

EHS-Net Kitchen Manager Certification Study Protocol

I. Project Overview

Title

Kitchen Manager Certification Study

Protocol Summary

Few studies have examined in detail the relationship between kitchen managers' knowledge and attitudes, and their food safety practices. The purpose of this study is to collect data describing the food safety knowledge level of non-certified and certified kitchen managers (KM) or Persons in Charge (PIC) and explore the relationships between KM/PIC certification, food safety knowledge, and control of foodborne illness risk factors.

This is an Environmental Health Specialist Network (EHS-Net) special study. EHS-Net is a collaboration involving the Centers for Disease Control and Prevention (CDC), the U.S. Food and Drug Administration (FDA), and nine state and local health department sites (California, Connecticut, Georgia, Iowa, Minnesota, New York, Oregon, Rhode Island and Tennessee); these partners have come together in an effort to better understand the contributing factors that lead to foodborne illness.

Investigators/collaborators/funding

Investigators include EHS-Net staff at each of the nine EHS-Net sites. Funding for this study will be provided through EHS-Net.

II. Introduction

Literature Review/Justification

Foodborne illness is a significant public health issue. Research indicates that eating outside the home is associated with foodborne illness and epidemiological research has found that over half of reported foodborne illness outbreaks are associated with restaurants (Jones & Angulo, 2006).

Under the assumption that managers with food safety knowledge are better able to control foodborne illness outbreak risk factors, public health agencies have encouraged kitchen manager certification, in which kitchen managers (KM) or persons-in-charge (PIC) show proficiency of required food safety information through passing a food safety exam. Kitchen manager certification is also one way to show compliance with one of the FDA Food Code's interventions to protect consumer health—kitchen manager 'demonstration of knowledge.'

Recent data has suggested that the presence of a certified KM/PIC in restaurants reduces the risk of a foodborne illness outbreak (Hedberg et al, 2007). However, little is known about the relationship between KM/PIC certification and food safety knowledge or about how certification may work to reduce foodborne illness outbreaks. Thus, the purpose of this study is to explore the relationship between KM/PIC certification, food safety knowledge, and control of foodborne illness outbreak risk factors.

Objectives

The primary purpose of this study will be to examine the relationship between KM/PIC certification, food safety knowledge, and attitudes. Specifically, the study will describe and compare the food safety knowledge levels and attitudes of certified KM/PIC and non-certified KM/PIC.

The secondary purpose of this study will be to examine the relationships between KM/PIC certification, food safety knowledge and attitudes, and foodborne illness outbreak risk factors. The study will:

1. compare the occurrence of risk factors in restaurants that have a certified KM/PIC to those without a certified KM/PIC,
2. compare the occurrence of risk factors in restaurants with knowledgeable managers to those with less knowledgeable managers,
3. compare food safety knowledge of food workers in restaurants with a certified KM/PIC to those without a certified KM/PIC, and
4. determine, through multiple regression analysis, the contribution that food safety certification, knowledge, and attitudes make, individually and together, toward explaining variation in the occurrence of risk factors.

III. Procedures/Methods

Design

This study will use a cross-sectional design to collect information about PIC/KM's knowledge of and attitudes toward food safety. Information will be collected through a brief manager quiz about their food safety knowledge, a manager interview, a food worker interview, and an observation of the kitchen environment and food handling practices. The study will be conducted by EHS-Net environmental health specialists (EHSs) who work in state and local health departments.

Data collection

The EHS-Net specialists will contact randomly-selected restaurants by telephone to determine their interest in participating in the study. If the restaurant PIC/KM is willing to participate, the EHS-Net specialist will arrange a time to conduct the interviews and observation. The visit by the EHS-Net specialist will include a short self-administered manager's quiz, an interview with the PIC/KM, kitchen observation, and brief interviews with one or two food workers. To help ensure cooperation and participation, the food workers from which participation will be requested will be selected by the manager.

The data collection will be anonymous. Although specialists will keep a list of establishments in which they have collected data, no identifying information on restaurants or KM/PIC will be stored with the data. Thus, it will not be possible to link the study data with specific restaurants. Any information used to schedule restaurant visits, such as call logs, will be destroyed once data collection is complete.

Data Entry and Management

Data will be entered into a web-based information system designed specifically for this project. User accounts will be issued to the EHS-Net specialist in each state. Account privileges identify the data each specific user is authorized to access and the functions they are authorized to perform. Each EHS-Net specialist is responsible for the administration of the system for his or her own state, and includes user administration, correction and deletion of records capabilities. All data records are owned by the state entering the data. Each state has authority over its records and must grant permission to other states or agencies who would like to use the data.

Study Population

The study population will include all restaurants in the EHS-Net catchment area. The catchment area for this study includes all or some counties in each of the following eight states: California, Connecticut, Georgia, Iowa, Minnesota, New York, Oregon, Rhode Island, and Tennessee. Each state will select a convenience sample of counties from which to randomly select a minimum of fifty restaurants for the study. Only restaurants that meet the EHS-Net definition of a restaurant will be included in the study. A minimum of fifty restaurants in each of the eight states will yield a total study population of at least 400 restaurants. Each state will include only one restaurant from each regional or national chain in its study population.

One PIC/KM from each selected restaurant will be asked to participate. Restaurants that employ PIC/KMs who are in charge of foodservice will be included in the study regardless of certification status. Data on certification and knowledge will be collected through a short manager quiz, observation, and manager interview. One or two food workers will be selected from each restaurant. The food workers will be identified by the PIC/KM.

Study Timeline

Activity	Time Schedule
Conduct pilot	1 month after IRB clearance obtained
Submit any revisions from pilot to IRB	2 months after IRB clearance obtained
Conduct study	3-7 months after IRB clearance obtained
Analyze data collected	8-12 months after IRB clearance obtained

Study Instruments

The following data collection instruments were developed by the EHS-Net specialists (See Attachment 1):

- 1) **Manager Interview** –EHS-Net staff will interview the KM/PIC in-person about the restaurants' characteristics (size, menu type, etc.), and food safety policies and practices. The manager will also complete a self-administered food safety knowledge survey. This will take about 15 minutes.
- 2) **Observation** – KM/PIC and food workers will be observed to evaluate food handling practices. This will take about an hour.
- 3) **Food Worker Interview** – EHS-Net staff will interview one or two English-speaking food workers about basic food safety knowledge. The interview will take about 5 minutes.

Data Handling and Analysis

Analysis Plan

Analysis will be performed by an EHS-Net analytical work group. The analysis of the data will proceed in several stages. The first stage of analysis will involve data cleaning, editing, and recoding. The data will be checked for accuracy and examined for inconsistencies. A frequency response will be done for each variable to examine item non-response and extraneous responses. Variables with high item non-response or of poor quality will be discarded. The second stage will involve a descriptive analysis of the data set by running univariate frequencies and cross-tabulations for selected variables by demographic variables. Tests for association will be done using chi-square and t-tests. Analysis may also involve regression modeling of the data to examine any multivariate relationships and to control for confounding.

