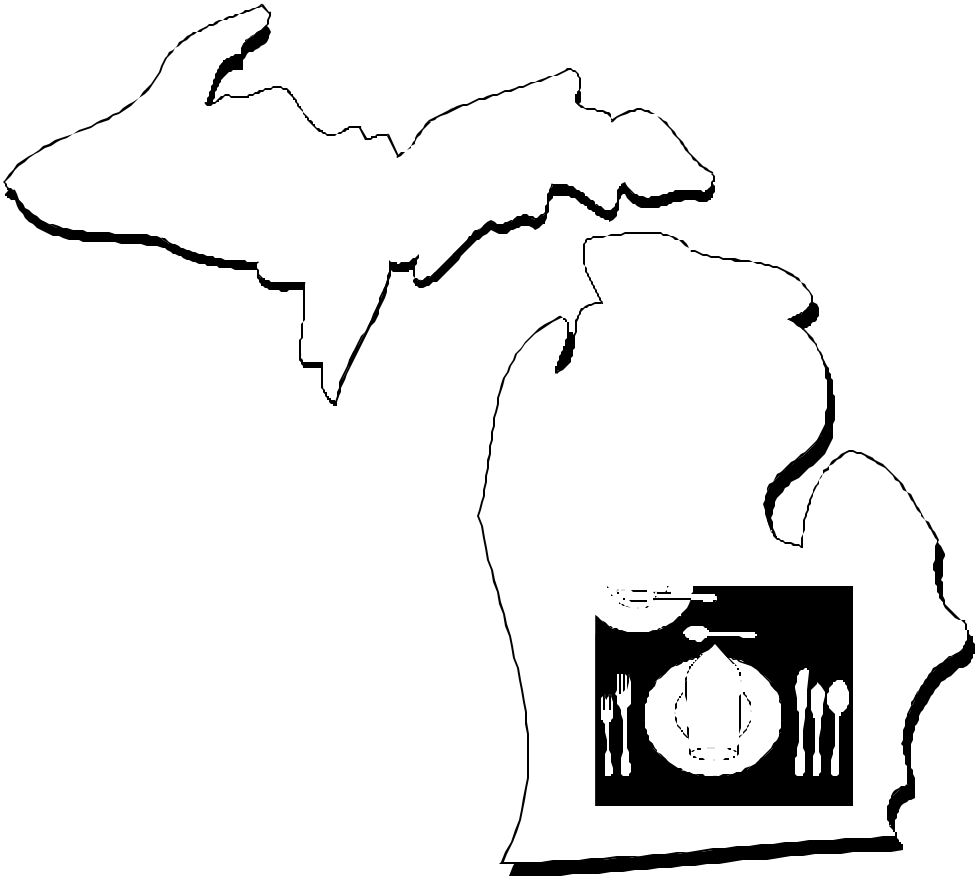
Ingham County, MI
A Story of Suppression
Part 2:
Food Safety Indicators



September 2001

About This Report

In early 2001, PEER was first approached by a number of Ingham County employees to discuss the suppression of a number of reports assessing the overall environmental health of the county and its residents.

A team of people involved with county health issues conducted an extensive analysis of a variety of public health issues. The information they uncovered details past inaction by the county and state officials that have left serious environmental health problems unaddressed. However, after investing many thousands of dollars in the report, the county, fearing negative public backlash, blocked the release of all but one report, which PEER will release in the coming weeks.

This first report, **Ingham County: Food Indicators** is a compilation of information gathered from food inspection team reports. While the research team also covered the topic of "pesticides and food" —a fundamental issue of food safety—that material is not presented here.

Given the tremendous scope of inquiry, the "first draft" food safety report of August 1999, was known to have a number of errors in it. However Health Department administrators did not provide environmental researchers sufficient time to critically review this original study. Therefore, a number of "Editorial Notes" have been included as endnotes and errors are noted throughout this document. Otherwise the original study remains unchanged from its August 1999 presentation.

PEER offers this suppressed report to the Ingham County community as a contribution to improve local public health. Inspection of facilities where food is sold to the public is rising in Ingham County. However, the failure rate of establishments in Ingham County are significantly higher than found in higher counties with a similar population demographic. For example, Washington County, Minnesota (one of the seven Twin City Metro Area Counties) had only a 4% restaurant inspection failure rate in 1998. Furthermore, Michigan does not require the community to be notified when a restaurant fails its inspection. Worse, food establishments with critical violations are not ordered shut.

