- Final Report -

Gastrointestinal Outbreak
Rosati's Pizza – Cary, IL
August 2002

Investigation by:
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INTRODUCTION

On August 6, 2002, the Environmental Division received a phone call at approximately 11:45 a.m. from a family who was experiencing similar gastrointestinal symptoms. The family had hosted a baptismal party on August 4, 2002, which was partially catered by Rosati's Pizza, Cary. Food items were also obtained from a local grocery store and bakery. The Department's investigation that ensued identified eighteen (18) individuals from two separate parties, who experienced similar gastrointestinal symptoms including diarrhea and abdominal cramping.

This report will review the methodology utilized in this investigation, the final findings, and a discussion of those findings. The appendices include graphs and tables depicting data from the epidemiological and environmental investigations and laboratory testing along with the various forms used to conduct and organize the data and information received in the field.

METHODS

A foodborne illness investigation includes obtaining case histories of those ill and those who are well, but still potentially at risk because of their exposure to those who became ill. It is also necessary to obtain clinical specimens to identify an etiologic agent for the illness. From these preliminary efforts, a case definition is developed to appropriately classify individuals interviewed as either a case or a non-case. The statistical significance of testing in this program helps us to determine what food exposures could be related to disease. The most common statistical testing in the outbreak setting is the chi-square test, the definition being a chi-square larger than 3.84 is significant and corresponds to a p-value smaller than 0.05, meaning that we are ninety-five percent (95%) sure that our findings were not due to chance. An odds ratio is also calculated to determine the strength of association between eating a food item and onset of illness. An odds ratio greater than 1 signifies that those who ate a particular food were more likely to become ill than those who did not eat the food. The chi-square test works well

if the number of people in the test is large. Paralleling this epidemiological investigation is an environmental investigation that includes the physical and procedural examination of pertinent operations and the collecting of food samples of implicated food items. The next stage of the investigation includes the development of hypotheses about the contributing factors to the illness and the examination of associations that develop from the data that has accumulated from the environmental, epidemiological and laboratory findings.

The epidemiological investigation began on August 6, 2002 after receiving an individual report of a family who had eaten food at a baptismal party catered by Rosati's, Cary, and were experiencing similar gastrointestinal illness. A phone conference was held between the Communicable Disease Coordinator and the Field Staff Supervisor. This meeting shared information and established an initial response strategy for the epidemiological and environmental investigations.

On August 6, and 7, 2002 the Communicable Disease Section staff conducted case history interviews of the Baptismal Party group. Twenty (20) of Twenty-four (24) attendees were interviewed. Ten (10) ill and ten (10) well were interviewed utilizing a questionnaire, which included symptoms as well as food history, developed by Communicable Disease and Environmental Health staff specifically for this incident.

Stool samples were collected from five (5) individuals from the Baptismal group on August 6 and 8, 2002.

An Environmental Health Practitioner visited Rosati's Pizza on August 6, 2002 to evaluate and review food handling procedures and practices, and to request the retention of any food products that may have been involved in the event that may be onsite. Food handling staff was not available onsite at that time who could provide information regarding the foods prepared for the catered event. The

Department requested copies of sales receipts or names of other catered events from Rosati's Pizza, but was told the information was not immediately available.

Two Environmental Health Practitioners returned to Rosati's Pizza on August 7, 2003. Utilizing a Hazard Analysis and Critical Control Point (HACCP) approach, the Environmental Health Practitioners reviewed in detail, the food handling steps associated with preparing the food items served at the baptismal party. The food facility was temporarily closed until the documentation and contact names for other recently catered events could be provided by the management. Environmental staff contacted these groups and individuals to determine if other customers were experiencing similar illness.

A second group, who had held a Harry Potter party, catered by Rosati's, Cary, who was also experiencing similar gastrointestinal illness, was identified through phone contacts provided by Rosati's Pizza. Rosati's had catered the Harry Potter Party on August 4, 2002. On August 7 and August 8, 2002, the Communicable Disease Section staff conducted case history interviews of the Harry Potter Party group. Twenty-nine (29) of thirty-six (36) attendees were interviewed. Eight (8) ill and twenty-one (21) well were interviewed utilizing a questionnaire developed by Communicable Disease and Environmental Health staff specifically for this incident.

Stool samples were collected from four (4) individuals from the Harry Potter party on August 7, 8 and 9, 2002.

A third group was identified who had held a party catered by Rosati's, Cary, on August 4, 2003. No individuals in this group reported illness.

A water sample was collected from Rosati's Pizza on August 7, 2003.

Environmental health staff contacted the hosts of each of the three group parties and reviewed how the catered foods were handled prior to, during and after service.

Samples of the beef were collected from the hosts of the Baptismal Party and Harry Potter Party Groups on August 8, 2003, and from the third group on August 9, 2003.

Throughout the investigation, the foodborne illness investigation team met to review the progress of the investigation and to continually refocus staff efforts based upon the most recent information from the ongoing investigation.

FINDINGS

There were eighteen (18) individuals from two (2) separate groups, in the outbreak investigation, that developed illness associated with the consumption of the beef au jus provided by Rosati's, Cary.

The epidemiological findings for the two (2) groups of individuals are as follows:

Baptismal Party – August 4, 2002

There were ten (10) individuals identified in the outbreak investigation that developed illness associated with the consumption of beef au jus. The **case definition** that was developed **specified a case would be someone who attended the Baptism Party on August 4, 2002 and consumed food catered by Rosati's, Cary between 2 and 2:30 pm, and became ill eight (8) to sixteen (16) hours after eating, with symptoms of diarrhea, abdominal cramps, nausea, vomiting and chills persisting for four and one-half (4.5) to twenty-four (24) hours.** Ten (10) ill and ten (10) well were interviewed utilizing the EPI INFO questionnaire. The illness was characterized by diarrhea (100%), abdominal cramps (90%) nausea (20%) vomiting (10%) and chills (10%.) The

duration of symptoms averaged fourteen and one-half (14.5) hours with a range of four and one-half (4.5) to twenty-four (24) hours. The incubation period averaged twelve (12) hours with a range of eight (8) to sixteen (16) hours. (See epidemiological findings in Appendix A.) These symptoms, incubation time and duration are typical to several foodborne pathogens. An examination of foodborne pathogens is provided in Appendix D. An examination of gender of those ill and not ill did not reveal any association with the development of illness or persistence of symptoms.

Statistical analysis of the food indicated that an odds ratio could not be calculated for the beef au jus due to a zero (0) in the 2 X 2 table (no individual who did not eat the beef au jus became ill.) To further evaluate the potential association with this outbreak, chi-square and p-values were calculated utilizing EPI INFO. This information is included in Appendix A. The chi square value for the beef au jus was 7.4725 and the p-value was .0147058824. Therefore consumption of the beef au jus was statistically associated with illness. The illness attack rate for the beef au jus was 77%, and no individuals who did not eat the beef au jus became ill. This further confirms the association between the consumption of beef au jus and illness.

Harry Potter Party – August 4, 2002

There were eight (8) individuals identified in the outbreak investigation that developed illness associated with the consumption of the beef au jus. The **case definition** that was developed for this outbreak **specified that a case would be someone who attended the Harry Potter Party on August 4, 2002, and consumed food catered from Rosati's Pizza between the hours of 3 and 4 pm and became ill five (5) to sixteen (16) hours after eating, with symptoms of diarrhea, abdominal cramps, headache and weakness persisting for two (2) to seventy-two (72) hours.**

Eight (8) ill and twenty-one (21) well were interviewed utilizing EPI INFO. The illness was characterized by diarrhea (100%), abdominal cramps (89%), and headache (33%), and weakness (33%). The duration of symptoms averaged thirty-one (31) hours with a range of two (2) to seventy-two (72) hours. The incubation period averaged fifteen (15) hours with a range of five (5) to sixteen (16) hours. (See epidemiological findings in Appendix B.) These symptoms, incubation time and duration are typical to several foodborne pathogens. An exam of foodborne pathogens is provided in Appendix D. An examination of gender of those ill and not ill did not reveal any association with the development of illness or persistence of symptoms.

Statistical analysis of the food items indicated an odds ratio of 3.80 for the ranch pepper sauce. The beef au jus carried an odds ratio of 20.66378. To further evaluate the potential association with this outbreak, chi-square and p-values were calculated utilizing EPI INFO. This information is included in Appendix B. The chi square for the ranch pepper sauce was 5.9832 with a corresponding p-value of .0224538081. The chi square value for the beef au jus was 1.7732 with a corresponding value of .1106230102. The illness attack rate for the ranch pepper sauce was thirty percent (30%), and twenty-six percent (26%) for the beef au jus.

Summary Findings

To further evaluate the statistical significance of the consumption of the beef au jus and/or ranch pepper sauce, the statistical association was calculated for these foods using all of the data from both of the groups. This analysis indicated an odds ratio of 12.28 of becoming ill for the beef au jus, with a 95% confidence limit of 1.45 – 104.28. The chi square was 7.23 with a corresponding p-value of .0072. The odds ratio for the ranch pepper sauce was zero. The chi-square for the ranch pepper sauce was 1.19 with a corresponding p-value of .3954. This confirmed an association between eating the beef au jus with the onset of illness.

Those who ate beef au jus were 12.28 times more likely to become ill than those who did not eat beef au jus.

All nine (9) stool samples were negative for Norovirus. Seven (7) stool samples were also analyzed for *Salmonella*, *Shigella*, *Campylobacter*, *E. coli*, and *Bacillus cereus*. All seven (7) stool samples were negative for these organisms. Nine (9) stool samples were analyzed for *Clostridium perfringens*. Eight (8) of the nine (9) stool samples were positive for *Clostridium perfringens*.

The water sample was negative for coliform bacteria.

The beef sample from the Baptism party was negative for *Salmonella* and *E. coli*. However, five (5) million colony forming units (cfu) per gram of *Clostridium perfringens*; thirteen hundred (1300) cfu of *Bacillus cereus*, and greater than 1100 cfu of coliform bacteria were found in the beef. The standard plate count for the beef was 5,400,000 cfu per gram. (See Appendix E.)