Analysis software

Software that will be used to analyze the data may include EpiInfo 2002, SAS, and SPSS.

Data Entry, Editing and Management

Data will be entered into a web-based information system designed specifically for this project. User accounts will be issued to the EHS-Net specialist in each state. Account privileges identify the data a specific user is authorized to access and the functions they are authorized to perform. Each EHS-Net specialist is responsible for the administration of the system for his or her state, and includes user administration, correction and deletion of records. Data records are owned by the state entering the data. Each state must grant permission to other states or agencies who would like to use the data.

The data entered into this system may only be analyzed, presented, or published by permission of the states owning the data according to the EHS-Net publication procedures.

Study Limitations

Data will be collected in those states participating in EHS-Net. Therefore, findings may not be generalizable to the US restaurant population or PIC/KM as a whole. The data may be subject to interviewer bias, recall bias, and the social desirability bias.

Dissemination, Notification, and Reporting of Results

Results of data analysis will be published in professional journals and presented at meetings. They will also be available for state and local health departments to utilize in their efforts to identify and change certain retail food practices that may contribute to foodborne illnesses. Agencies may also disseminate reports to foodservice establishments where research was conducted and to PIC/KM at the respective establishments.

Risks Summary

Current Risks

This study presents no more than minimal risk of harm to participants as the probability and magnitude of harm or discomfort anticipated in answering these questions are not greater in and of themselves than those ordinarily encountered in daily life. Participants in this study will not provide personally identifiable information.

Future Risks

No future risks exist since call logs will be destroyed once data collection is complete. These materials will be secured in a locked cabinet until destruction.

Benefits

Although there are no immediate benefits to participants, the information learned from this study can be used to determine how kitchen manager certification leads to safer food. This information, in turn, can be used by food safety programs to promote kitchen manager certification, leading to safer food.

Informed Consent

Before interviewing the manager and worker, we will obtain verbal informed consent from them (See Attachment 1). A waiver of documentation of informed consent is requested in accordance with 45 CFR 46.117(c) (2). The proposed research meets the first criteria for waiver, as it presents no more than minimal risk of harm to participants as the probability and magnitude of harm or discomfort anticipated in answering these questions are not greater in and of themselves than those ordinarily encountered in daily life. Additionally, as participants in this study will not be providing personally identifiable information, activities for which written consent is not normally required outside the research context, the study also meets the second criteria for waiver.

Funding Information

This study is funded by the CDC EHS-Net project through a cooperative agreement.

Institutional Information

Not applicable.

Approvals from other IRBs

IRB review or deferment will be obtained from CDC and all sites.

EHS-Net KMC Study: Manual

I. Study Design/Method

- Data will be collected through: 1) manager interview, 2) manager survey, 3) kitchen observation, and 4) worker interview.
- EHS-Net EHSs or their staff will be responsible for participant recruitment.
- An appointment will be made with the establishment to collect the data.
- EHS-Net EHSs and local partners will collect the data.
- Data collection will be independent of an inspection.
- Data will be anonymous.

II. Recruitment

A. Recruiting Procedure

We expect each state to collect data in 67 restaurants. Each state will receive a list of randomly selected restaurants from the CDC and will use this list to obtain restaurant participants for this study.

When recruiting, please adhere to the guidelines described below.

1. Do NOT pick and choose restaurants to contact. Contact restaurants in the order they are listed. This is important; if you pick and choose restaurants to contact, then we no longer have a randomly selected sample.

2. Make multiple attempts to contact restaurants. Recruiters need to make a concerted effort to establish contact with any restaurant that they initially try to contact. This is important because there may be systematic differences between easy-to-contact restaurants and hard-to-contact restaurants. For example, easy-to-contact restaurants may be less busy, better staffed, or better run than hard-to-contact restaurants. As these systematic differences could impact good handling practices in the restaurant, we want to be sure that hard-to-contact restaurants are represented in our sample as well as easy-to-contact restaurants. To ensure that every effort is made to contact all restaurants in the sample, please do the following:

- Unanswered calls: For unanswered calls make a minimum of 10 attempts over two weeks to reach an establishment.
- Answered calls: For an answered call where no response was given (i.e. call back later) a minimum of 5 attempts over a minimum of 4 days should be made to the establishment to attempt to get a response.
- For restaurants with multiple unanswered calls or non-working numbers, consider googling them to find a working number.

3. Record all call attempts in the provided Call Tracking Log. A Call Tracking Log designed to assist in keeping track of your calls is provided at the end of this manual. Please fill out the Call Log with the following information:

- Call Date
- Call Time
- Establishment Information
- Attempt Number: The number of the attempt to call a particular restaurant
- Results or Disposition of Call: No answer, Nonworking number, Told to call back, etc.

CDC will not want to see this log and you do not have to use it; it is provided to assist you.

4. Record the final disposition of all restaurants in the Participation Log. The Excel file called KMC Study Participation Log should be used to keep track of the responses of the restaurants. You will send this log back to CDC when your recruiting is complete. Once you have made a final determination about a restaurant, fill out the Participation Log with the following information.

- **Response Code:** Indicate the response you received from the restaurant using the following codes.
- **UNABLE TO CONTACT (U):** Use this response code if you followed the protocol above for unanswered calls and do not ever make contact with a restaurant. Also use this code if you cannot find a working number for a restaurant.
- **CLOSED (C):** Use this code if you determine that the restaurant is closed.
- **REFUSED (R):** Use this code if you followed the protocol above for answered calls and make contact with a restaurant, but do not ever get a definitive response on participation. You will also use this code if you do make contact but the manager/owner declines to participate.
- **PARTICIPATING (P):** Use this code if you are able to contact a restaurant, it meets the EHS-Net definition of a restaurant, and the restaurant agrees to participate.
- **INELIGIBLE RESTAURANT- NOT EHS-NET (I1):** Use this code if you determine that the restaurant does not meet the EHS-Net definition of a restaurant. The following is the EHS-Net definition of a restaurant: An establishment that prepares and serves food to customers; institutions, food carts, mobile food units, temporary food stands, restaurants in supermarkets, and establishments that only cater are not included. Restaurants that are mostly or exclusively carry-out can be classified as EHS-Net restaurants if they meet these criteria. You may be able to determine whether a restaurant meets this definition without having to call the restaurant; you may have to call the restaurant and ask questions about it before you can make this determination.
- **INELIGIBLE RESTAURANT- LANGUAGE (I2):** Use this code if you are able to contact a restaurant but there are no managers who speak English well enough to schedule a visit or complete data collection.
- **OTHER (O):** Something that does not fall into any of the other categories.
- **Number of Critical Violations:** Enter the number of critical violations for the restaurant; this number is provided in the restaurant sample list you obtained from CDC.
- **Seating Capacity:** Enter the seating capacity for the restaurant; this number is provided in the restaurant sample list you obtained from CDC.
- **Restaurant Type:** Enter whether the restaurant is an independent restaurant or part of a chain, based on your knowledge of the restaurant. If you cannot determine this, enter Unsure.
- **Difficulty Communicating:** If you were able to talk to someone at the restaurant, enter how much difficulty you had communicating with that person- none, a little, some, a lot. If you were not able to talk to someone at the restaurant, enter No communication.
- **Number of Calls Attempted:** Enter how many calls you made in your attempts to talk to someone at the restaurant. If you did not make any calls (e.g., you know that the restaurant closed recently), enter zero.
- **Reasons for refusal/comments:** Any information they may provide on the reasons for refusal, or any other comments. Information on refusal is valuable, so if you do obtain any of this information, please record it.