To avoid distracting from the message and avoid the prospect of future retaliation, the authors have chosen to remain anonymous. The authors also believe that the facts presented herein speak for themselves.

PEER is proud to assist conscientious public servants who have dedicated their careers to the protection of our natural resources and to faithful execution of the laws.

Jeff Ruch
PEER Executive Director

FOOD SAFETY IN INGHAM COUNTY – FOOD SAFETY INDICATORS
EXECUTIVE SUMMARY

A suppressed 1999 study of Ingham County's 898 restaurants and other food establishments found that 29% -- nearly a third of food outlets failed a sanitary food inspection in 1998.

Moreover, the number of failed food inspections climbed a precipitous 265% between 1996 and 1998. There were 57 failed inspections in 1996, 209 in 1997, and 268 in 1998, nearly a three-fold increase.

For a restaurant to fail, a food sanitarian must find 4 or more "critical violations" during the inspection process, which takes, on average, four hours. The leading violations, in 1998 were:

1) poor hand-washing and/or soap and sanitary towel/devices not provided (27%),
2) food temperature violations (21%),
3) necessary toxic items improperly stored, labeled or used (16%), and
4) the presence or evidence of insects and rodents (9%).

Most food establishments are inspected twice per year. In 1998, approximately 82% of food outlets were tested twice (a figure derived from best available evidence). All tolled there were 3,594 critical violations among the 1,466 food sanitary inspections in 1998. ***Disturbingly, the average critical violation count per inspection increased 21% between 1997 and 1999, rising from 2.03 critical violations per food establishment in 1997 to 2.45 in 1998.***

Table Service restaurants (bar and food) had the highest rate of inspection failure. In 1998, of 200 such establishments, 118 failed inspection, a 59% failure rate. Fast food outlets failed 28% of inspections. Of 504 burger, pizza and other fast food outlets, 140 had 4 or more "critical violations," the failure breakpoint indicating conditions that could lead to food poisoning.

Apparently in response to these trends, the Health Department dramatically increased its restaurant enforcement hearings in 1998 and early 1999. In 1996 and 1997 there were only 3 enforcement hearings. This skyrocketed to 26 hearings in 1998 and 27 were held in the first 6 months of 1999. A hearing involves an office meeting between the restaurant owner, the Ingham County Environmental Health administration and the sanitarian bringing the action. The establishment's history of critical violations is discussed and a compliance schedule is negotiated. The establishment may be required to retain the services of a sanitation consultant for four hours per week or participate in a 16-hour management sanitation certification course.

According to a study by the Center for Disease Control, there are an estimated 6.5 million to 33 million cases of food borne illness per year. The range is large because the vast number of illnesses go unrecognized, due to mild, flu-like symptoms that are not reported. In this review, CDC found that *79 percent of the cases involved improper food handling in food service establishments.*

According to the suppressed report, there were 9 local confirmed outbreaks of food borne illness between 1995 and early 1999, affecting 105 people. This may be the tip of the iceberg however, for if one extrapolates from the CDC findings, *there are between 209,000 and a million cases of food borne illness in Michigan each year, and somewhere between 6,500 and about 33,000 cases of food borne illness in Ingham County per year.*

At the high end of the projected CDC estimates, about one in eleven people in Ingham County get sick each year from dining out.

In one other finding of note, the suppressed study reported that ***Ingham County infection rates per 100,000 people for Salmonella and E.coli 0157:H7 exceed goals proposed for Healthy People 2010, a federal guidebook for public health improvement.*** In 1997, there were 23 cases of confirmed Salmonellosis infections per 100,000 people in Ingham County and in 1998 there were 11.3 cases per 100,000. The Healthy People 2010 goal is 6.9 cases of Salmonellosis infections per 100,000 people.

The data in this report was originally researched by the Ingham County Environmental Health Assessment Coordinator, Dr. Brian McKenna, and a food safety worker, Ms. Diane Gorch, at the Ingham County Health Department. It was presented to the Ingham County Environmental Health Roundtable, a community oversight panel, in August 1999. This food safety study was part of a far-ranging environmental health assessment (ranging from indoor air and pesticides to water resources and land use), most of which was suppressed by Health Department administration.