The beef sample from the Harry Potter party was negative for *Bacillus cereus*. However three (3) million cfu per gram of *Clostridium perfringens* was found in the beef. (See Appendix E.)

The beef from the third party was negative for *Clostridium perfringens*. 1400 cfu per gram of *Bacillus cereus* were found in the beef. (See Appendix E.)

Discussion:

The pathogen for this outbreak was *Clostridium perfringens*. Clostridium perfringens is a spore forming anaerobic bacterium which causes an intestinal disorder characterized by sudden onset of colic followed by diarrhea; nausea is common, but vomiting and fever are usually absent. The incubation period is from six (6) to twenty-four (24) hours, usually ten (10) to twelve (12) hours. The disease is typically short in duration; usually less than one (1) day. The reservoir

for *Clostridium perfringens* is soil and the intestinal tracts of healthy people and animals. Food intoxication caused by *Clostridium perfringens* is associated with ingestion of food that was contaminated by soil or feces and then held under conditions that permit multiplication of the organism. Almost all outbreaks are associated with failure to cool cooked meats promptly and adequately. Spores survive normal cooking temperatures, germinate and multiply during slow cooling, storage at ambient temperature and/or inadequate reheating. The toxin is produced during the sporulation in the small intestines, resulting in the illness.

Clostridium perfringens can be found in approximately fifty (50) percent of raw or frozen meat; the beef may have been contaminated with *Clostridium perfringens* when it was purchased, or the pathogen may have been introduced into the food through the food handler (inadequate handwashing) or through contact with contaminated utensils or surfaces.

The Environmental investigation did identify numerous deficiencies in the preparation of the beef which would allow for the rapid multiplication of *Clostridium perfringens*. (See Appendix F.) The beef roasts were very large in size - approximately fifteen to twenty pounds each. Various scenarios regarding how the beef was prepared were provided by different food staff. Most staff was unaware of minimum required internal cooking temperatures. It is likely that the internal temperature of the beef did not reach a high enough temperature during the cooking process to destroy the *Clostridium perfringens* spores. Food staff also provided varying information regarding how the roasts were cooled after cooking. Some staff indicated that roasts were reduced in size for cooling, while other staff indicated that the large roasts were cooled whole. The large, whole roasts would have been difficult to cool properly even under refrigerated conditions. It has been the Department's experience with cooling large quantities of food, that the food items can remain at unsafe internal temperatures (41 degrees F to 140 degrees F) for well over twenty-four hours. The addition of large quantities of hot food to a refrigeration unit can also elevate the

temperature of the interior of the refrigerator resulting in longer cooling times. Department staff also noted that previously prepared, potentially hazardous foods were not labeled with the date and time of preparation. Without this labeling, staff would be unable to verify that prepared, potentially hazardous foods were cooled within the allowable time limits.

The hosts of the parties were not provided with any written directions for proper reheating of the beef upon receipt. Potentially hazardous foods should be rapidly reheated to 165 Degrees F. The host of the third party indicated that she thoroughly reheated the beef at a high temperature on the stove top prior to service. No individuals in this party experienced illness. The host of the baptism party stated that the beef was at room temperature upon receipt. Both the beef and au jus were heated for approximately ten (10) minutes prior to service. The host of the Harry Potter party indicated that the beef was delivered at ambient temperature by Rosati's Pizza. The hot au jus was poured over the beef, placed on sternos and immediately served.

Failure to confirm the minimum internal cooking temperatures, the slow cooling of the large beef roasts, and failure to rapidly reheat the beef to a safe temperature allowed for the rapid growth of C. perfringens, which can double in number every ten (10) minutes under optimal conditions. The standard plate count of 5, 400,000 and > 1100 cfu per gram of coliform bacteria also indicates a gross bacterial contamination of the beef resulting from significant mishandling of the beef. The Illinois Department of Public Health has established a maximum acceptable limit of fifty thousand colonies per ml (standard plate count) and 20 colonies per ml (coliform) for pasteurized soft serve mix. The Bacillus cereus, which was confirmed in two (2) of the three (3) food samples was well below the estimated infectious dose of 1,000,000 to 100,000,000 to cause illness. Its presence, however, is another indication of the gross mishandling of the beef.

CORRECTIVE ACTION

The environmental investigation confirmed that there is a lack of management oversight with appropriate interventions where necessary, at the critical points in the foodhandling processes, to prevent the introduction and/or growth of pathogenic organisms in the food items which can result in foodborne illness. The Department met with management of the facility on August 16, 2002 to review the required corrective action (See Appendix F.) In addition the following recommendations should be implemented:

- A self-inspection system should be developed by the operators of Rosati's Pizza. The self-inspection system should incorporate necessary, immediate interventions when critical problems are identified.

- A complete Hazard Analysis and Critical Control Point program should be developed and implemented.

- Additional staff of the food establishment should become certified food service managers to oversee all food handling procedures. The certified personnel should include front line staff as well as management.

Appropriate management strategies to ensure adherence by all food staff to food protection and practices are essential if future illness outbreaks are to be prevented.

Appendix A

Epidemiological Findings – Baptism Party

Percent Ill by Group
Foodborne Illness Investigation
August 4, 2002 – Baptism Party
Rosati's Pizza and Catering, Cary

GROUP	KNOWN ATTENDANCE	KNOWN ILL*	PERCENTAGE ILL
Baptism Party	24	10	42%

* 20 of 24 interviewed

Incubation Period of Ill
Foodborne Illness Investigation
August 4, 2002 – Baptism Party
Rosati's Pizza and Catering, Cary

Mean	12 Hours
Median	13.5 Hours
Mode	14
Range	8 – 16 Hours

Duration of Symptoms
Foodborne Illness Investigation
August 4, 2002 – Baptism Party
Rosati's Pizza and Catering, Cary

Mean	14.5 Hours
Median	14 Hours
Mode	None
Range	4.5 - 24 Hours

Statistically Significant Results of Food Analysis
Foodborne Illness Investigation
August 4, 2002 – Baptism Party
Rosati's Pizza and Catering, Cary

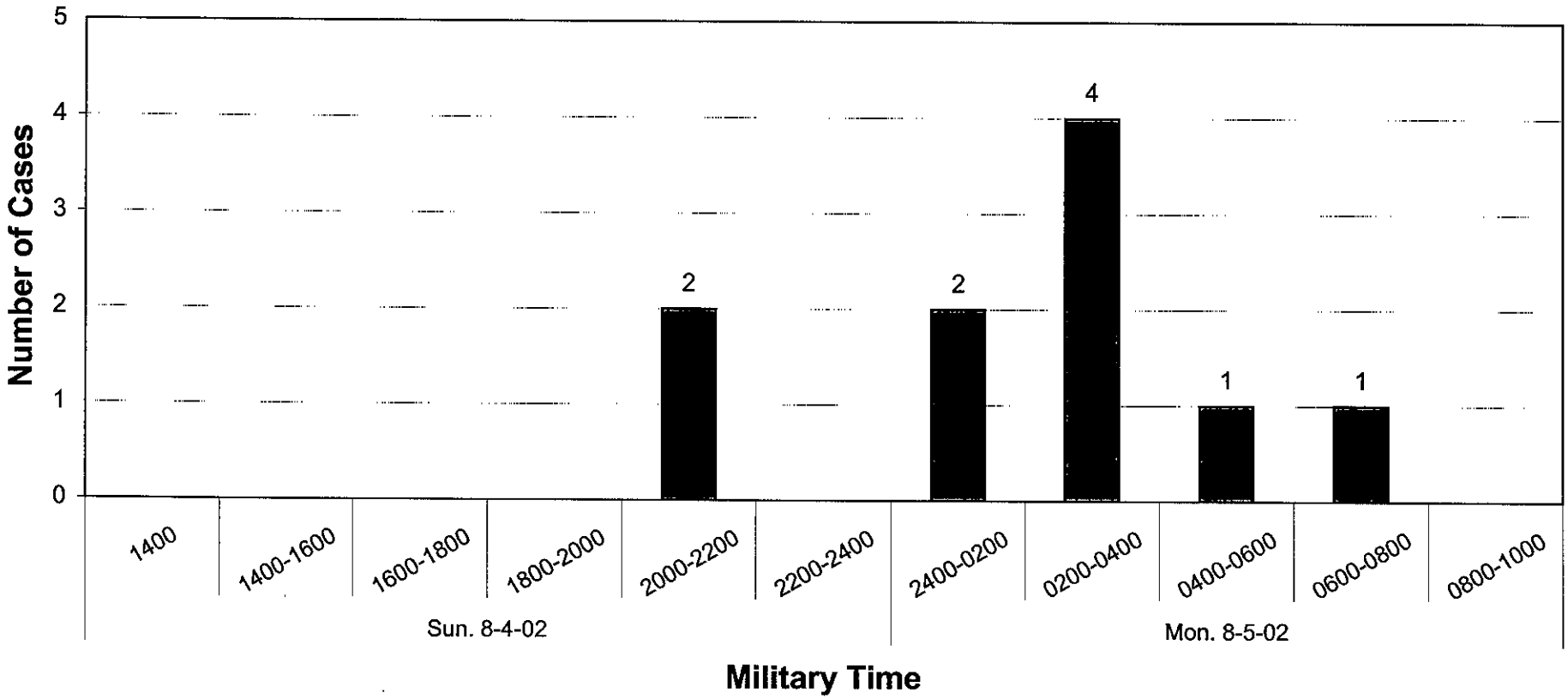
Food Item	P-Value*	Chi-Square*	Odds Ratio
Beef Au Jus	.0147058824	7.4725	Undefined

* A p-value of <0.05 suggests the food item is associated with the outbreak.

