge was to improve the inspection process by making it more risk-based. However, improvement did not happen and the Council faded. Code compliance inspections failed to support the experiment. The Council was onto something, but the follow through wasn't there.
- ◆ **Round Table Meetings.** At these "round table" meetings we invited operators to ask questions and discuss their concerns about the food program. Although insightful for us, and hopefully informative for attendees, turnout was poor. The only time more than five people attended was when the agenda hinted at a proposed large increase in their license fees. We wanted to be seen as a resource, but most operators didn't see our "product" as having value.
- ◆ **Rochester Lodging and Hospitality Association (RLHA).** In 1995, the RLHA asked our department to provide the following: 1) limit of one inspector to conduct inspections for any lodging, pool, and food service located in the same building, 2)

streamline the inspection reports, and 3) re-organize the inspection reports relative to risk. As we worked to address these requests, we became more aware of the operator's needs as a primary customer.

B. Through the Inspection Process:

- ◆ **The Systems Review Process** The scheduled, systems review inspection was the key to removing communication barriers built over many years. When asked in our 1998-99 operator survey: "What part of the scheduled inspection was the most helpful to you and why?," one operator reported:

"All parts were helpful. My kitchen staff learned more from our last scheduled inspection than all other inspections combined! The sit down portion allows me to understand reasons for things and the ability to ask questions. During the staff portion of the visit my employees were able to do the same. After the visit they all said "wow" that was sure informative!"

(The overwhelming majority of respondents also made similar responses - see Appendix for complete 1998-99 operator survey responses, and 1999 "success stories").

In the systems review inspection our principal form of communication is verbal, which is the opportunity to develop a mutual understanding. This is supplemented with printed educational materials, given to the manager in a 3-ring binder, which are also referenced on our report form (see appendix).

- ◆ **Onsite Training as Part of the Inspection**

Another outcome of improved communication has been an increase in onsite employee training services. Even certified food managers have told us they need reinforcement in training their employees because of high employee turnover. As a result, each systems review inspection includes on-site employee training or a

separate training session is scheduled (see Appendix for list of educational materials/resources). There is no charge for this training and we have received a tremendous response (see graph below).



Training focuses on the foodborne disease factors specific to the operation and usually includes a “Glo Germ” handwashing demonstration. Training in their facility is more convenient and is scheduled during staff meetings, evenings, and weekends.

2. Enhancing our Educational Communications Through:

A. Food Safety Classes: OCPHS has a long tradition of providing food safety education. Starting in the late 1970s, we taught two, 2-day food manager certification courses each year which focused on HACCP principles. In these voluntary courses, we reviewed recipes during class and encouraged participants to write a procedures manual incorporating what they learned, including food times and temperatures at each step in their recipes. License fee discounts were offered to those who successfully completed the course (\$25 discount) and completed their policy and procedure manual (additional \$25 discount). Unfortunately, we didn’t have an

inspection system that reinforced what they learned. Reviewing and discussing their procedures wasn't part of the inspection process!

Now all food manager certification courses are provided to operators by the private sector. We encourage and promote these private efforts by offering our mailing list/labels to the course organizer and advertise the course in our newsletter and during inspections.

B. Newsletters and News Releases:

Since 1989, the newsletter "**Food Talk,**" complete with our own inserts of local food safety-related events has been sent to all our licensed food services on a quarterly basis. We've expanded our mailing to include grocery stores, nursing homes, hospitals, group homes, and other food facilities we don't license. Operators tell us they do read the newsletter and find it a valuable resource (See Appendix).

Other time sensitive notices are mailed to all licensed food service operations alerting them to the increased risk posed by foodborne diseases such as hepatitis A and Norwalk-like viruses that appear to be "moving through" the community. Media news releases are issued as needed (see Appendix).

C. Community Outreach:

In September 1997, we started participating annually in National Food Safety Education Month. Annually since then, a news release is issued promoting food safety in the community. With the help of a committee composed of one of our Sanitarians, a University Extension Specialist, Public Health Nurses and a Health Educator, we developed food safety information that was:

- ◆ printed in weekly feature articles in the Rochester Post Bulletin newspaper;

- ◆ the focus of an article for the Advocate, a community action newsletter;
- ◆ broadcast on local radio stations through staff interviews and “Fight Bac” public service announcements;
- ◆ displayed at area grocery stores; and
- ◆ presented to groups and high school Family and Consumer Science students.

In addition, we also regularly teach Community Education courses which are targeted at day care providers, special event organizers, and restaurant employees, as well as people who cook at home.