FOOD SAFETY INDICATORS

LAST UPDATED AUGUST 17, 1999

[EDITORIAL NOTES, APPEARING AS ENDNOTES, ADDED SEPTEMBER 2001]

Issue Overview

The Foodservice Sanitation program at Ingham County Health Department licenses and inspects establishments that serve prepared food on the premises. The Michigan Department of Agriculture (MDA) oversees and provides the legal basis and cost-sharing funds for the statewide food service inspection program, while the county provides direct inspection and enforcement services. MDA has established minimum program requirements (MPR) which must be fulfilled to assure a comprehensive and thorough program and cost-sharing monies depend on their fulfillment. Unfortunately, MDA's cost-sharing formula consists of payment based on 5.8 hours per licensed establishment, while at Ingham County, the mandated plan review, inspection, follow-up visits, re-inspections, enforcement hearings, complaint responses and food borne illness investigations have been shown to require over 9 hours per establishment. The following indicators represent some of the measurable parameters that can be used to evaluate the aspects of food safety in Ingham County.

INDICATORS

1. Illness complaints: In the United States, the Centers for Disease Control (CDC) estimates that there are 6.5 million to 33 million cases of food borne illness per year. The range is large because the vast number of illnesses go unrecognized, due to mild, flu-like symptoms that are not reported. CDC conducted a thorough analysis of 7,458 outbreaks and 237,545 cases of food borne illness reported to the agency between 1973 and 1987. In this review, CDC found that *79 percent of the cases involved improper food handling in food service establishments.*

Ingham County Health Department (ICHD) investigates all reports of food borne illness it receives. Standardized interview forms based on CDC recommendations are completed for each complaint, and are logged. Sanitarians then conduct an appropriate investigation of the complaint, and when the investigation is completed, the interview and investigation report are forwarded to MDA for inclusion in their statewide database.

All complaints are entered into a logbook when received. However, the complaints are not screened as to biological plausibility. For example, a person who dined at Restaurant A and experienced *diarrhea* 15 minutes after dining, surely did not acquire his alleged food poisoning at Restaurant A--the *symptoms* and *timing* of food borne illness are not consistent with known food borne illness profiles, so it is unlikely *to have been caused by restaurant A.* So while Restaurant A is named in the complaint, *the real source of the illness is likely to have been a meal consumed at least six hours prior to the onset of symptoms.* Sanitarians attempt to collect information on all meals consumed over the

preceding three days, and make appropriate investigations as to the more probable culprit meal.

The Ingham County Health Department's log was instituted on May 22, 1995, and has been used consistently. A review of the log yielded these figures:

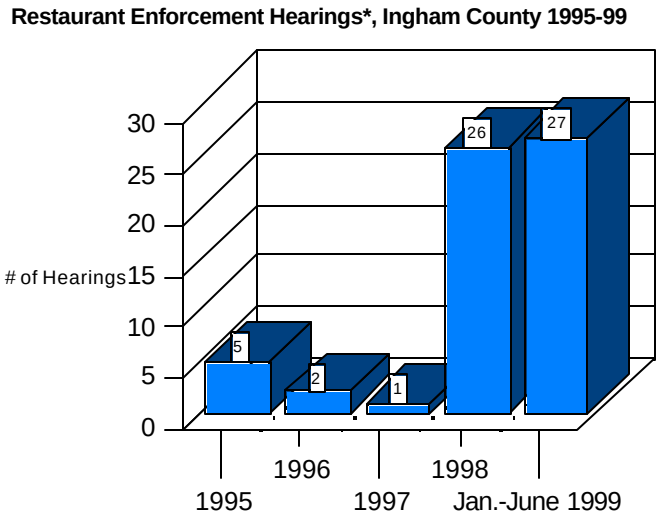
Food Poisoning Complaints to Ingham County Health Department May 1995 – Aug. 1999	
1995 (May-Dec)	43 complaints of possible food borne illness/contamination
1996	69
1997	79
1998	63
1999 (Jan-Aug 16)	30

2. <u>Frequency of inspections:</u> *Ingham County has always attempted to conduct two routine inspections per year.* MDA has recently imposed Minimum Program Requirements (MPR's) pertaining to this, requiring routine inspections to be conducted at six-month intervals, which has reinforced the two per year goal. Since 1992 at least two routine inspections per year have been conducted for over 90% of all establishments in Ingham County[1i].

Research has shown that two or more inspections per year are positively associated with improved sanitation scores[2].

3. <u>Number of enforcement actions per year:</u> In mid-1997 ICHD completed and implemented a protocol for enforcement of Act 368 (The Food Code), which was approved by Corporation Counsel. Enforcement hearings have become more productive, with the result that Sanitarians are now calling more hearings against restaurants with a history of poor sanitation compliance[3].