5. Stop collecting data once you have collected data in 67 restaurants. When you have collected data in 67 restaurants, you do not have to collect any more data, even if you have restaurants on the list that you have not yet contacted.

B. Recruiting Script

When recruiting restaurants for participation, you will need to use the recruiting script (document entitled 'KMC Study Manager Recruiting Script'). Although you do not have to use this script word

for word, you do need to ensure that you share all the information included in the script with the manager you are attempting to recruit.

C. Scheduling

All data collection visits should be scheduled in advance. Schedule visits at a time that will allow you to interview a kitchen manager and a food worker, and also observe food being prepared. A good time to visit would be before a busy time (e.g., lunch), so that you would have time to do the interviews before the restaurant gets busy. Then you could stay through part of the busy time and conduct your observation of food workers.

III. Data Collection

A. Preparation

The restaurant list you will receive from CDC will have restaurant names along with the restaurants' inspection status and seating capacity. Before each data collection visit, print a copy of the data collection instruments (manager interview, manager survey, kitchen observation, and worker interview). On the top of the manager interview, record the inspection status and seating capacity data for the restaurant you are preparing to visit. It is important that you use the inspection status and seating capacity data from the restaurant sample that we sent you; do not use any other source for this.

Do not write any other identifying information about the restaurant on any of the data collection forms. The data collected from this study will be anonymous, meaning that we do not want it to be possible to link any data to the restaurant from which the data came. Thus, once you complete your data collection in each restaurant, you will need to separate any identifying information on the restaurant from the restaurant's data collection forms. For example, if you had the restaurant's name and directions to the restaurant in a file with the data collection instruments, you would need to separate that identifying information from the completed data collection instrument.

On each data collection visit, you will need to bring sanitizing solution test kits, calibrated thermometers for taking food and ambient temperatures, and wipes for cleaning your thermometers.

A. Informed Consent

When you arrive at the restaurant, you must obtain the manager's informed consent before you begin data collection. The script for this is included at the beginning of the manager interview. You must also talk to the manager about the food worker interview before you do the interview. In addition, you need to attempt to do the manager interview before the manager completes the survey. However, you do not have to do the manager interview and survey, worker interview, and kitchen observation in any particular order. For example, you may wish to do the manager informed consent and talk to the manager about the food worker interview first, followed by the kitchen observation, worker interview, manager interview, and manager survey.

Note: Throughout the data collection instrument, boxes (☐) indicate that there could be multiple answers to the question, while circles (○) indicate that there should be only one answer to the question.

B. Manager Interview

After obtaining informed consent, you will interview a manager with authority over the kitchen. Please use the following guidelines.

1. General Guidelines

- For each interview question, you will read the question aloud and mark the appropriate response. Note that words that should be read aloud are in bold, while words you should not read aloud are not bolded.
- Answer choices should not be read aloud unless specifically noted.
- When reading answer choices, do not read the responses of “Unsure” or “Refused.”
- Questions that allow more than one answer will be followed by “Check all that apply.”
- Please note and follow skip patterns. Skip patterns are denoted by indents and instructions within the response options (e.g., (*skip to 19*)).
- You should attempt to obtain an answer to each question in the interview; however, if you believe that the interviewee is unaware or unsure of the answer to a question, the response should be recorded as “Unsure,” and if the manager refuses to answer a question, the response should be recorded as “Refused.”

2. Specific Questions

- Question 2: The response should be an *estimate* of the number of meals served on the restaurant’s busiest day. Managers do not need to provide the exact number of meals served. Meals may be represented by ticket orders and/or customers served.
- Question 3: The response can be an estimate of seating capacity.
- Question 5: You may write down the answer to this question in any way you like, but these data will be reported into the information system in terms of years. For example, if the manager’s answer is 6 months, the information will be reported in the system as .5. You will not need to make this conversion until data entry.
- Questions 8, 8a: If the manager is unsure, tell them that an educated guess would be fine.
- Questions 9a: A valid certificate is one for which the date has not expired.
- Questions 10a: If the manager is unsure, tell them that their best guess would be fine.
- Question 12: If the manager is unsure, tell them that their best guess would be fine.
- Questions 13a, 14, 14a: If the manager is unsure, tell them that their best guess would be fine.
- Questions 13-14b: These questions are about food workers and their training. It is possible that you will see a higher percentage of managers saying they do not know the answers to these questions.
- Question 13b.3, 13b.7, 18a, 19: You may need to define potentially hazardous foods for the interviewee. If so, use the following definition: Raw or cooked food of animal origin and cooked vegetables.
- Questions 13b.1-7: You will use the N/A option if the question does not apply. For example, if the restaurant does not prepare potentially hazardous foods, the answer to question 12b.3 could be N/A.
- Question 17d, 20: Attempt to classify the manager’s answer into one of the provided options. Do not read the answers aloud, although if the manager has a hard time answering the question, you may wish to provide them with a prompt (e.g., ‘For example, do you tell the food is done by how long it cooks or by how it looks?’).
- Question 18: You may need to provide a definition of hot holding. If so, you can use the following definition: keeping hot foods at temperature hot enough to reduce germ growth.
- Question 19: You may need to provide a definition of cold holding. If so, you can use the following definition: keeping cold foods at a temperature cold enough to reduce germ growth.
- Questions 24: You will ask the manager to answer this question about him/herself for each item in 24a-g. You will ask: ‘how important do *you* think it is that food workers *properly sanitize equipment and utensils*?’ and then you will ask ‘how important do *you* think it is that food workers *report any symptoms of illness to kitchen manager*?’ and so on. If needed, show the manager the response scale for this question found at the end of the manager interview.