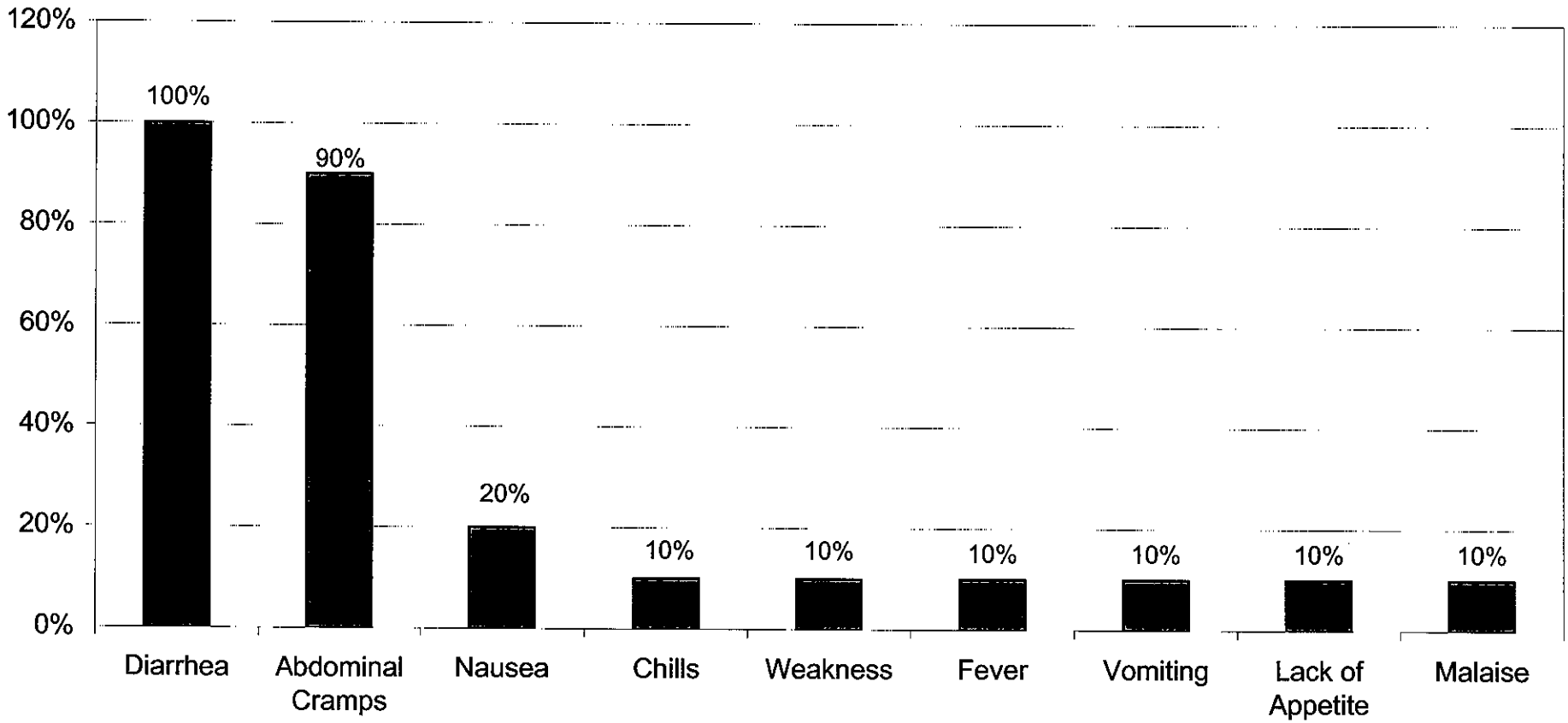
Attack Rate Table
Foodborne Illness Investigation
August 4, 2002 – Baptism Party
Rosati's Pizza and Catering, Cary

FOOD ITEM	ATE FOOD				NOT ATE				DIFFERENCE
	ILL	NOT ILL	TOTAL	% ILL	ILL	NOT ILL	TOTAL	% LL	
Fried Chicken	6	4	10	60%	4	3	7	57%	3%
Mostaccoilli	9	7	16	56%	1	0	1	100%	-44%
Beef Au Jus	10	3	13	77%	0	4	4	0%	77%
Roll	6	2	8	75%	4	5	9	44%	31%
Salad	4	4	8	50%	6	3	9	67%	-17%
Dressing	2	2	4	50%	8	5	13	62%	-12%
Watermelon	2	3	5	40%	8	4	12	67%	-27%
Pineapple	1	0	1	100%	9	7	16	56%	44%
Cantelope	1	1	2	50%	9	6	15	60%	-10%
Grape	2	2	4	50%	8	5	13	62%	-12%
Peppers	1	0	1	100%	9	7	16	56%	44%
Strawberries	1	1	2	50%	9	6	15	60%	-10%
Taco Chips	1	1	2	50%	9	6	15	60%	-10%
Broccoli	0	2	2	0%	10	5	15	67%	-67%
Tomato	1	2	3	33%	9	5	14	64%	-31%
Carrots	2	1	3	67%	8	6	14	57%	10%
Cucumber	1	1	2	50%	9	6	15	60%	-10%
Peas	1	1	2	50%	9	6	15	60%	-10%
Cake	1	1	2	50%	9	6	15	60%	-10%
Soda	6	4	10	60%	4	3	7	57%	3%
Wine	2	2	4	50%	8	5	13	62%	-12%
Dip	0	2	2	0%	10	5	15	67%	-67%
Ice	1	2	3	33%	9	5	15	64%	-31%

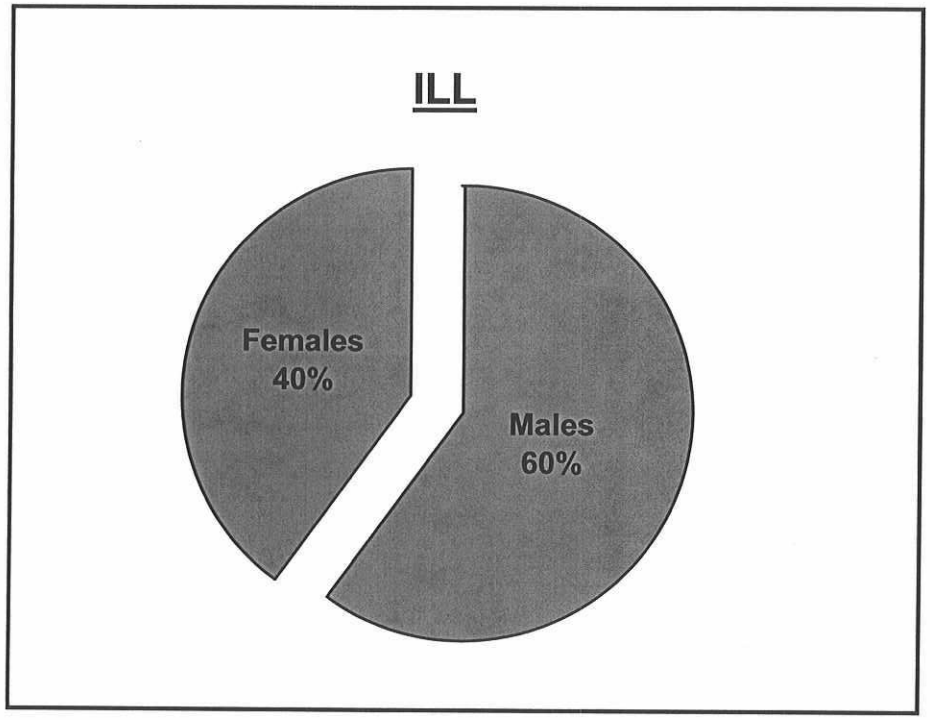
Date and Time of Onset
Foodborne Illness Investigation
8-4-02 Baptism Party
Rosati's Pizza and Catering

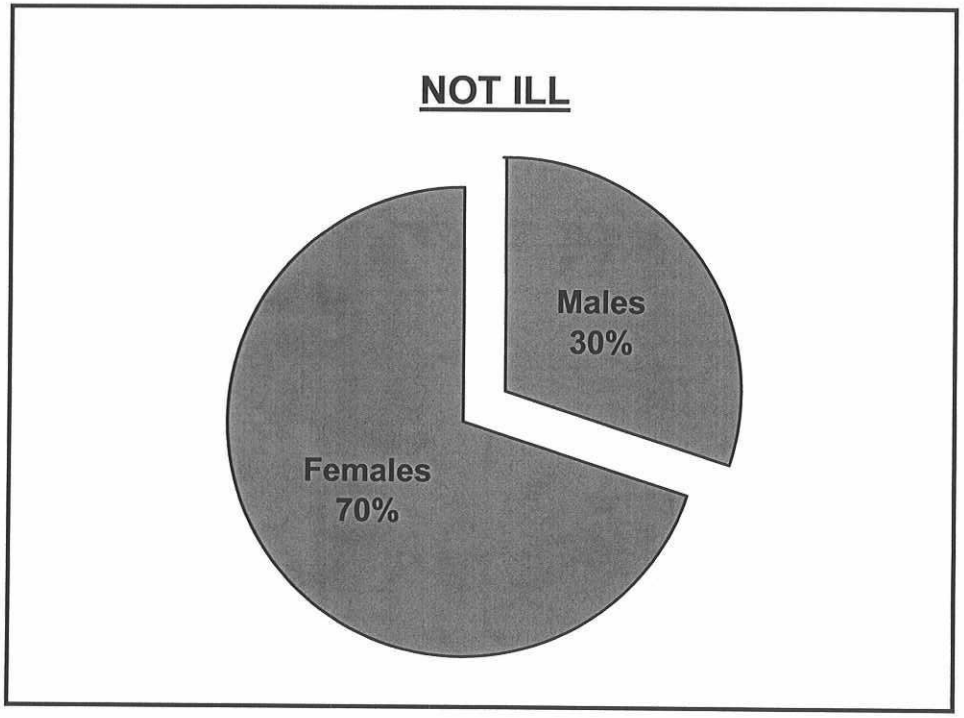


Frequency of Symptoms
Foodborne Illness Investigataion
8/4/2002 - Baptism Party
Rosati's Pizza & Catering