The numbers of administrative enforcement actions were tallied from a file review of all correspondence from the years 1995-1999. Letters of notification of hearing were counted. For 1995, there were 5 hearings; 1996, 2 hearings; 1997, 1 hearing, 1998, 26 hearings, and as of June



[i] *Errata: This figure may not be correct. In 1998, there were 1,466 inspections of 898 food establishments, an 82% rate. This rate might even be lower still if the 1,466 inspections include food establishments tested 3 or more times.*

1999, there have been 27 hearings.
A hearing consists of an office meeting between the restaurant owner and EH administration and the sanitarian bringing the action. The history of non-compliance[4] is discussed, and a compliance schedule is negotiated. Our department may require that the food service establishment retain the services of a sanitation consultant for five[5] and[6] that restaurant management participate in a 16-hour management sanitation certification course. This has been required of several establishments. If non-compliance continues, a formal hearing including legal counsel, is held. For continued non-compliance, the next step is revocation of the food service license. It is rare for a situation to come to this step.

4. **Number and character of critical violations cited:** Data from 1998 are available due to the continued evolution of the ***Inspector*** software. For licensing purposes, foodservice establishments are divided into Types, consisting of Bar Only, Cafeteria, Church, Commissary, Fast Food, Table Service, Other, and in some databases, Schools. The number of establishments in the various Types are shown below (data is available for 1998):

Type of Food Service Establishment 1998	Number (and %)
Bar Only	24 (2.6%)
Cafeteria	65 (7.2%)
Church	36 (4%)
Commissary	10 (1.1%)
Fast Food	504 (56%)
Other	59 (6.5%)
Table Service	200 (22%)
Total	898 (100% of all existing food establishments)
Total # of establishments failing inspection (see table below)	268 (~29%)

A breakdown of the nature of critical violations and their distribution among the different types of licensed food services establishments appears in the attached table (Appendix A) ***"Critical Sanitary Violations by Institution Type, Ingham County, 1998."*** From a glance it is apparent that establishments typed as Fast Food and Table Service/Bar with Food appear to have the highest ratio of violations per establishment in general. This may be attributed in part to greater complexity of menu, greater business volume, and higher employee turnover than the other types of establishments.

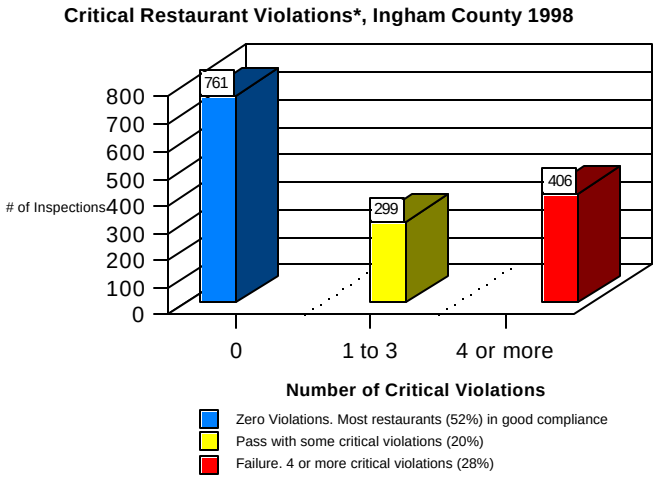
The number (and type) of establishments falling below the minimum sanitation level is shown below[7]:

Number (and type) of Ingham County Food establishments falling below The minimum sanitation level, 1996-1998			
Type of Food Establishment	1996	1997	1998
Bar Only	2	0	0
Cafeteria	1	7	6
Church	0	0	0
Commissary	0	0	1
Fast Food	25	114	140
Other	0	0	1
Table Service (Bar with Food)	29	88	118
Total	**57**	**209**	**268**

Again, "Fast Food" and "Table Service/Bar with Food" are over-represented, and because of the high volume of business, represent the segment most in need of improvement.

For the 1,417 facilities licensed in 1997[ii] the average critical violation count was 2.03. For the 1,465 facilities licensed in 1998[iii] the average critical violation count was 2.32[iv].

It is not clear whether these differences are significant. A distribution of inspection scores, counted by critical violations is depicted below. A score of 4 or more critical violations is considered failing, and a reinspection is required.