- Question 25: You will ask the manager to answer this question about his/her *food workers* for each item in 25a-g. You will ask: ‘how important do *your food workers* think it is to *properly sanitize equipment and utensils?*’ and then you will ask ‘how important do *your food workers* think it is that they *report any symptoms of illness to kitchen manager?*’ and so on. If needed, show the manager the response scale for this question. It is possible that your interviewee will be the only food worker at the establishment and will have no food workers to answer this question about. If this is the case, skip this set of questions, make a note of it, and you will be able to report this situation appropriately in the data entry system.
- Question 26: You will ask the manager to answer this question about *his/her boss* for each item in 26a-g. You will ask: ‘how important does *your boss* think it is that food workers to *properly sanitize equipment and utensils?*’ and then you will ask ‘how important does *your boss* think it is that food workers *report any symptoms of illness to kitchen manager?*’ and so on. If needed, show the manager the response scale for this question. It is possible that your interviewee is the boss; for example, he may be the owner of the establishment. If this is the case, skip this set of questions, make a note of it, and you will be able to report this situation appropriately in the data entry system.
- Question 27-29. If needed, show the manager the response scale for this question.
- Question 29: It is possible that your interviewee is the boss/owner. If this is the case, skip this question, make a note of it, and you will be able to report this situation appropriately in the data entry system.
- Question 30: Attempt to classify the manager’s answer into one of the provided options. Do not read answers aloud, unless the manager needs to be prompted.
- Question 31: If needed, show the manager the response scale for this question.
- Gender question: You will not be asking managers to answer this question- you will be answering it yourself based on your observation of the manager.

C. Manager Survey

The manager will complete this survey using pen and paper. Immediately after you complete the manager interview, ask them to take the survey. While they are taking the survey, remain nearby, but try to remain unobtrusive. This may be a good time to review the menu or your notes. We do not wish to give them the opportunity to look up the answers to the questions on the survey, but we also don’t want them to feel that they are being monitored while they are taking the survey. If clarification is needed, these questions are about their jurisdiction’s requirements, not FDA’s recommendations.

D. Kitchen Observation

You will spend about 50 minutes observing food handling in the kitchen and the kitchen environment. The observation contains 5 sections- Handwashing, Thermometers and Temperatures, Wiping Cloths, Cross Contamination, and Demographics. Collecting data for these sections will require that you observe food workers in the kitchen, take temperatures, and test sanitizer solution. During these tasks, attempt to remain as unobtrusive as possible and keep interaction with food workers to a minimum.

1. Handwashing

For this section, you will observe 1 or 2 food workers or a hand sink for about 15 minutes and attempt to observe at least 2-4 handwashes during that time. Only count a handwashing observation if you are able to observe the food worker from the time they get to the hand sink to the time they leave it.

- Question 1. You will record the number of *attempted* handwashes observed and the number of *complete* handwashes observed.

- A *complete* hand washing requires all of the following steps:
 - Soap
 - Scrub for 10-15 seconds (or more) on all sides of the hands (top, back). You will need to determine how long the workers scrub their hands, either with a timer or watch, or by counting “one-one thousand, two-one thousand, three-one thousand, etc.” to determine if the scrubbing occurred for 10 or more seconds.
 - Rinse hands
 - Dry with paper towel or other approved drying device.
 - Avoid recontamination of hands and arms by using a clean barrier, such as a paper towel, when turning off hand sink faucets.
- An *attempted* hand washing does not fulfill all of the requirements above. For example: a worker did not wash for 10 or more seconds or dried his hands on his apron.
- You may record all observations/handwashing data in the table entitled “Handwashing Table” provided at the end of the kitchen observation document.
- Question 2. Note the number of hand sinks in the kitchen area- areas like the bar or waitress station should not be included in your count.
- Question 2a. To answer this question: 1) turn on hot water and let it run for 10 seconds before you measure the temperature of the water; 2) use a thermometer to determine whether the water reaches 100°F; 3) record the temperature on the table entitled ‘Kitchen Hand Sink Water Temperature.’ Do this for each hand sink in the kitchen area.
- Question 3. “Conveniently located” implies that there is a hand sink in each area or section of the kitchen (prep area, cook line), employees have easy access to the sink and it is unblocked. If the sink is blocked or in an inconvenient location, then mark No (examples of “inconvenient location”: having to enter into another room or open a door to access a hand sink, garbage/equipment blocking access to hand sink, door propped open and hand sink is blocked behind the door).
- Question 4. Note if you observed any food worker wearing disposable gloves.
- Question 4a. Gloves should only be used for one task (working with ready-to-eat food or with raw animal food) and they should be discarded when they are damaged or soiled or when interruptions occur in the operation (change in task). Contamination would include switching tasks, touching face, touching garbage, picking up something off of the floor, etc. If you observe any worker who did not change contaminated gloves then mark No. If you observed a worker wearing gloves but did not witness any possible contamination events then mark N/A.
- Question 4b. Note if there is a glove supply in an area that is visible and readily accessible to food workers.
- Question 5. Note if you see an employee touching ready-to-eat foods (this food won’t have a kill step) with bare hands (no gloves, tongs, or other utensils being used). If you do not see any ready-to-eat foods being prepared, then answer this question ‘No RTE food prep occurring’.
- Question 6. Note if you see an employee touching non-ready-to-eat foods (this food will have a kill step) with bare hands (no gloves, tongs, or other utensils being used). If you do not see any non-ready-to-eat foods being prepared, then answer this question ‘No non-RTE food prep occurring’.

2. *Thermometers and Temperatures*

Calibrating and sanitizing your thermometer

- Probe food thermometers should be maintained and used appropriately to facilitate accurate data collection with minimal risk of cross-contamination. It is recommended that thermometers be periodically calibrated with standardized laboratory equipment. Thermometers may also be field-calibrated using the ice-point and boiling-point methods. The

following steps should be taken when calibrating thermometers using the ice-point or boiling-point method:

- Fill a glass with an even ratio of crushed ice to water solution. (Fill a pot with plain water and bring to a rolling boil if using the boiling-point method.)
- Insert the thermometer probe into the center-most portion of the solution without touching the bottom or sides of the container.
- Allow the thermometer to stabilize while in the solution.
- Accurate thermometers should read 32°F (ice-point) or 212°F (boiling-point) with a +/- 2°F variance.
- If the thermometer is out of calibration, follow the manufacturer's instructions when adjusting the thermometer back into calibration.
- If calibrating at high and low altitudes, be aware that pressure changes may change boiling and freezing points.
- To help avoid cross-contamination, probe food thermometers should be properly sanitized before measuring any food and between measuring different foods. The metal stem may be sanitized by conventional wash, rinse and sanitize process (dish machine or dish sink) or by using an alcohol wipe.