Gender Ratio
Foodborne Illness Investigation
8/04/2002 - Baptism Party
Rosati's Pizza & Catering





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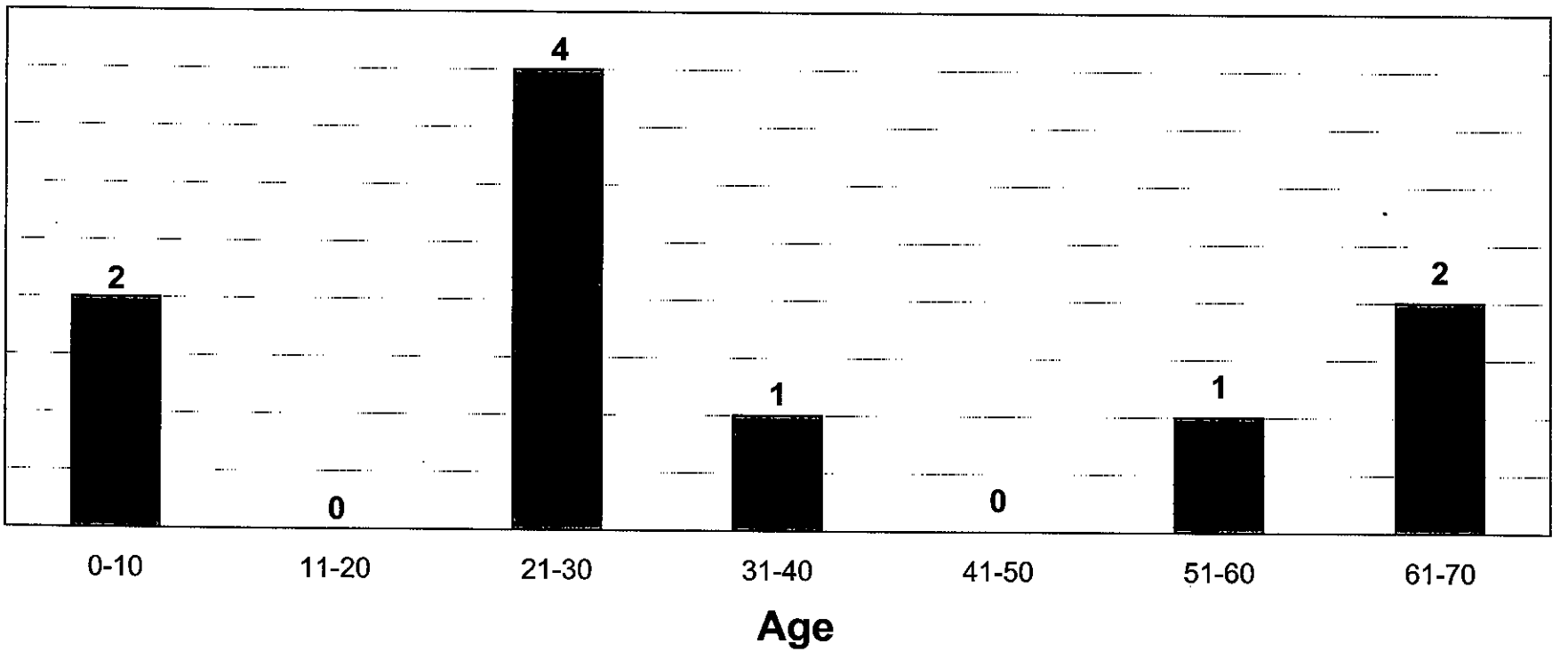
Age Comparision To Illness
Foodborne Illness Investigation
8/4/2002 - Baptism Party
Rosati's Pizza & Catering



Appendix B

Epidemiological Findings – Harry Potter Party

Percent Ill by Group
Foodborne Illness Investigation
August 4, 2002 – Harry Potter Party
Rosati's Pizza and Catering, Cary

GROUP	KNOWN ATTENDANCE*	CONFIRMED ILL**	PERCENTAGE ILL
Harry Potter Party	36	8	25%

* 29 of 36 interviewed

** 8 confirmed ill; 1 unconfirmed

Incubation Period of Ill
Foodborne Illness Investigation
August 4, 2002 – Harry Potter Party
Rosati's Pizza and Catering, Cary

Mean	15 Hours
Median	13.75 Hours
Mode	16
Range	5 – 16 Hours

Duration of Symptoms
Foodborne Illness Investigation
August 4, 2002 – Harry Potter Party
Rosati's Pizza and Catering, Cary

Mean	31 Hours
Median	30 Hours
Mode	48
Range	2 - 72 Hours

Statistically Significant Results of Food Analysis
Foodborne Illness Investigation
August 4, 2002 – Harry Potter Party
Rosati's Pizza and Catering, Cary

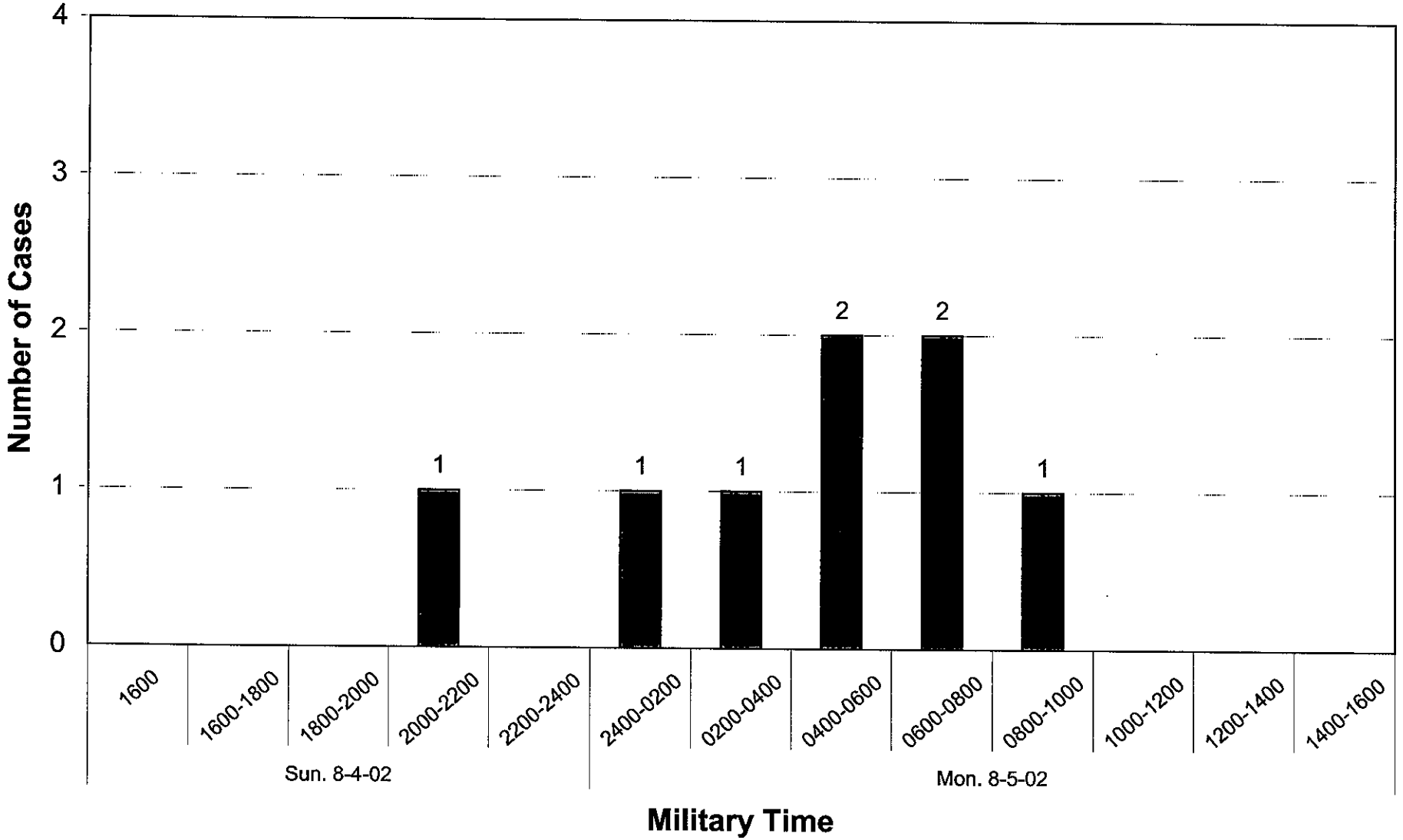
Food Item	P-Value*	Chi-Square*	Odds Ratio
Ranch Pepper Sauce	.0224538081	5.9832	3.80
Beef Au Jus	.1106230102	1.7732	20.66378

* A p-value of <0.05 suggests the food item is associated with the outbreak.