[ii] Errata: *should read, "for the 1,417 routine inspections completed in 1997, the average…"*
[iii] Errata: *should read, "for the 1,466 routine inspections completed in 1998, the average…"*
[iv] Errata: *This figure should read 2.45. That is, 3,594 total critical violations divided by 1,466 routine inspections.*

5. <u>Number of *confirmed* food borne outbreaks:</u> A ***food borne outbreak*** is defined as an instance when two or more unrelated people with a common exposure have experienced similar symptoms of illness. When an outbreak is detected, Disease Control (DC) and Environmental Health (EH) collaborate in the investigation, with DC interviewing the victims and EH conducting field visits to the suspect restaurant. A comprehensive protocol for outbreak investigation was written jointly by DC and EH staff, and has been successfully field-tested. Several others have requested this protocol for their own use.

Filed reports of confirmed outbreaks of food borne illness are kept in Ingham County's Disease Control Unit. A search of these files yielded the following information.

Confirmed outbreaks of food borne illness, Ingham County, 1995 – 1999[8]	
1995:	"Sig" outbreak, Etiology not confirmed, 4 cases of illness.
	"St Ch;" Etiology not confirmed, 12 cases.
1996:	"BurHls;" Etiology not confirmed; 3 cases, (negative for enteric bacterial pathogens).
1997:	Multi state outbreak of Hepatitis A due to school lunch program strawberries: 0 cases in Ingham County.
	"Stp" S enteritidis confirmed, 20 cases.
	"Pen" C. perfringens confirmed, 21 cases.
1998:	"WH" Etiology not confirmed, 4 cases.
	"Pncho" Salmonella confirmed, 4 cases.
	"Kel" C perfringens + B cereus confirmed, 35 cases.
1999	"Ar" Etiology not confirmed, 2 cases.

6. <u>Case counts</u> of *Salmonella, Campylobacter, Staph, Clostridium perfringens, Bacillus cereus* and *Listeria monocytogenes* illness. The first four organisms represent the most common food borne pathogens. *Listeria*, while not common, has a high case fatality rate among the immunocompromised and pregnant women. ICHD Disease Control Office records cases of these and other food borne diseases on the Five Year Summary of Reportable Diseases.

Attached please find graphs denoting the rates of illness for these four diseases in Ingham County as compared to the goals set in Healthy People 2010[9].

Though not noted in the graphs, the five-year averages for infection rate for salmonellosis, Campylobacter, Listeriosis, and E. Coli 0157:H7 all exceeded the goals established in HP2000. ***The Ingham County infection rates per 100,000 for Salmonella and E.coli 0157:H7 exceed goals proposed for Healthy People 2010.*** The goal for Listeriosis has not yet been established. Note, however, that Ingham County's Listeria case count averages 0.2 cases per year: it is likely that we will exceed the goal when it is established.

7. Numbers of temporary food service establishment licenses issued and inspected each year: All licensed temporary food service establishments must be inspected unless an MDA-approved alternative inspection policy and procedure has been adopted (see below). A temporary food service establishment (TFSE) is a short-term food service set up normally in conjunction with an event, where a limited menu may be served with minimal facilities. TFSEs are frequently seen at ***festivals, picnics, and barbecues*** [10]. To be licensed, operators must view a slide presentation and complete a checklist so that they understand what will be required of them[11].

A computer database exists for temporary licenses issued and inspections conducted for 1997 and 1998. The data are presented below:

Number of temporary food service establishment licenses and inspections Ingham County, 1997, 1998	
1997	340 licenses were issued and 277 inspections were conducted (81%)
1998	296 licenses were issued and 230 inspections were conducted (77%)

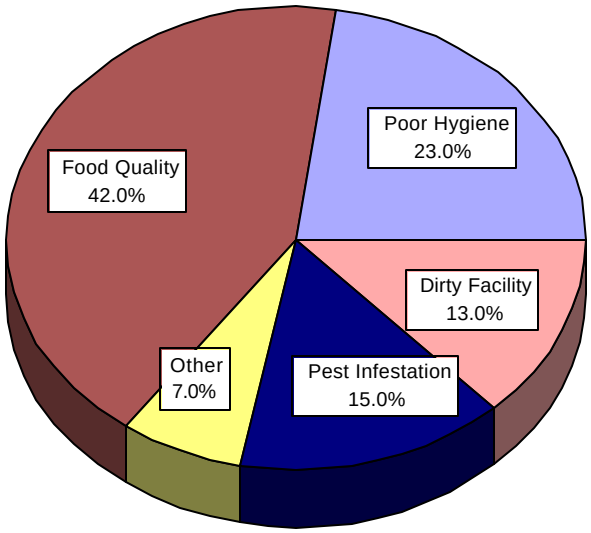
An inspection is *not required* when 1) an operator has been previously licensed and inspected, and has performed well; or 2) when food is prepared in a licensed kitchen and is transported complete to be served without modification in a remote location. These circumstances account almost entirely for the disparity between the number of licenses issued and the number of inspections conducted[12].