Specific questions

- Question 7. This question refers to thermometers used to check food temperatures. Thermometers are available if it is relatively easy for a food worker to find a thermometer to use. If you see food workers with thermometers or thermometers in the kitchen, then the answer to this question is Yes. If you don't see any thermometers, then answer this question is No.
- Question 7a. You will attempt to determine if one or more thermometers used for checking food temperatures is accurate. To do this, you will ask the kitchen manager to insert a thermometer in a food item or ice bath, and insert your (calibrated and sanitized) thermometer or thermocouple into the same food item. If the manager's thermometer(s) are within +/- 2 °F of yours, then check Yes, if there is a variation of more than 2 °F check No.
- Question 7b. If you see a thermometer being used to take a final cook temperature of a potentially hazardous food, check Yes, if you don't, check No. If you are not able to observe the final cooking process of a potentially hazardous food, check No Final Cooking Observed'.
- Question 7c. If you see a thermometer being used to check hot or cold holding temperature of a potentially hazardous food, check Yes; if you don't, check No. If you don't see any potentially hazardous food being hot or cold held, check No Holding Observed.
- Question 7d. If you observed a thermometer in use, check Yes if you saw it being sanitized before use, check No if you saw that it was not sanitized before use. If you did not see a thermometer in use, check No Thermometer in Use.
- Question 8. Temperature logs are tools used to record food temperatures. Temperatures logs may be paper or digital and are typically available for review one or more days following temperature documentation. Temperature logs often contain basic information such as date, time, item being measured, food temperature, corrective actions and employee taking the measure. If you observe a temperature log with a temperature documented in the previous two weeks, the answer to this question is Yes. If you don't see any temperature logs, or you see logs that do not have any temperatures documented, the answer to this question is No.
- Question 9. If you were able to observe raw animal foods in the final stages of cooking, answer Yes. If you were not, answer No.
- Question 9a. Take the temperature of a raw animal food at the end of cooking. If the food reached the required temperature, the answer to this question is Yes. If it did not, the answer is No.

3. Cold Holding/Storage and Hot Holding

General guidelines

- Foods identified as potentially hazardous should be targeted for temperature checks to answer these questions. In general, potentially hazardous foods include foods of animal origin and heat-processed vegetables. However, additional foods may be recognized as potentially hazardous; therefore, refer to the FDA Food Code for the comprehensive definition of potentially hazardous foods before collecting temperature data.
- Only *internal* food temperatures should be recorded during observations. It is recommended to measure at least one inch into the product where appropriate. Thin foods may be layered or measured by inserting the thermometer into the edge of the product.
- Internal temperatures may vary within the same food. Therefore, it is advised to take multiple internal temperatures at various depths and locations within each food item being measured. At least one center-most measure and two edge measures (> 1 inch deep) should be taken for containerized, volume foods such as soups, casseroles, protein salads or cooked rice. At least one center-most temperature should be taken for non-volume foods such as individual fried foods or prepared sandwiches. For hot foods, document the coolest temperature observed. For cold foods, document the warmest temperature observed.
- Hot-holding and cold-holding are specific processes involving foods temporarily held for service and dispensed per order or recipe. In most cases, holding devices are not designed to heat or cool foods to target temperatures; instead, they merely maintain food at a desired temperature.
- Typical cold-holding examples include:
 - Salad bars
 - Top-access “low-boy” preparation coolers
 - Reach-in coolers
 - Cook-line drawer coolers
 - Ice beds
- Hot-holding examples include:
 - Steam tables
 - Bain maries
 - Alto-shaams
 - Crock pots

Specific questions

- Question 10. If you saw potentially hazardous foods in cold holding units, you would answer this question Yes. If you did not see this, you would answer No. If you saw potentially hazardous foods in cold holding units, you will measure temperatures of 4-6 different potentially hazardous foods in at least 2 different cold holding units. If there are more than 2 units attempt to get a food temperature in up to 4 units. For example, if there are 3 units then temp 2 foods in each unit. If there are 4 units, temp 1 or 2 foods in each unit. Record the food temps in the provided table (one temp on each line of the table), along with the type of cold holding unit, whether the unit had a thermometer, and whether they were accurate. In order to answer this last question, you will need to take the ambient temperature of the cold holding units.
- Question 11. If you saw potentially hazardous foods being hot held, you would answer this question Yes. If you did not see this, you would answer No. If you see potentially hazardous foods being hot held, measure the temperature of 2-4 of those foods. Temp different hot hold holding units if there is more than 1. Record the food temps in the provided table (one temp on each line of the table), and the type of unit.

4. *Wiping Cloths*

- Question 12. Were wiping cloths used in this restaurant?
 - Yes -if you observe wiping cloths in the kitchen area.
 - No - if you do not observe any wiping cloths in the kitchen area. If you do not see any wiping cloths, skip to question 13.
- Question 12a. Were any wet wiping cloths stored in a sanitizer solution between uses?
 - Yes -if you observe wiping cloths stored in a sanitizer solution. If you cannot determine what the solution is, ask a manager or food worker.
 - No - if you do not observe any wiping cloths stored in sanitizer solution.
- Question 12b. Were test strips available to measure the concentration of the sanitizing solution?
 - Yes -if you observe test strips. If you don't see test strips, ask the manager or worker if test strips are available and if you could see them. If they show them to you, mark yes.
 - No - if you do not observe any test strips and the manager/worker says they don't have any or can't show them to you.
 - No sanitizing solution is used- the restaurant does not use sanitizer solution.
- Question 12c. Was the concentration of the sanitizer at the required level?
 - Yes -if when you test the sanitizer solution, you find it is at the required level.
 - No - if when you test the sanitizer solution, you find it is not at the required level.
 - No sanitizing solution is used/was available to test- if the restaurant does not use sanitizer solution or they have none available for testing.
- Question 12d. Did you observe the use of dry soiled wiping cloths?
 - For these questions, use your professional judgment to determine if the wiping cloths are soiled.
 - Yes -if you observe workers using dry, soiled wiping cloths for cleaning.
 - No - if you do not observe workers using dry soiled wiping cloths for cleaning.
 - No dry wiping cloths- if you do not observe any dry wiping cloths in the restaurant.
 - Unable to determine- if you are unable to determine if the wiping cloths were soiled.