Issue/Challenge 3: Measuring Outcomes

We collected data that measured what we did, not what impact our work had on food safety. It was limited to the number of inspections completed and scores based on the 44 item inspection sheet.

OUTCOME: The Systems Review inspection process allows for a better assessment of the risk factors. This created an opportunity to develop our forms, procedures and database to measure the frequency of each of the foodborne disease factors over time. Quantitative data show an increase in the number of risk factors identified, which is a more accurate reflection of what’s taking place. Qualitative data from 2 separate industry surveys reflect changes in food safety practices and a positive response to the system inspection approach.

How did we reach our outcome?

Our first attempt to improve our program measurement was to discontinue issuing inspection scores and begin categorizing and counting the number of “Critical” and “Non-critical” conditions observed during inspections. However, counts of critical items didn’t tell us which of the foodborne disease factors were the problem. Our challenge was to convert a tracking system based on a “snapshot” of observations to a big picture assessment based on discussions and observations. Because we were asking many more questions, in a non-threatening way, we were being told about many more “systems out of control” than we ever

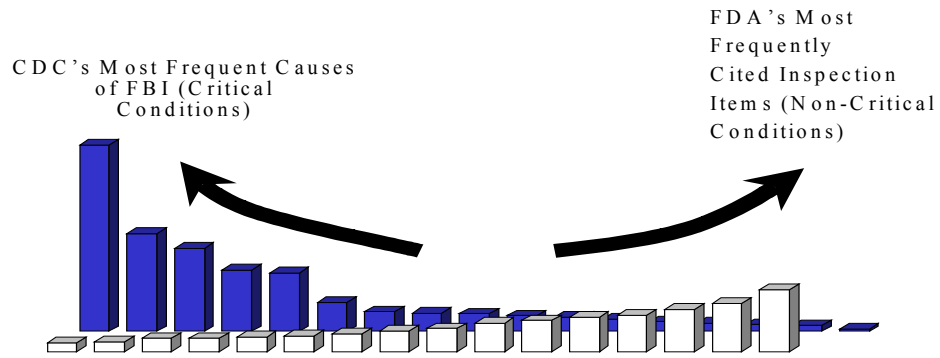
would have suspected or observed. In addition, Minnesota adopted a new food code in September, 1998 based on the FDA model code. This added additional specific critical conditions within each system that needed to be tracked.

To help manage our ever-changing data needs, we applied for, and received an Olmsted County Research and Development grant in 1999 to build a new database called EHDOC (phase 1 to be completed in April, 2000). Coordinated through the Minnesota Counties Computer Consortium (MCCC), this database will provide flexibility to measure trends both at the systems level and for specific risk factors (see Appendix for more information on EHDOC).

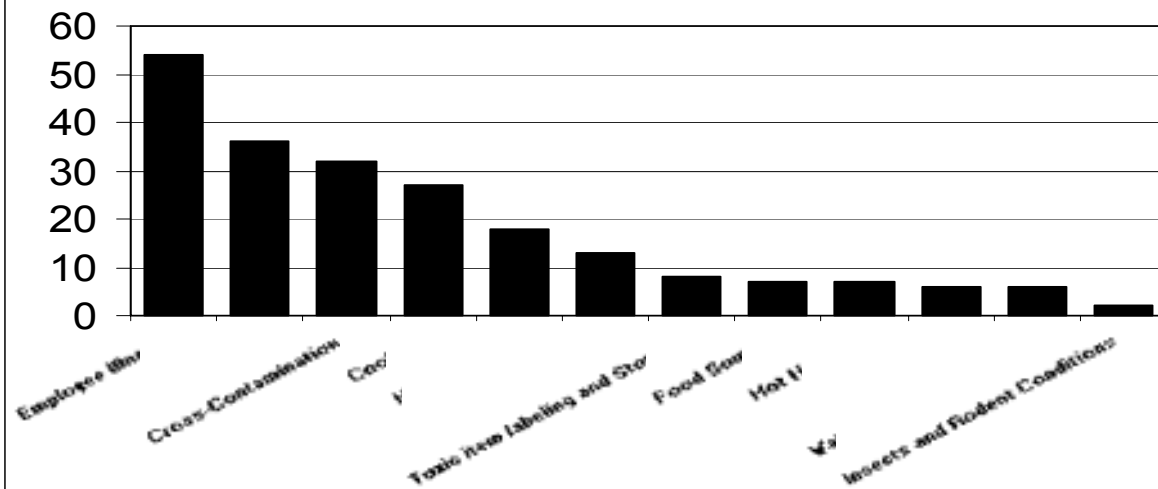
Results To Date from Systems Review Inspections

Quantitative: Because our approach focuses on learning the business’ food safety systems, we are uncovering more of the disease risk factor “iceberg.” A statistically random sample of inspection data from high risk facilities support the shift from non-criticals to a more thorough assessment of the known foodborne disease risk factors (the food safety systems).