8. Number of consumer complaints and related inquiries received per year. This information was retrieved using the *Inspector* software. The data is reliable for 1998, and less complete for 1997, since we are a test/development site for this software and our use of it is evolving.

These complaints are any which do *not* relate to possible food borne illness, such as "foreign objects in food" or "dirty facilities." These are investigated as warranted by the sanitarians. In 1998 there were 73 complaints, 53 (73%) of them regarding fast food establishments; and another 15 (20%) involved table service (bar with food) establishments. The breakdown of the 73 complaints by the type of food service establishment involved is shown on Worksheet 6-6, table 3[13]. These can be further broken down by the nature of the complaints. Here are the major complaints against fast food establishments:

Consumer Complaints against Fast Food Establishments Received by the Ingham County Health Department in 1998 Note: these are complaints unrelated to possible food borne illness)		
Type of Complaint	**Number**	**Percentage**
Food Quality	22	41.5%
Poor hygiene	12	22.6%
Pest infestation	8	15.1%
Dirty facility	7	13.2%
Foreign object	2	3.8%
Dirty utensils	1	1.9%
Sewage	1	1.9%
Improper cleaning	1	1.9%
Single service protection	1	1.9%
Contaminated package	1	1.9%
Smoking	1	1.9%
Lack of potable water	1	1.9%

Investigated Formal Complaints Against
Fast Food Establishments, 1998 By Type of Complaint



Changing Ideas in Inspection and Enforcement

The scope of routine inspections is broad. Violations can be divided into two groups. The first is comprised of ***"critical violations,"*** which are likely to contribute to food contamination, illness, or environmental health hazard [***see Appendix A*** for a thorough breakdown of data for 1998]. These require immediate remediation. Critical violations are printed in red on the *Food Service Establishment Inspection Report Form*, and are each assigned 4-5 demerit points in the FDA Model Inspection Report form.

The second group consists of ***"non-critical violations,"*** conditions that contribute to problems in food safety, but do not *directly* compromise food safety. These appear printed in black, and bear scoring ratings of 1-2 demerit points. A demerit score of 70 or below is considered failing, (100 being a perfect score).

About two years ago our department began participating in a pilot program, which uses the actual count of critical violations, rather than a demerit scoring system. If a total of four instances of improper food temperature, cross-contamination or other critical items are found, an inspection is considered failing. The critical items must be corrected immediately, and a reinspection is also scheduled, at which time substantial progress toward complete compliance is expected. If conditions are not substantially improved at that time, an informal hearing is scheduled with EH administrators and restaurant owner/management[14].

The recording system in use in the *Inspector* program and data reported here, reflect the rating system using critical counts.

The change in focus to critical violations from demerit points reflects the increasing emphasis on HACCP, or *Hazard Analysis Critical Control Point*, methodology. An emphasis on HACCP principles, the "critical violations", is used to direct the inspection toward emphasizing the most important processes and hazards, and moving away from citing structural violations which are easier to see, but may have a minor influence on food safety[15].

HACCP: Background

HACCP was conceived by Pillsbury and the National Aeronautics and Space Administration (NASA) in the 1970's as a system to guarantee that astronauts would not get food poisoning in space. There are seven steps to textbook HACCP:

HACCP's Seven Steps to Assure Food Safety	
Step	**Explanation**
1. Hazard analysis	Identifies which hazards may be present in a given process or recipe. Ex: Raw chicken carries harmful bacteria. The bacteria are the hazard.
2. Identify critical control points (CCP)	These are the points at which hazards are eliminated if applied correctly, and where hazards persist if not applied correctly. Ex: Cooking the chicken thoroughly. The cooking step is the CCP.
3. Establishing critical limits for each control point.	For example, cooking chicken "thoroughly" will mean cooking chicken to an internal temperature of 165 degrees F, the "critical limit."
4. Monitoring the CCP requirements and using the data gathered to effectively	For example, using a thermometer to measure the temperature of cooked chicken, adjusting cooking time or temperature as needed to assure best quality as well as

control processes.	proper temperature.
5. Corrective action.	For example, if chicken is not at internal temp of 165 degrees F when removed from oven, log it in and put back in oven to continue to heat to proper temperature.
6. Record keeping.	Keeping a temperature log for cooked foods, including corrective actions taken.
7. Verification	Spot checking the processes to be sure that the records reflect reality.