5. *Cross Contamination*

- The potential for cross contamination happens when an activity can potentially transfer bacteria to food or objects. The information for this section is collected while observing food workers actively working to prepare food, handle utensils, cleaning surfaces etc. The observation is to determine if the potential activity and/or method and contact with other items could lead to food/surface/equipment becoming cross contaminated.
 - Use your professional judgment when determining if something is dirty. Some examples are provided below.
- Question 13a. From bare hands to ready-to-eat foods?
 - Yes -if you observe a food worker handling ready-to-eat food with bare hands (dirty or clean).
 - No - if you see ready-to-eat food being handled, but not with bare hands (instead with gloves, clean utensils, or some other method for preventing bare hand contact).
 - No ready-to-eat food preparation observed - if you saw no ready-to-eat food being prepared during your observation.
- Question 13b. From dirty bare hands to clean equipment or surfaces?
 - Yes - if you observe a food worker's dirty bare hands come in contact with clean equipment or surfaces. *Example: if bare hands are used to handle raw meat product, dirty dishes, or garbage, etc., and then are used to touch a clean serving platter.*

- No - if you observe the worker adequately washing hands prior to, or putting on gloves prior to, contact with equipment or surface.
- No bare hands observed or no handling of clean equipment or clean food prep surfaces observed – if you did not see any bare hand contact during the observation or if you did not see clean equipment or surfaces being handled.
- Question 13c. From dirty equipment or utensils to ready-to-eat foods?
 - Yes - if you observe dirty equipment or dirty utensils in contact with ready-to-eat foods. *Example: a plate used to transfer raw or under cooked food is reused for ready-to-eat food without cleaning and sanitizing prior to reuse.*
 - No – if you observe clean equipment or utensils in contact with ready-to-eat foods. Clean equipment/ utensils are those that are clean and sanitized. *Example: Utensil used with ready-to-eat foods was seen retrieved from clean storage or washed, rinsed, and sanitized prior to use.*
 - No ready-to-eat food preparation observed – if you did not see any ready-to-eat foods being prepared.
- Question 13d. From dirty gloves to ready-to-eat foods?
 - Yes - if you observe a food worker using gloves in a way that could cause cross-contamination to a ready-to-eat food. *Example: if gloved hands are used to handle raw meat product, dirty dishes, or garbage, etc., and then used to handle ready-to-eat foods.*
 - No - if, upon changing tasks or when gloves are soiled, the worker puts on a new set of gloves prior to handling ready-to-eat food.
 - No glove use or ready-to-eat food preparation observed - if gloves were not being used in the restaurant or if you did not see any ready-to-eat foods being prepared.
- Question 13e. From dirty gloved hands to clean equipment or surfaces?
 - Yes - if you observe a food worker using gloves in a way that could cause cross-contamination to clean equipment or surfaces. *Example: if gloved hands are used to handle raw meat product, dirty dishes, or garbage, etc., and then touch a clean serving platter.*
 - No - if, upon changing tasks or when gloves are soiled, the worker put on a new set of gloves prior to touching equipment or surface.
 - No glove use observed or no handling of clean equipment or clean food prep surfaces observed - if you did not see any gloves being used or if you did not see clean equipment or surfaces being handled.
- Question 13f. From a wiping cloth (not properly stored in sanitizer) to clean equipment or a clean food prep surface?
 - Yes - if you observe a wiping cloth that was not stored in sanitizer solution prior to use used on equipment or prep surfaces, there is no sanitizing solution available, and a wipe cloth is used to clean equipment or a food prep area.
 - No - if you observe wiping cloths stored between use on equipment/surfaces in an adequate sanitizing solution. Refer to Q12c to determine if the sanitizing solution is adequate.
 - No handling of clean equipment or clean food prep surfaces observed- if you did not see clean equipment or surfaces being handled.
- Question 13g. From a wiping cloth (not properly stored in sanitizer) to clean hands or hands with clean gloves?
 - Yes - if you observe a worker using a wiping cloth that was not properly stored in a sanitizing solution to wipe their bare or gloved hands, or if there is no sanitizing solution available and a worker uses a wiping cloth to wipe their bare or gloved hands.

- No - if the wiping cloths are stored between use in an adequate sanitizing solution. Refer to Q12c to determine if the sanitizing solution is adequate.
- Question 13h. In a refrigeration unit from raw foods stored over or on cooked or ready-to-eat foods?
 - Yes - if you observe raw meat or poultry stored in the refrigeration unit with the potential to cross contaminate cooked or ready-to-eat foods. *Example: raw meat or poultry on a platter with plastic wrap or in a sealed container, stored over a cooked or ready-to-eat food.*
 - No - if all raw meat and poultry stored in the same unit are located where the potential to cross-contaminate ready-to-eat foods is not possible. Example: All ready-to-eat foods are stored on a shelf above any raw meat or poultry or, raw meat and poultry are stored in a separate unit from ready-to-eat foods.
 - No raw animal foods or no ready-to-eat foods observed – if you did not see any raw animal foods in the kitchen or you did not see any ready-to-eat foods in the kitchen.
- Question 13i. Other (please describe) _____
 - List any other potential cross contamination activity observed that is not indicated in questions 13 a–h. Please limit response to 50 characters.

Demographics

These questions are to be answered by the EHS-Net data collectors. They may need to review the menu, observe the restaurant, and ask a few question of the manager to answer some of these questions.

- Question 14. Establishment type:
 - *Prep Serve*– An establishment where all food items are prepared and served without a kill step. Some food on the menu that is commercially prepared ready-to-eat food which may be heated for service without a kill step.
 - *Cook Serve*– An establishment where at least one food item is prepared for same day service and involves a kill step. The menu may also include prep serve items or have some food on the menu that is commercially prepared and heated for service.
 - *Complex*– An establishment where at least one food item requires a kill step and holding beyond same day service or a kill step and some combination of holding, cooling, re-heating, and freezing. The menu may also include any combination of prep serve, cook serve, and complex food items.
- Question 15. FoodNet establishment type:
 - Quick Service Establishment – An establishment that includes take out and any food service facility where payment is made prior to eating the meal.
 - Regular Sit-Down Restaurant – An establishment where food is brought to the table and the customer pays after eating.
 - Cafeteria/Buffer Service – A cafeteria or other restaurant where the main course is obtained from a buffet line.
- Question 16. Please check all of the following that describe this establishment. Check any of the options that describe the establishment.
- Question 17. What is the highest priced food entree on the menu? Review the menu in order to determine the highest priced entree. If there are multiple menus (e.g., breakfast, lunch, brunch, dinner, late night) for the restaurant, record the highest price entrée for each menu.
- Question 18. What is the lowest priced food entree on the menu? Review the menu in order to determine the lowest priced entree. If there are multiple menus for the restaurant, record the lowest price entrée for each menu.

- Question 19. How many critical violations did this restaurant receive on its last routine inspection? Answer this question through a review of your department records or by reviewing the inspection posted in the restaurant.