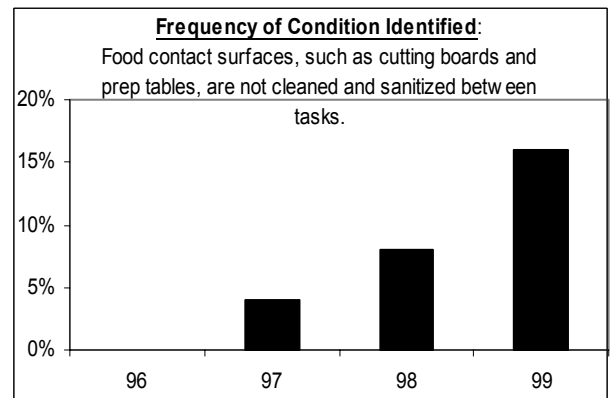
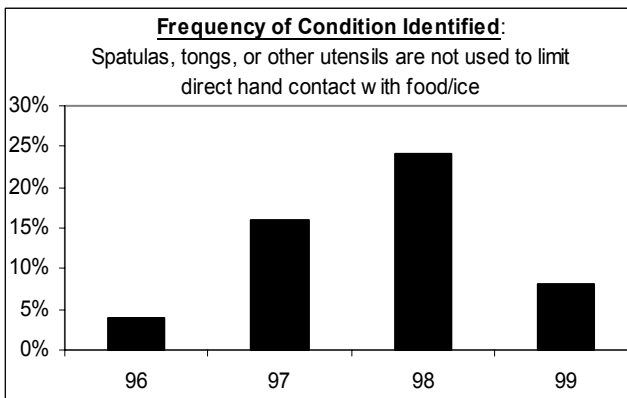
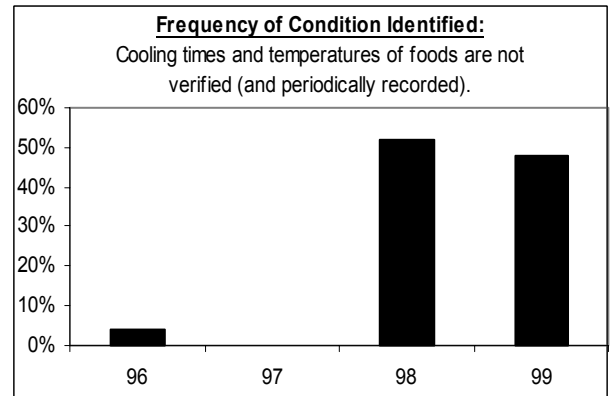
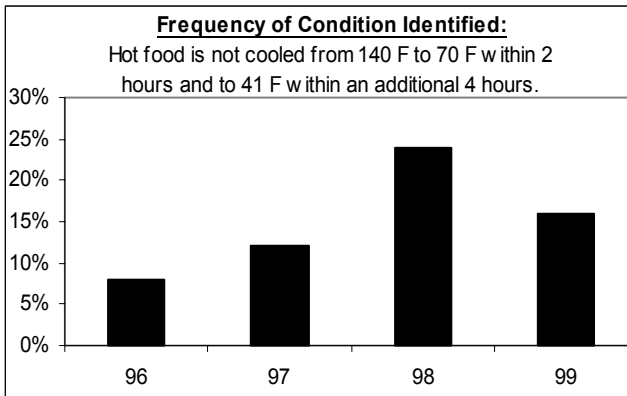
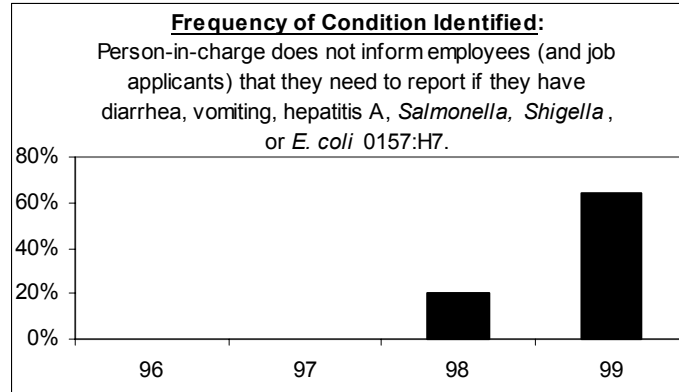
A Comparison of the Most Frequent Causes of Foodborne Illness (FBI) vs. Most Frequently Cited Conditions During Inspections