Attack Rate Table
Foodborne Illness Investigation
August 4, 2002 – Harry Potter Party
Rosati's Pizza and Catering, Cary

FOOD ITEM	ATE FOOD				NOT ATE				DIFFERENCE
	ILL	NOT ILL	TOTAL	% ILL	ILL	NOT ILL	TOTAL	% LL	
Fried Chicken	7	13	20	35%	2	7	9	22%	13%
Mostaccoilli	8	12	20	40%	1	8	9	11%	29%
Beef Au Jus	8	13	21	38%	1	7	8	13%	26%
Roll	8	12	20	40%	1	8	9	11%	29%
Potato Salad	4	6	10	40%	5	14	19	26%	14%
Coleslaw	6	4	10	60%	3	16	19	16%	44%
Grape	3	4	7	43%	6	16	22	27%	16%
Peppers	4	5	9	44%	5	15	20	25%	19%
Strawberries	4	5	9	44%	5	15	20	25%	19%
Nacho Chips	4	8	12	33%	5	12	17	29%	4%
Carrots	3	6	9	33%	6	14	20	30%	3%
Cucumbers	3	4	7	43%	6	16	22	27%	16%
Cake	4	10	14	29%	5	10	15	33%	-5%
Soda	5	9	14	36%	4	11	15	27%	9%
Dip	1	2	3	33%	8	18	26	31%	3%
Ice	5	12	17	29%	4	9	13	31%	-1%
Sloppy Joe	1	3	4	25%	8	17	25	32%	-7%
Jelly Beans	4	5	9	44%	5	15	20	25%	19%
Salsa	3	5	8	38%	6	15	21	29%	9%
Gummy Frogs	3	8	11	27%	6	12	18	33%	-6%
Water	4	1	5	80%	5	19	24	21%	59%
Juice	3	6	9	33%	6	14	20	30%	3%
Ranch Pepper Sauce	6	4	10	60%	3	16	19	30%	30%

Date and Time of Onset
Foodborne Illness Investigation
8-4-2002 - Harry Potter Party
Rosati's Pizza and Catering



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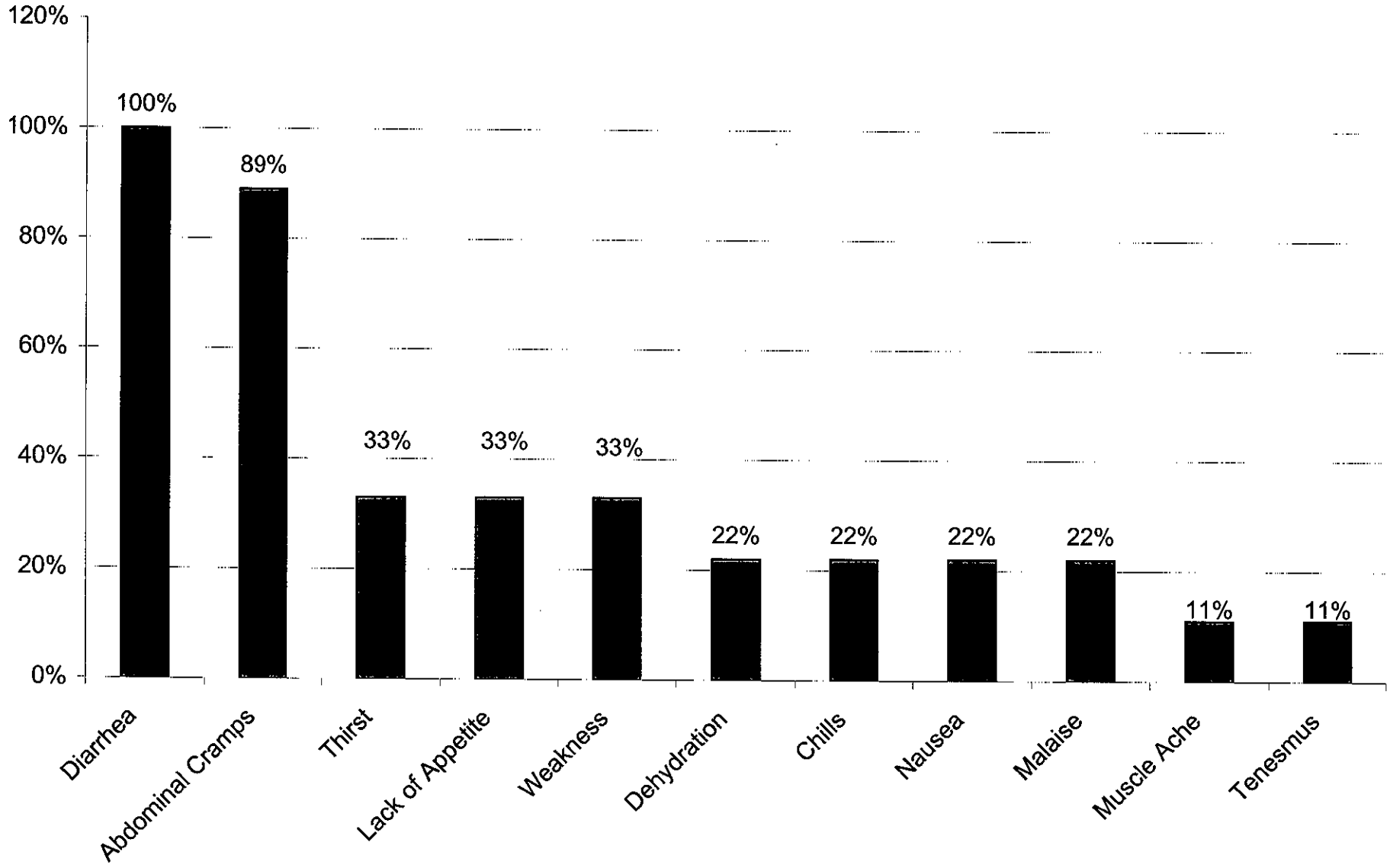
Frequency of Symptoms
Foodborne Illness Investigataion
8/4/2002 - Harry Potter Party
Rosati's Pizza & Catering



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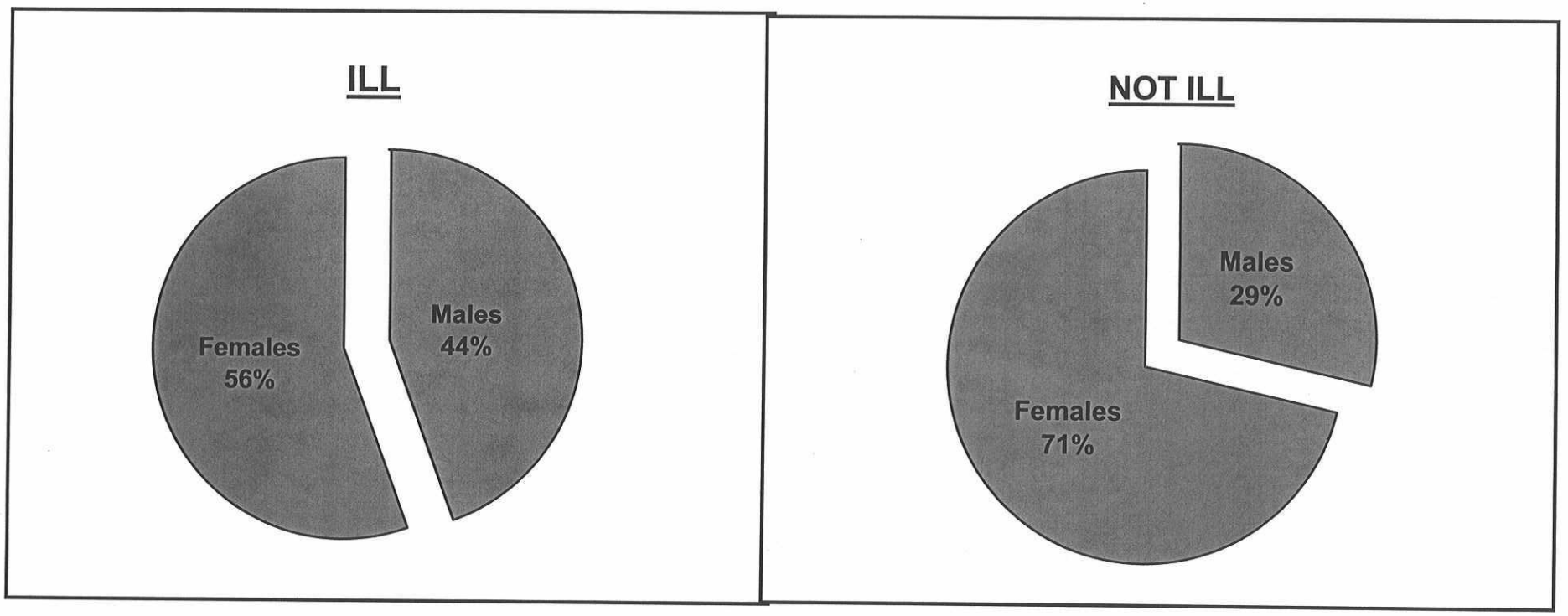
Gender Ratio
Foodborne Illness Investigation
8/4/2002 - Harry Potter Party
Rosati's Pizza & Catering