E. Worker Informed Consent and Interview

Before you can conduct the worker interview, you will first need to talk with the manager about which food worker they can spare to talk with you for about 10 minutes. The food worker will need to be someone who can speak English well enough to conduct the interview. Once you have identified the food worker to be interviewed, attempt to find a place to interview him or her out of the sight and hearing of the manager and other food workers. This may require that you ask the manager for some privacy. Then read the informed consent script to the food worker and begin your interview (assuming the food worker agrees to the interview). If the food worker does not agree to the interview, you may ask the manager to identify another food worker whom you could interview. You will only need to interview one food worker per restaurant.

1. General Guidelines

- For each interview question, you will read the question aloud and mark the appropriate response. Note that words that should be read aloud are in bold, while words you should not read aloud are not bolded.
- Answer choices should not be read aloud unless specifically noted.
- When reading answer choices, do not read the responses of “Unsure” or “Refused.”
- Questions that allow more than one answer will be followed by “Check all that apply.”
- Please note and follow skip patterns. Skip patterns are denoted by indents and instructions within the response options (e.g., *(skip to 19)*).
- You should attempt to obtain an answer to each question in the interview; however, if you believe that the interviewee is unaware or unsure of the answer to a question, the response should be recorded as “Unsure,” and if the manager refuses to answer a question, the response should be recorded as “Refused.”

2. Specific Questions

- Question 2-3: You may write down the answer to this question in any way you like, but these data will be reported into the information system in terms of years. For example, if the worker’s answer is 6 months, the information will be reported in the system as .5. You will not need to make this conversion until data entry.
- Question 4c.3: You may need to provide a definition of potentially hazardous food for the worker. Use the following definition: Raw or cooked food of animal origin and cooked vegetables.
- Questions 5-7: If needed, show the manager the response scale for this question found at the end of the worker interview.
- Questions 6: If the food worker has no coworkers, skip this question, make a note of it, and you will be able to report this situation appropriately in the data entry system.
- Question 9: If clarification is needed, these questions are about their jurisdiction’s requirements, not FDA’s recommendations.
- Question 10: Attempt to classify the manager’s answer into one of the provided options. Do not read answers aloud, unless the manager needs to be prompted.
- Question 11: If needed, show the manager the response scale for this question.

- Gender question: You will not be asking managers to answer this question- you will be answering it yourself based on your observation of the manager.

At the completion of the interview, thank the food worker, and give them the summary of the answers to question 9.

F. Debrief

At the end of your visit, talk with the managers briefly about what you saw. Offer them the answers to the manager survey, and ask them if they have any questions. Mention any unsafe practices that you would like to bring to their attention. Thank them for allowing you into the restaurant.

As you leave the restaurant, remove any identifying information about the restaurant (name, location, etc.) from the data collection forms.

VI. Other

A. Answers to possible questions.

- “What are you doing?”
- “Why are you watching me?”
- “What are you looking for?”

We are trying to learn more about how food is prepared in restaurants. So we are watching food workers prepare food, and taking notes on what they do.

- “Why?”

In the long run, we hope to figure out how to make it easier for food workers to do what they need to do.

- “What are you going to do with your notes?”

They will be entered into a computer and analyzed along with other responses. We are not collecting any information that might identify you in any way.

EHS-Net KMC Study Manager Telephone Recruiting Screener

Hello this is _____ with the _____ Health Department. We are working with the Centers for Disease Control and Prevention (CDC) on a research project designed to help us better understand managers' and workers' food safety knowledge and attitudes and restaurant policies and practices. Your restaurant was picked at random to be in this project. The study involves an interview with a manager and a food worker, and an observation of the kitchen. Your participation is voluntary, but we would really appreciate your participation, as it will help us understand the difficult issues restaurants face. If you don't want to be part of the study or if you change your mind later, nothing will happen to you. Whether you are part of the study or not will not affect your restaurant's score on any health inspection. Also, if you decide to participate, your name and your restaurant's name will not be recorded on the data collection form, nor will they be included in any reports.

Having said that, I need to let you know that at any time during the survey if I see something that is an imminent health hazard, such as no power, no water or sewage on the floor, I will need to stop the study and report the problem to your local health department.

Could we schedule a time to come out when we could talk to a kitchen manager, a food worker, and observe your kitchen for a while?

No → Thank you for your time.

Yes ↓

Great! I'll visit your restaurant for about an hour and a half. Keeping in mind that a manager responsible for managing the kitchen and a worker who handles food and who speaks English needs to be available for the interview, when would be a convenient time to schedule the visit?

Date:

Time:

Please call me at if you need to cancel or re-schedule, or if you have any questions.

If you have any questions at a later time, you can contact: (Local Contact Name). *(If have card)* My information is on this card.

Public reporting burden for this collection of information is estimated to average 3 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to: CDC/ATSDR Information Collection Review Office, MS D-74; 1600 Clifton Road NE, Atlanta, Ga. 30333; ATTN: PRA (0920-0792)

EHS-Net KMC Study: Manager Informed Consent and Interview

Manager Informed Consent

Let me give you a little background on why I'm here and what we are going to be doing. I'm working with _____ (state health department) on a research project designed to help us better understand managers' and workers' food safety knowledge and attitudes and restaurant policies and practices. Your restaurant was picked at random to be in this project. Participation in this study is voluntary. You can choose to stop at any time. If you don't want to be part of the study or if you change your mind later, nothing will happen to you. Whether you are part of the study or not will not affect your restaurant's score on any health inspection.

Having said that, I need to let you know that if at any time during my visit I see something that is an imminent health hazard, such as no power, no water or sewage on the floor, I will need to stop the study and report the problem to your local health department.

I'm going to ask you some questions about this restaurant's policies and practices, and your food safety knowledge. The interview should take about 20 minutes. If any of the questions make you uncomfortable you can choose not to answer them. The information I collect today will be combined with information from other restaurants in various states and analyzed. Your name and your restaurant's name will not be recorded on the data collection form, nor will they be included in any reports.

The information you provide will be valuable in helping us understand the difficult issues restaurants face, so we ask you to be as open and honest as possible.

After our interview, I'd like to observe your kitchen for a while. I'd also like to talk to one of your food workers for about ten minutes, if possible. It can be a worker of your choosing, a worker that you feel you can spare for a few minutes, but it needs to be someone who works in the kitchen, has food handling responsibilities and can speak English fairly well.

Do you have any questions?

If you have any questions at a later time, you can contact: (Local Contact Name). *(If have card)* My information is on this card.

Public reporting burden for this collection of information is estimated to average 20 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to: CDC/ATSDR Information Collection Review Office, MS D-74; 1600 Clifton Road NE, Atlanta, Ga. 30333; ATTN: PRA (0920-0792)

Only bold text is to be read aloud by the data collector. Instructions to data collector are italicized.