HACCP methodology is readily applicable to food processors, where the day to day operation varies little. In a factory which produces 20,000 pot pies each day, the production can be analyzed according to HACCP and the principles applied consistently. It may also be successfully applied to chain restaurants with unchanging menus. However, HACCP in its pure form is difficult to apply in restaurants with variable menus, particularly the analysis of the recipes, which typically involve flow charts for each recipe, and the extensive record keeping required by the "pure" HACCP concept. Another important point is that HACCP is a managerial undertaking. It cannot be imposed upon an establishment from without, and it is not an enforcement tool. The HACCP plan can be reviewed by outside agencies, but its implementation must necessarily be by management, within the facility[16].

A form of modified HACCP has been explored by MDA. While it enjoyed moderate success in the facilities that *volunteered* to undertake the program on an experimental basis, about 25% of the volunteer establishments dropped out. The corresponding time expended per establishment for HACCP program review by the health department (in lieu of conventional inspections) was about 24 hours. Given the present staffing and funding levels, even modified HACCP as a policy is impractical. ICHD has shifted emphasis from a total count of violations, which can include a preponderance of floor, wall and ceiling deficiencies, to critical counts, which reflect the true risk to food safety and a more science-based and effective intervention[17].

EMERGING PROBLEMS IN FOOD SAFETY (in no particular order)

1. ***Aging population.*** Older people have less vigorous immune systems, and are therefore a "vulnerable population." Food borne illness can assume more serious manifestations in older people. A recent outbreak of Food borne Listeriosis had an 11 % case fatality rate in persons below 40 years of age, and 63% in those above 60 years of age (source: Benenson, 1995).

2. ***Increasing numbers of children in child care.*** Diarrhea illness can spread very rapidly within groups of children, especially those in diapers. A single case of Food borne infection could easily have substantial secondary spread in a day care situation. Giardiasis has been seen to spread rapidly in this situation in Ingham County.

3. ***Increasing numbers of immunocompromised citizens.*** People who experience immunocompromization resulting from chemotherapy for various cancers, and resulting

from AIDS and other serious illness, are increasingly resident in the community, rather than in medical institutions. Pregnant women also represent a vulnerable population, for whom food borne illness can represent an increased hazard. While food borne Listeriosis in a non-pregnant person produces flu-like symptoms, a pregnant woman transmits the infection to her fetus, which develops septicemia and meningitis with a case fatality rate between 30-50%.

4. ***More meals are produced outside the home.*** (Statistics on women in the workplace.) Working parents often rely on carryout foods for their meals. Delis produce ready-to-eat meals. Eateries such as Boston Market produce carry-out entrees and side dishes, and fast food restaurants such as IngCredible (a Chinese restaurant), Taco Bell, and all the big chains, produce fast, ready to eat, kid-pleasing meals. The average American consumes about 7 meals each week that are produced outside the home.

5. ***More imported foods are available.*** Soft Mexican cheeses, and lately, French cheeses made from unpasteurized milk, have been vehicles for food borne Listeriosis. Increasing quantities of imported foods increase risks of food borne illness due to variable sanitation practices. Importation of foods from countries where sanitation practices are inferior increases the risk that our population will be exposed to pathogenic organisms. Raspberries and basil produced in Guatemala were recently the vehicle for Cyclospora food borne illness.

6. ***Domestic production practices are changing.*** Eggs are now produced by hens, which are housed in huge poultry facilities, in great concentrations. Due to the crowded conditions, pathogens can evolve and spread quickly. The contents of fresh, clean shell eggs were generally considered to be "sterile," until about 10 years ago when hens in the eastern US were found to be producing eggs with Salmonella enteritidis *inside* the eggs. The extensive use of antibiotics in animal feed as a growth enhancer has lead to the development of antibiotic resistant strains of pathogenic bacteria -- a fact that is nevertheless vigorously challenged by livestock interests.

7. ***Bacterial evolution.*** Newly emergent strains and species of bacteria cause problems that were not present, or at least understood, only a few years ago. *Aeromonas hydrophila* has long been known as a fish pathogen, and is now turning up unexpectedly as a food borne pathogen. *E. coli O157H7* was first described here in Michigan in 1982, an apparently new strain capable of causing not only conventional gastrointestinal distress, but hemolytic uremic syndrome and death, especially among the aged and children.

8. ***Consumer trends.*** Consumer consumption trends have been towards fresh, unprocessed foods, which necessarily omit the processing and "sanitizing" steps (canned foods are considered sterile, and frozen vegetables and fruits are often blanched in boiling water, which stops enzymatic ripening and spoilage, and also significantly reduces microbial populations). The emphasis on fresh foods means that food safety critical control points lie in the growing and packing of such foods, rather than the processing steps that are omitted.