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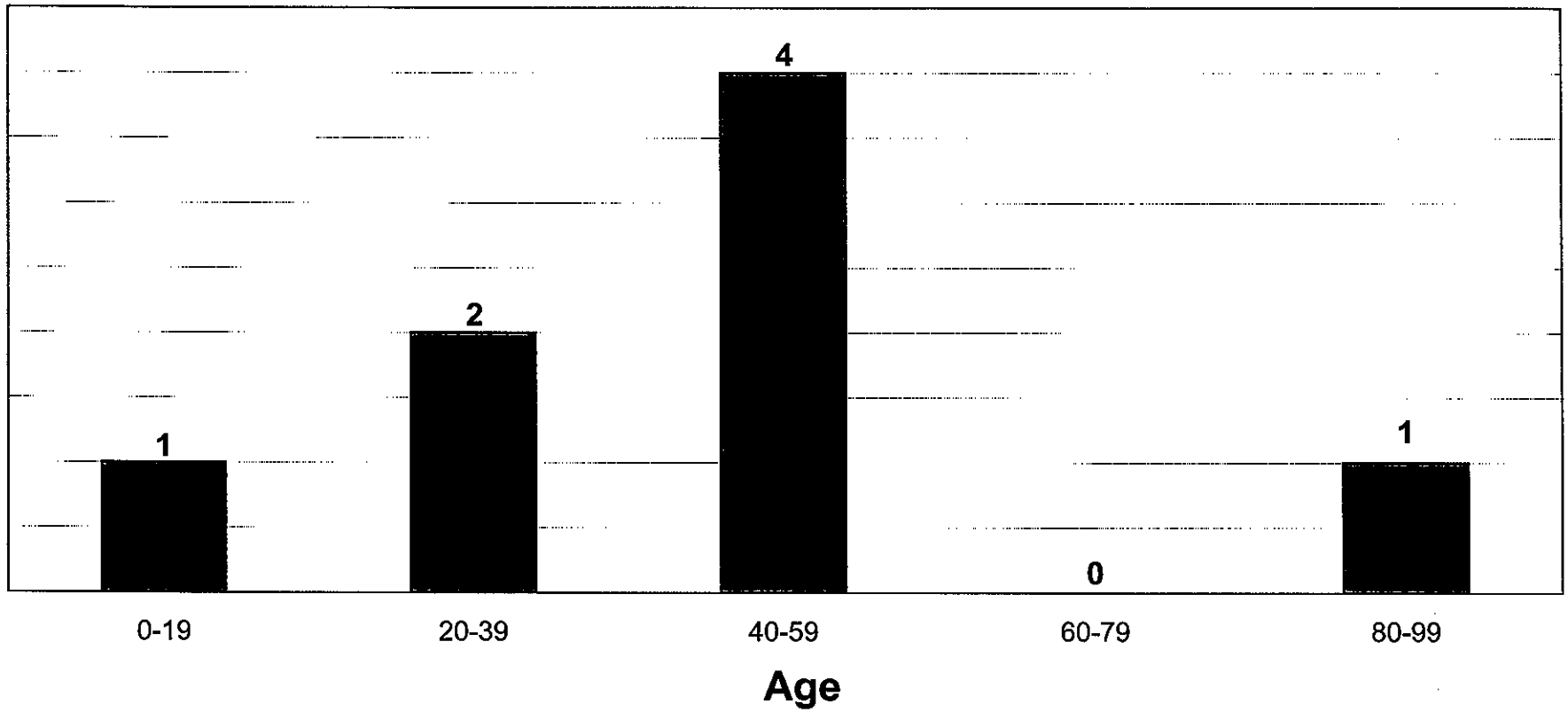
Age Comparision To Illness
Foodborne Illness Investigation
8/4/2002 - Harry Potter Party
Rosati's Pizza & Catering



Appendix C

Epidemiological Findings – Combined

Statistically Significant Results of Food Analysis
Foodborne Illness Investigation
August 2002 – Combined Groups
Rosati's Pizza and Catering, Cary

Food Item	P-Value*	Chi-Square*	Odds Ratio
Beef Au Jus	.0072	7.23	12.28
Ranch Pepper Sauce	.3954	1.19	0

* A p-value of <0.05 suggests the food item is associated with the outbreak.

Appendix D

Foodborne Pathogens

Possible Etiologic Agents
Foodborne Illness Investigation
August 4, 2002
Rosati's Pizza and Catering, Cary

AGENT	INCUBATION PEROID	DURATION	SYMPTOMS	FOOD INVOLVED
Campylobacter	3 - 5 days	1 - 4 days	Diarrhea, fever, nausea, headache, abdominal cramps	Raw vegetables, unpasteurized milk and dairy products, poultry, pork, beef and lamb
Norwalk-like Virus	14 - 48 hours	24 - 48 hours	Nausea, abdominal cramps, diarrhea, vomiting, headache, myalgia, low-grade fever	Could be any food contaminated with feces.
E. Coli	8 - 24 hours	Variable	Fever, chills, headache, malaise, abdominal cramps, profuse watery diarrhea	Cheese, coffee substitute, and salmon
Salmonella	5 - 72 hours	Several days	Diarrhea, abdominal pain, headache, chills, fever, vomiting, anorexia, and malaise	Meat, poultry, eggs, coconut, yeast, smoked fish, melon and milk
Shigella	7 - 1 days	Variable	Abdominal cramps, fever, chills, diarrhea, watery stools, tenesmus, lassitude, prostration, nausea, vomiting	Moist mixed food, potato, shrimp, tuna, salads, turkey and milk
Clostridium Perfringens	6 – 24 hours	24 hours	Diarrhea, Nausea	Inadequately heated or reheated meats and gravies
B. Cereus	1 – 6 hours	24 hours	Nausea/vomiting or diarrhea	Food kept at ambient temperature after cooking, especially rice

Appendix E

Laboratory Findings

Stool Sample Analysis
Foodborne Illness Investigation
August 4, 2002 – Baptism Party
Rosati's Pizza and Catering, Cary

Patient ID#	Spec Type	Spec Date		Campylobacter	E. Coli	Norwalk-like Virus	Salmonella	Shigella	Clostridium Perfringens	B. Cereus
CV193	Stool	08/08/02	Attendee	Negative	Negative	Negative	Negative	Negative	Negative	Negative
CV196	Stool	08/08/02	Attendee	Negative	Negative	Negative	Negative	Negative	Positive	Negative
CV197	Stool	08/06/02	Attendee	Negative	Negative	Negative	Negative	Negative	Positive	Negative
CV198	Stool	08/06/02	Attendee	Negative	Negative		Negative	Negative	Positive	Negative
CV201	Stool	08/06/02	Attendee	Negative	Negative		Negative	Negative	Positive	Negative

Stool Sample Analysis
Foodborne Illness Investigation
August 4, 2002 – Harry Potter Party
Rosati's Pizza and Catering, Cary

Patient ID#	Spec Type	Spec Date		Campylobacter	E. Coli	Norwalk-like Virus	Salmonella	Shigella	Clostridium Perfringens	B. Cereus
CV199	Stool	08/07/02	Attendee	Negative	Negative	Negative	Negative	Negative	Positive	Negative
CV200	Stool	08/08/02	Attendee	Negative	Negative	Negative	Negative	Negative	Positive	Negative
CV194	Stool	08/08/02	Attendee	Negative	Negative	Negative	Negative	Negative	Positive	Negative
CV195	Stool	08/09/02	Attendee	Negative	Negative	Negative	Negative	Negative	Positive	Negative

Laboratory Findings – Food Analysis
Foodborne Illness Investigation
August 2002
Rosati's Pizza and Catering, Cary

FOOD	GROUP	C perfringens	B cereus	Salmonella	Coliform	Standard Plate Count	E coli
Italian Beef	Baptism	>5,000,000	1,300	Negative	>1,100	5,400,000	Negative
Italian Beef	Harry Potter	3,000,000	Negative	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed
Italian beef	Third Group	Negative	1,400	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed

McHENRY COUNTY DEPARTMENT OF HEALTH
McHENRY COUNTY GOVERNMENT CENTER
AUXILIARY BUILDING
2200 N. SEMINARY AVENUE - ROUTE 47 N.
WOODSTOCK, ILLINOIS 60098
TELEPHONE 815-334-4510
FAX 815-338-7661

MCDH

Source Address:
395 CARY ALGONQUIN ROAD
CARY, IL 60013

Mailing Address:
ROSATI'S
395 CARY ALGONQUIN ROAD
CARY, IL 60013

Date/Time Collected:
08/07/02 3:00 PM

Collected By:
J GUGLE

Date/Time Received:
08/07/02 5:45 PM

LAB NO - 76271

ANALYTICAL REPORT

ILLINOIS DEPARTMENT OF PUBLIC HEALTH NO 17539, ILLINOIS EPA NO. IL00083

BACTERIAL ANALYSIS

Parameter	Result	Opinion	Date Analyzed	Method	Sample Volume mL.
TOTAL COLIFORM	NOT PRESENT	SATISFACTORY	08/08/02	Colilert P/A	100
E COLI	NOT PRESENT		08/08/02	Colilert P/A	

CHEMICAL ANALYSIS

Parameter	Result	Unit	OPINION	Date Analyzed	Method

Remarks
CITY WATER

FOR LAB USE ONLY

SR - FB - - - - (ATY - TYP) - RNKW - RDGW

REPORTED OUT BY: Gail Weber Date Reported Out: 8/9/2002

Gail Weber, Laboratory Supervisor

McHENRY COUNTY DEPARTMENT OF HEALTH
McHENRY COUNTY GOVERNMENT CENTER
AUXILIARY BUILDING
2200 N. SEMINARY AVENUE - ROUTE 47 N.
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Date/Time Collected:
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Collected By:
J GUGLE

Date/Time Received:
08/07/02 5:45 PM

LAB NO - 76272

ANALYTICAL REPORT

ILLINOIS DEPARTMENT OF PUBLIC HEALTH NO 17539, ILLINOIS EPA NO. IL00083

BACTERIAL ANALYSIS

Parameter	Result	Opinion	Date Analyzed	Method	Sample Volume mL.
TOTAL COLIFORM	NOT PRESENT	SATISFACTORY	08/08/02	Membrane Filter	100
FECAL COLIFORM	NOT PRESENT		08/08/02	Membrane Filter	

CHEMICAL ANALYSIS

Parameter	Result	Unit	OPINION	Date Analyzed	Method

Remarks
CITY WATER

FOR LAB USE ONLY

SR - FB - - - - (ATY0 - TYP0) - RNKW - RDGW

REPORTED OUT BY: Gail Weber Date Reported Out: 8/9/2002

Gail Weber, Laboratory Supervisor

Appendix F

Environmental Findings / Recommendations

ROSATI'S PIZZA & CATERING
PROBLEMS AND RECOMMENDATIONS
AUGUST 7, 2002
PAGE ONE

Problem 1:
Large quantities of potentially hazardous foods prepared at a time (beef roasts.)
Corrective Action:
The amount of food preparation is limited to the available workspace, hot and cold food storage capacities, ability to properly cool foods, etc. Whenever possible, food should be prepared in small batches to facilitate more control over the critical control points in the process (temperature control, personal hygiene, potential for cross contamination, etc.)`
Reason:
The safe handling of food requires strict control over the critical steps in the preparation process to minimize the potential for contamination of food products and/or the rapid growth of microorganisms, which can cause foodborne illness.