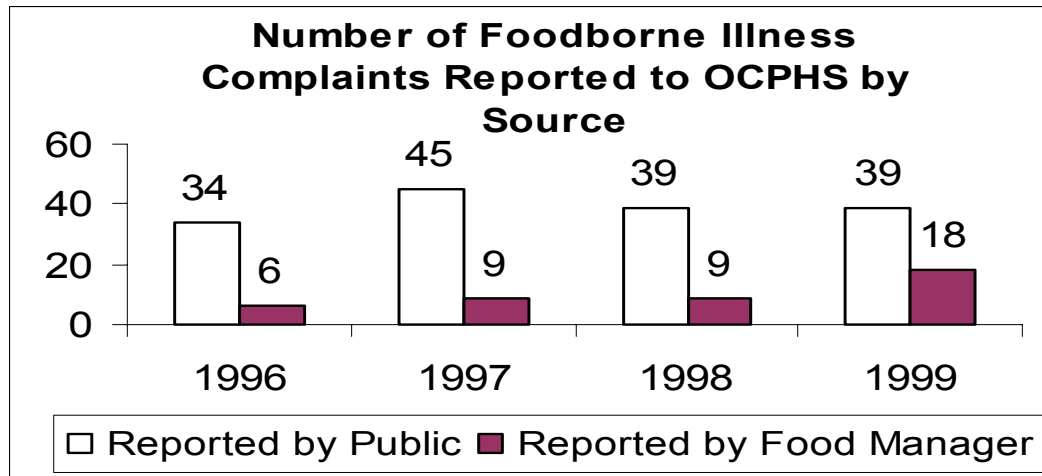
Frequency of critical conditions* by food safety system identified at Olmsted County, MN food service facilities, 1998-99 (* 216 conditions identified during 100 inspections of 50 facilities)



This more sensitive approach provides an opportunity to track outcomes at both the system level (above) and within each system. The graphs below are specific risk factors within several food safety systems. They further highlight the shift in focus and provide a baseline for future trend comparisons.



In addition, we have seen an increase in the number of operators who call us when they receive a complaint of illness.



Qualitative: The qualitative data gathered within the past three years, from 2 separate operator surveys, has been extremely valuable to help us assess our effectiveness (see Appendix for sample surveys and compilation of results). Have we seen changes in food handling practices as a result of this approach? Here is a sample of specific changes (that lose some of their significance when quantified) made by operators in how they prepare food (also see the comments made on the 1998-99 operator survey in Appendix),:

- ◆ Using tongs instead of hands for handling raw chicken at the cookline,
- ◆ Cooking soup for the day and then discarding, rather than advance prepping for several days (we were told it actually cost less to do it this way too),
- ◆ Dedicating an area of a room for raw chicken prep instead of prepping the chicken in several areas,
- ◆ Cooking chicken to 165°F instead of the 140°F the chef thought was sufficient,

- ◆ *“We started the use of the food meat thermometer, started the procedure of keeping temperature logs and food flow charts. This will help make staff more aware of food temps/proper cooking.”* (1998-99 Operator Survey),

Our most recent survey shows operators are overwhelmingly positive about the change. They are not only requesting the scheduled inspections to continue, but in several cases explained in length why and what they’ve learned. We’re planning to update the survey this year to focus our questions on ways to further improve our service and eventually to gain further insight into overcoming the barriers to long-term behavior change – ultimately for better public health protection.

Part IV: Conclusion (or 2000 and Beyond)

With the help of many partners, we feel we have merged the epidemiology of foodborne disease with a common-sense inspection approach. Where the traditional inspection put operators on the defensive, this new approach invites informed cooperation with clearly defined goals and avenues for positive change.

Industry graciously invited us to use their businesses as a “laboratory” during the development process. They were patient with us as we experimented with teaching styles and inspection reports. We’ve learned a lot from them and look forward to it continuing.

With renewed enthusiasm and a greater appreciation of our customer’s needs, we will continue to search outside the “box” to improve food safety in Olmsted County. Completion of our database, developing a Food Safety Advisory Council, expanding the systems review concepts and training into the plan review process and other environmental health programs – are all goals for 2000 and beyond. This transition we’re going through is a process of continuous improvements; we’re on a “path to self discovery.”

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Percentage of Risk Factors Identified by Discussion vs. Observation

2001-2004 Olmsted County (N=1142 assessments)