Outbreaks of Cyclospora food poisoning continue to be associated with imported foods of a delicate nature such as fresh raspberries and sweet basil. A multi-state outbreak from Guatemalan raspberries was traced to contaminated surface water that was used to irrigate the plants. Sanitation facilities, both for handwashing and privies available to the workers were non-existent or sadly deficient. Incidents aplenty also exist regarding domestic produce.

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[1] Editorial Note: *In fact, the Health Department did not always inspect a food establishment every 6 months. Sometimes it was every 7, 8, 9, or more months. For example the ICHD conducted fewer inspections on those food establishments that had good records; those that did not have a critical violation during the past two routine inspections. Also the Health Department did not inspect churches (or various types of halls) twice a year since these kitchens would not typically be used every day. The Michigan Department of Public Health, when it existed, approved that monitoring strategy. However, the Michigan Department of Agriculture, which now has legal authority over the Health Department's food inspection program, has required a local health department to re-submit its reduced frequency program proposal for review and approval before it can be accepted by MDA. ICDH has not submitted a proposal yet. Now, according to MDA's requirements, the ICHD must inspect all food establishments every 6 months (for those that are open 12 months out of the year), whereas formerly it never had to be done. Moreover, seasonal establishments are only required to be inspected once per licensing year. These include satellite school kitchens and summer food vendors such as hot dog and ice cream stands.*

[2] Editorial Note: *Indeed, Ingham County Health Department inspections have proven that certain "bad actors," including many fast food outlets, require more frequent inspections. Some establishments have been set up to be inspected 3 or 4 times a year. Unfortunately, the Health Department's new "Inspector" software program often fails to alert staff to increase its inspections of poorly performing food establishments. Managers can manually override the software's twice-per-year-inspection-mandate. However a problem exists in either entering the changes in frequency or else the computer does not acknowledge the frequency increase. Thus field staff may not necessarily inspect establishments more than twice per year.*

[3] Editorial Note: *The Health Department's enforcement directives are based solely on its sanitation code of the 1970s. Until the sanitary code is updated and approved by the Ingham County Board of Commissioners, it could be challenged.*

[4] Editor's Note: *history of critical violations*

[5] Editorial Note: *typically only four hours per week*

[6] Editorial Note: *this should read "or" because the Health Department does not always require it.*

[7] Editorial Note: *It is unclear whether an individual food establishment, which may receive 3 or 4 inspections a year, is counted more than once in the table below. Otherwise, the figures below are accurate.*

[8] Editorial Note: *Unfortunately, we are unable to translate the names of the offending food establishments indicated below (as in "Sig," BurHls," Pncho," and so on), though the reader*

might be able to guess at some. For those interested, please contact the Health Department at (517) 887-4312.

[9] Editorial Note: *These graphs were not available for this report but should be available at the Health Department (517) 887-4312.*

[10] Editorial Note: *or street corner vendors.*

[11] Editorial Note: *The temporary slide presentation is no longer available for review at the department.*

[12] Editorial Note*: Or, apparently for some cases, the disparity is also due to the Health Department failing to conduct the inspection*.

[13] Editorial Note: *This table might still be available from the Health Department.*

[14] Editorial Note: *In fact, the food establishment usually receives at least 3 follow-up inspections before the Ingham County Health Department institutes an informal hearing. One reason: not all critical violations can be corrected immediately. Sometimes a plumber must be hired, or a pest control operator. So additional time is required for a food establishment to fully correct some critical violations. In addition, the Health Department no longer uses the term "reinspections." They are now considered "follow-up inspections."*

[15] Editorial Note: *It may appear that HACCP is a dramatically new inspection system, but you should know that HACCP was in place when conducting inspections using the old state inspection form. Food handling procedures were scrutinized previously and continue to be assessed as part of the new way of completing inspections. Structural violations continue to be cited. Still, it appears that the new HAACP protocol is an advance: it makes some food inspection techniques more explicit and systematic, while offering some new guidelines to protect the public.*

[16] Editorial Note: *HACCP recipes have been developed by many restaurants and implemented successfully. The recipes and flow charts are typically in a binder available for cooks to review.*

[17] Editorial Note: *Still, it is important to point out that food-handling procedures were always reviewed while conducting inspections. There has been no drastic shift in emphasis. Food inspectors should know where the 'true risk to food safety' is*.