Problem 2:
Temperatures of foods (roasts) were not checked after cooking, during the cooling process or reheating. **This is a critical violation.**
Corrective Action:
Internal food temperatures shall be checked with a sanitized, calibrated, metal stemmed thermometer, after cooking, during the cooling process and when reheating.
Reason:
Verification of internal food temperatures with a sanitized, metal stemmed thermometer is the only way to ensure that food products reach required temperatures at the critical points in the preparation process to prevent the growth of microorganisms.

Problem 3:
Failure to label previously prepared, potentially hazardous foods with date and time of preparation. **This is a critical violation.**
Corrective Action:
All previously prepared, potentially hazardous foods shall be labeled with date and time of preparation.
Reason:
Labeling requirements provide assurance that prepared, potentially hazardous foods are cooled properly to seventy (70) degrees F within two (2) hours and to forty-one (41) degrees F within an additional four (4) hours.

Problem 4:
Employees wiping hands on aprons instead of properly washing hands. **This is a critical violation.**
Corrective Action:
Employees shall thoroughly wash their hands and the exposed portions of their arms with soap and warm water before starting work, during work as often as is necessary to keep them clean, and after smoking, eating, drinking or using the toilet.
Reason:
The hands are particularly important as a potential vehicle of contamination of food and food contact surfaces. In order to prevent the contamination of food and food contact surfaces, and the resulting potential transmission of foodborne illness, it is essential that employees observe strict standards of cleanliness and proper hygiene during their working periods and before starting work or returning to work after any interruption of their food service activities.

Problem 5:
Failure to properly clean and sanitize utensils. **This is a critical violation.**
Corrective Action:
Utensils and equipment shall be thoroughly cleaned and sanitized after each use.
Reason:
Regular, effective cleaning and sanitizing of utensils minimizes the probability of contaminating food during preparation, storage, or service and the transmission of disease pathogens to consumers and employees.

Problem 6:
Failure to reduce the volume of previously prepared, potentially hazardous foods (roasts) for quick chilling.
Corrective Action:
Potentially hazardous food of large volume or prepared in large quantities shall be rapidly cooled utilizing such methods as reduction in size, shallow pans, agitation, quick chilling, or water circulation external to the food container.
Reason:
Since any temperature between 41 degrees F and 140 degrees F presents a hazard to public health in terms of microbial growth, food must remain in the critical temperature zone as little time as possible. The parameters defining the cooling period for foods in storage following preparation set forth procedures and conditions that minimize risk to the public health.

Problem 7:
Failure to provide recipes which incorporate Hazard Analysis and Critical Control Points.
Corrective Action:
A complete Hazard Analysis and Critical Control Point (HACCP) program should be developed and implemented in the establishment. HACCP concepts shall be incorporated into the recipes for all potentially hazardous food items. Recipes should clearly identify every critical control point in the preparation process. Recipes should include direction for appropriate intervention when problems are encountered at critical steps in the process.
Reason:
Identification of the critical points in the process of all potentially hazardous foods provides staff with the knowledge of which steps are vital in preventing foodborne illness. Appropriate control of those critical points prevents creating an environment for the introduction or rapid growth of any pathogens which could result in foodborne illness.

Problem 8:
Consumers are not provided with any written instructions for safe handling of catered food products.
Corrective Action:
Written instructions on safe handling of all potentially hazardous catered food items should be provided to consumers. The instructions should include recommendations for storage, temperature control, handwashing, and handling of leftovers, at a minimum.
Reason:
Proper handling of potentially hazardous foods from the time of preparation until consumption is essential to prevent the occurrence of foodborne illness.

Problem 9:
Potentially hazardous foods delivered at ambient temperature. **This is a critical violation.**
Corrective Action:
Delivery services shall be limited to prepackaged food items obtained from an approved location with proper equipment to maintain product temperature.

Problem 9 continued:
Reason:
Holding potentially hazardous foods at proper temperatures prevent the rapid and progressive growth of disease-causing organisms that are naturally present in foods as well as those introduced through incidental contamination in the operation of a food establishment.

Problem 10:
Lack of management oversight to identify foodhandling problems and to provide immediate interventions as required.
Corrective Action:
Management strategies must be implemented to ensure that all food staff are sufficiently trained and are provided with the appropriate oversight at all critical stages in the food preparation process to ensure wholesome food to the public.
Reason:
Appropriate management strategies to ensure adherence by all food staff to food protection principles and practices are essential if future illness outbreaks are to be prevented.

Appendix G

Epidemiological Questionnaires

DATE AND TIME OF INTERVIEW: _____ NUMBER _____

INITIAL REPORTER:

LAST NAME _____ FIRST NAME _____

ADDRESS _____ CITY _____

PHONE _____ WORK PHONE: _____

OCCUPATION _____ DIET _____

ANY UNDERLYING HEALTH CONDITION? _____

D.O.B._____ AGE_____ IF UNDER 2 ENTER AGE IN MONTHS SEX (M F)

SICK IN THE PAST WEEK?_____ MEDICATIONS?_____ GI SYMPTOMS?_____

REQUIRED MEDICAL AID? YES OR NO

DOCTOR WHO _____ SEE DOCTOR, YES OR NO

HOSPITALIZED YES OR NO, WHERE _____

DIAGNOSIS _____

DATE OF ONSET OF SYMPTOMS _____ <MM/DD/YY>

HOUR OF ONSET OF SYMPTOMS _____ MILITARY TIME

HOW LONG DID SYMPTOMS PERSIST IN HOURS OR DAYS? _____ OR _____ HOURS DAYS

DATE ATE 1 _____ <MM/DD/YY> TIME ATE 1 _____ MILITARY TIME DATE ATE 2 _____ <MM/DD/YY> TIME ATE 2_____ MILITARY TIME

ANSWER ALL QUESTIONS WITH A YES OR NO, NUMBER ALL OCCURRANCE QUESTIONS IN ORDER OF APPEARANCE OF SYMPTOMS, OCCUR DATE, OCCUR TIME, DURATION

NAUSEA <Y> _____ NAUSOCCUR ## _____

NAUSDATE _____ MM/DD/YY NAUSTIME _____ MILITARY TIME NAUSDURA _____ HOURS/DAYS

VOMITING <Y>_____ VOMITOCCUR ## _____

VOMIDATE _____ MM/DD/YY VOMITIME _____ MILITARY TIME VOMIDURA _____ HOURS/DAYS

MOUTHBURN <Y>_____ MOUTHOCCUR## _____

MOUTDATE _____ MM/DD/YY MOUTTIME _____ MILITARY TIME MOUTDURA _____ HOURS/DAYS

DEHYDRATE<Y>_____ DEHYOCCUR ## _____

DEHYDATE _____ MM/DD/YY DEHYTIME _____ MILITARY TIME DEHYDURA _____ HOURS/DAYS

PROSTRATION <Y>____ PROSTOCCUR ## _____

PROSDATE _____ MM/DD/YY PROSTIME _____ MILITARY TIME PROSDURA _____ HOURS/DAYS

THIRST <Y> _____ THIRSOCCUR ## _____

THIRDATE _____ MM/DD/YY THIRTIME _____ MILITARY TIME THIRDURA _____ HOURS/DAYS

WEIGHTLOSS <Y>____ WEIGHOCCUR## _____

WEIGHDATE _____ MM/DD/YY WEIGTIME _____ MILITARY TIME WEIGDURA _____ HOURS/DAYS

ABDOCRAMPS <Y>___ ABDOOCCUR## _____

ABDODATE _____ (MM/DD/YY) ABDOTIME## _____ (MILITARY TIME) ABDODURA _____ (HOURS/DAYS)

DIARRHEA <Y>_____ DIAROCCUR## _____

DIARDATE _____ (MM/DD/YY) DIARTIME## _____ (MILITARY TIME) DIARDURA _____ (HOURS/DAYS)

CHILLS <Y> _____ CHILLOCCUR## _____

CHILDATE _____ (MM/DD/YY) CHILTIME## _____ (MILITARY TIME) CHILDURA _____ (HOURS/DAYS)

CONSTIPATE<Y>_____ CONSTOCCUR## _____

CONSDATE _____ (MM/DD/YY) CONSTIME## _____ (MILITARY TIME) CONSDURA _____ (HOURS/DAYS)

FEVER <Y> _____ FEVEROCCUR## _____

FEVEDATE _____ (MM/DD/YY) FEVETIME## _____ (MILITARY TIME) FEVEDURA _____ (HOURS/DAYS)

TENESMUS <Y>_____ TENESOCCUR## _____

TENEDATE _____ (MM/DD/YY) TENETIME## _____ (MILITARY TIME) TENEDURA _____ (HOURS/DAYS)

HEADACHE <Y>_____ HEADOCCUR## _____

HEADDATE _____ (MM/DD/YY) HEADTIME _____ (MILITARY TIME) HEADDURA _____ (HOURS/DAYS)

LACK OF APPET ITE<Y>_____ APPETOCCUR## _____ (MILITARY TIME)

LACKDATE _____ (MM/DD/YY) LACKTIME _____ (MILITARY TIME) LACKDURA _____ (HOURS/DAYS)

MALAISE <Y> _____ MALAOCCUR## _____

MALADATE _____ (MM/DD/YY) MALATIME## _____ (MILITARY TIME) MALADURA _____ (HOURS/DAYS)

MUSCLEACHE <Y>____ MUSCLOCCUR## _____

MUSCDATE _____ (MM/DD/YY) MUSCTIME## _____ (MILITARY TIME) MUSCDURA _____ (HOURS/DAYS)

PERSPIRE <Y>_____ PERSPOCCUR## _____

PERSDATE _____ (MM/DD/YY) PERSTIME## _____ (MILITARY TIME) PERSDURA _____ (HOURS/DAYS)

STIFFNECK<Y>_____ STIFFOCCUR## _____

STIFDATE _____ (MM/DD/YY) STIFTIME## _____ (MILITARY TIME) STIFDURA _____ (HOURS/DAYS)

WEAKNESS <Y>_____ WEAKOCCUR## _____

WEAKDATE _____ (MM/DD/YY) WEAKTIME## _____ (MILITARY TIME) WEAKDURA _____ (HOURS/DAYS)

BLURRED VISION <Y> _____ BLUROCCUR## _____ (MILITARY TIME)

BLURDATE _____ (MM/DD/YY) BLURTIME## _____ (MILITARY TIME) BLURDURA _____ (HOURS/DAYS)

DIZZINESS <Y>_____ DIZZIOCCUR## _____ (MILITARY TIME)

DIZZDATE _____ (MM/DD/YY) DIZZTIME## _____ (MILITARY TIME) DIZZDURA _____ (HOURS/DAYS)

OTHER: _____

_____

FOOD ITEMS:

DAY 1 DATE _____

BREAKFAST

LUNCH

DINNER

DAY 2 DATE _____

BREAKFAST

LUNCH

DINNER

DAY 3 DATE _____

BREAKFAST

_____

_____

_____

LUNCH

_____

_____

_____

DINNER

_____

_____

_____

WILL SUBMIT SPECIMEN? _____

TIME/DATE CONVENIENT TO DELIVER/PICK-UP CONTAINERS _____

DIRECTIONS TO HOUSE: _____

_____

_____

_____

OTHER TIMES WHEN THEY MAY HAVE BEEN TOGETHER WITH OTHER INTERVIEWERS:
SOCIAL AND/OR EATING

_____

NAME _____
DATE _____
MEAL _____

NAME _____
DATE _____
MEAL _____

Fried chicken

Mostacciolli

Italian Beef with au jus

Salad

Fruit and veggie tray (specific ones eaten)

Cake

Soda

Beer

Wine

ice

DATE AND TIME OF INTERVIEW: _____ NUMBER _____

INITIAL REPORTER:

LAST NAME _____ FIRST NAME _____

ADDRESS _____ CITY _____

PHONE _____ WORK PHONE: _____

OCCUPATION _____ DIET _____

ANY UNDERLYING HEALTH CONDITION? _____

D.O.B._____ AGE_____ IF UNDER 2 ENTER AGE IN MONTHS SEX (M F)

SICK IN THE PAST WEEK?_____ MEDICATIONS?_____ GI SYMPTOMS?_____

REQUIRED MEDICAL AID? YES OR NO

DOCTOR WHO _____ SEE DOCTOR, YES OR NO

HOSPITALIZED YES OR NO, WHERE _____

DIAGNOSIS _____

DATE OF ONSET OF SYMPTOMS _____ <MM/DD/YY>

HOUR OF ONSET OF SYMPTOMS _____ MILITARY TIME

HOW LONG DID SYMPTOMS PERSIST IN HOURS OR DAYS? _____ HOURS OR _____ DAYS

DATE ATE 1 _____ <MM/DD/YY> TIME ATE 1 _____ MILITARY TIME DATE ATE 2 _____ <MM/DD/YY> TIME ATE 2_____ MILITARY TIME

ANSWER ALL QUESTIONS WITH A YES OR NO, NUMBER ALL OCCURRANCE QUESTIONS IN ORDER OF APPEARANCE OF SYMPTOMS, OCCUR DATE, OCCUR TIME, DURATION

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NAUSDATE _____ MM/DD/YY NAUSTIME _____ MILITARY TIME NAUSDURA _____ HOURS/DAYS

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VOMIDATE _____ MM/DD/YY VOMITIME _____ MILITARY TIME VOMIDURA _____ HOURS/DAYS

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MOUTDATE _____ MM/DD/YY MOUTTIME _____ MILITARY TIME MOUTDURA _____ HOURS/DAYS

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DEHYDATE _____ MM/DD/YY DEHYTIME _____ MILITARY TIME DEHYDURA _____ HOURS/DAYS

PROSTRATION <Y>____ PROSTOCCUR ## _____

PROSDATE _____ MM/DD/YY PROSTIME _____ MILITARY TIME PROSDURA _____ HOURS/DAYS

THIRST <Y> _____ THIRSOCCUR ## _____

THIRDATE _____ MM/DD/YY THIRTIME _____ MILITARY TIME THIRDURA _____ HOURS/DAYS

WEIGHTLOSS <Y>____ WEIGHOCCUR## _____

WEIGHDATE _____ MM/DD/YY WEIGTIME _____ MILITARY TIME WEIGDURA _____ HOURS/DAYS

ABDOCRAMPS <Y>___ ABDOOCCUR## _____

ABDODATE _____ (MM/DD/YY) ABDOTIME## _____ (MILITARY TIME) ABDODURA _____ (HOURS/DAYS)

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DIARDATE _____ (MM/DD/YY) DIARTIME## _____ (MILITARY TIME) DIARDURA _____ (HOURS/DAYS)

CHILLS <Y> _____ CHILLOCCUR## _____

CHILDATE _____ (MM/DD/YY) CHILTIME## _____ (MILITARY TIME) CHILDURA _____ (HOURS/DAYS)

CONSTIPATE<Y>_____ CONSTOCCUR## _____

CONSDATE _____ (MM/DD/YY) CONSTIME## _____ (MILITARY TIME) CONSDURA _____ (HOURS/DAYS)

FEVER <Y> _____ FEVEROCCUR## _____

FEVEDATE _____ (MM/DD/YY) FEVETIME## _____ (MILITARY TIME) FEVEDURA _____ (HOURS/DAYS)

TENESMUS <Y>_____ TENESOCCUR## _____

TENEDATE _____ (MM/DD/YY) TENETIME## _____ (MILITARY TIME) TENEDURA _____ (HOURS/DAYS)

HEADACHE <Y>_____ HEADOCCUR## _____

HEADDATE _____ (MM/DD/YY) HEADTIME _____ (MILITARY TIME) HEADDURA _____ (HOURS/DAYS)

LACK OF APPET ITE<Y>_____ APPETOCCUR## _____ (MILITARY TIME)

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MUSCDATE _____ (MM/DD/YY) MUSCTIME## _____ (MILITARY TIME) MUSCDURA _____ (HOURS/DAYS)

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STIFDATE _____ (MM/DD/YY) STIFTIME## _____ (MILITARY TIME) STIFDURA _____ (HOURS/DAYS)

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BLURDATE _____ (MM/DD/YY) BLURTIME## _____ (MILITARY TIME) BLURDURA _____ (HOURS/DAYS)

DIZZINESS <Y>_____ DIZZIOCCUR## _____ (MILITARY TIME)

DIZZDATE _____ (MM/DD/YY) DIZZTIME## _____ (MILITARY TIME) DIZZDURA _____ (HOURS/DAYS)

OTHER: _____

_____

FOOD ITEMS:

DAY 1 DATE _____

BREAKFAST

LUNCH

DINNER

DAY 2 DATE _____

BREAKFAST

LUNCH

DINNER

DAY 3 DATE _____

BREAKFAST

_____

_____

_____

LUNCH

_____

_____

_____

DINNER

_____

_____

_____

WILL SUBMIT SPECIMEN? _____

TIME/DATE CONVENIENT TO DELIVER/PICK-UP CONTAINERS _____

DIRECTIONS TO HOUSE: _____

_____

_____

_____

OTHER TIMES WHEN THEY MAY HAVE BEEN TOGETHER WITH OTHER INTERVIEWERS:
SOCIAL AND/OR EATING

_____

NAME _____
DATE _____
MEAL _____

NAME _____
DATE _____
MEAL _____

PARTY MENU

ITALIAN BEEF

ROLL

PEPPERS

AU JUS

RANCH PEPPER SAUCE

MOSTACOLLI

FRIED CHICKEN

POTATO SALAD

COLE SLAW

SLOPPY JOE

HAMBURGER BUN

STRAWBERRYS

GRAPES

CARROTS

CUCUMBERS

JELLY BEANS

NACHO CHIPS

SALSA

GUMMY FROGS

CAKE

WHAT TO DRINK?

Appendix H

Food Service Personnel Questionnaire

INTERVIEW WITH FOOD PERSONNEL
ROSATI'S PIZZA, CARY

Employee: Date:

Job Title:
Job Description:

Usual Hours:
Days worked:
Days not worked:

Most recent illness/symptoms:
Date(s):
Physician consulted: When:

From knowledge of food operation (irregardless of duties):

Frequency of food receipt

- Time of delivery:
- Where are products first placed:
- Responsibilities for placement until ultimate use:
- Usual and extreme time from delivery to placement:
- A re-temperature checked from delivery to placement:

How, what type foods, how frequently:

Ultimate use of food

- Responsibilities for thawing:
- Usual procedure for thawing foods that are frozen:
- Are temperatures checked during thawing:
- Usual time needed to thaw
  Roast beef
  Round roast
  Poultry
  Fish
  Etc
- Cooking responsibilities
- Usual time from cooking to service
- Are temperatures checked of actual food product(s) after cooking and before serving. If so, how, what type foods and how frequently:

- Are container temperatures taken that hold cooked food (e.g. refrigerators, steam tables, hot transport units, etc.):
  If so, how and how frequently:
- When are hot-holding units plugged in:

- Responsibilities for service of food:
- Utensils used (describe):
- Containters used (single-service or reusable):
- Temperature checks:
    - Frequency
    - How

  Typical time food on serving line:

  Method of holding food temperature:
  When are left-overs removed from table:
  Where are they placed:
  Are any temperatures taken how are left-overs handled from banquet:
  How soon are they reused:

Personal Practices

- Do you usually eat a meal at work:
- Are breaks allowed: how long:
- Where do you take breaks:
- Where are hands washed:
- Is soap and tempered water available always:
- How are hands dried:
- In general, do you feel hands are washed frequently enough (for fellow employees):
- Are hands washed, usually after break or before break or neither:
- Is a handsink available in food prep or service area:
- Have you noticed others smoking while working:
- Do employees drink or eat while preparing food or serving food:
- Are plastic gloves used by any employees:
    - If so, how frequently:

Others comments or concerns

- Do you smoke If so, do you while working:

- Recount your activities as completely as possible:

This information will be kept strictly confidential