DEMOGRAPHIC / CLASSIFICATION

I'd like to ask you some questions about this restaurant. Please be as open and honest as possible. The first few questions are general questions about the restaurant.

- 1. Is this an independent establishment or a chain establishment?**
 Independent Chain Unsure Refused
- 2. Approximately how many meals are served here on your busiest day? _____** Unsure Refused
- 3. What is the restaurant's maximum seating capacity? _____** Unsure Refused
- 4. Which one of the options below best describes the menu for this establishment- American, Asian, Mexican, Italian, or Other?**
 American (non-ethnic) Asian Mexican Italian Other Unsure Refused
- 5. Approximately how long have you been employed as the Person-In-Charge- the PIC- or kitchen manager here? _____** Unsure Refused

MANAGER FOOD SAFETY TRAINING AND CERTIFICATION

The next few questions are about kitchen managers- managers that have control over the kitchen area.

- 6. How many PICs/kitchen managers, including you, work in this restaurant? _____**
 Unsure Refused
- 7. Have you received food safety training on topics such as how to do a proper hand wash, final cook temperatures or ways to prevent cross contamination? This training could have occurred on the job, or in a course or class.**
 Yes No Unsure Refused
- 8. Have other PICs or kitchen managers received food safety training?**
 Yes (*go to 8a*) No (*go to 9*) Unsure (*go to 9*) Refused (*go to 9*)
8a. How many other managers have had this food safety training? _____
 Unsure Refused
- 9. Have you, as the PIC or kitchen manager, ever been food safety certified? By food safety certified, I mean you have taken a food safety test and been issued a card or a certificate; you may or may not have had to take training to get the certificate.**
 Yes (*go to 9a*) No (*go to 10*) Unsure (*go to 10*) Refused (*go to 10*)
9a. Do you currently hold a valid food safety manager certificate?
 Yes (*go to 9b*) No (*go to 10*) Unsure (*go to 10*) Refused (*go to 10*)
9b. What organization provided the certificate- ServSafe, National Registry of Food Safety Professionals, Thomson Prometric, a state or local health department, or some other organization? (Check all that apply)
 ServSafe
 National Registry of Food Safety Professionals
 Thomson Prometric (*known formerly as: Experior Assessments, National Assessment Institute, Chauncy, Educational Testing Service*)
 A state or local health department
 Other, *describe:* _____

- Unsure
- Refused

9c. Was training provided before the exam?

- Yes (go to 9d)
- No (go to 10)
- Unsure (go to 10)
- Refused (go to 10)

9d. Did the training include any of the following?

- 1...Classroom training Yes No Unsure Refused
- 2...On-the-job training Yes No Unsure Refused
- 3...Online training Yes No Unsure Refused
- 4...A manual or employee handbook Yes No Unsure Refused
- 5...other kinds of written materials Yes No Unsure Refused
- 6...Videos or DVDs Yes No Unsure Refused

9e. Is food safety training a required part of the certification program?

- Yes
- No
- Unsure
- Refused

10. Have any other PICs or kitchen managers on staff here been food safety certified?

- Yes (go to 10a)
- No (go to 11)
- Unsure (go to 11)
- Refused (go to 11)

10a. How many PICs or kitchen managers are food safety certified? _____ Unsure Refused

10b. What organization provided their certification- ServSafe, National Registry of Food Safety Professionals, Thomson Prometric, a state or local health department, or some other organization?
(Check all that apply)

- ServSafe
- National Registry of Food Safety Professionals
- Thomson Prometric (formerly known as: Experior Assessments, National Assessment Institute, Chauncy, Educational Testing Service)
- A state or local health department
- Other, describe: _____
- Unsure
- Refused

11. Does this establishment require PICs or kitchen managers to be food safety certified?

- Yes
- No
- Unsure
- Refused

FOOD WORKER FOOD SAFETY TRAINING AND CERTIFICATION

The next few questions focus on food workers- employees, excluding managers, who work in the kitchen. This does not include staff who have no food handling responsibilities or who have very limited food contact, such as adding garnish or condiments to a plate.

12. How many food workers, excluding managers, work in this restaurant? _____ Unsure Refused

13. Have any food workers received training focused on food safety, training that might include topics such as how to do a proper hand wash, when and where to wash, or ways to prevent cross contamination? The training may occur on the job, or in a course or a class.

- Yes (go to 13a)
- No (go to 14)
- Unsure (go to 14)
- Refused (go to 14)

13a. How many food workers have received this food safety training? _____ Unsure Refused

13b. Does the food safety training provide instruction on:

1. How, when, and where to do a hand wash?

Yes No N/A Unsure Refused

2. How and when to use gloves to prevent contamination of food?

Yes No N/A Unsure Refused

3. Time and temperature control of potentially hazardous foods?

Yes No N/A Unsure Refused

4. How to properly clean and sanitize equipment and food contact surfaces?

Yes No N/A Unsure Refused

5. How to prevent or reduce the risk of cross contaminating food during storage, preparation, holding and service?

Yes No N/A Unsure Refused

6. How to use a thermometer to check food temperatures?

Yes No N/A Unsure Refused

7. Final cook temperatures of potential hazardous foods?

Yes No N/A Unsure Refused

13c. Does the training include any of the following?

1...Classroom training Yes No Unsure Refused

2...On-the-job training in the restaurant Yes No Unsure Refused

3...Online training Yes No Unsure Refused

4...A manual or employee handbook Yes No Unsure Refused

5...other kinds of written materials Yes No Unsure Refused

6...Videos or DVDs Yes No Unsure Refused

14. Have any food workers been food safety certified? By food safety certified, I mean they have taken a food safety test and been issued a card or a certificate.

Yes (go to 14a) No (go to 15) Unsure (go to 15) Refused (go to 15)

14a. How many food workers have been food safety certified? _____ Unsure Refused

14b. What organization provided the certification ServSafe, National Registry of Food Safety Professionals, Thomson Prometric, a state or local health department, or some other organization? (Check all that apply)

ServSafe

National Registry of Food Safety Professionals

Thomson Prometric (formerly known as: Expor Assessment, National Assessment Institute, Chauncy, Educational Testing Service)

A state or local health department

Other, describe: _____

Unsure

Refused

FOOD HANDLING PRACTICES AND POLICIES

Now I'd like to ask you some general questions about this establishment's food handling practices and policies. If the question refers to something your restaurant doesn't cook or do, just let me know.

15. Does this establishment have a policy or procedure concerning hand washing? This policy may include information such as where or when food workers should wash.

- Yes (go to 15a) No (go to 16) Unsure (go to 16) Refused (go to 16)

15a. Is the policy written?

- Yes No Unsure Refused

16. Does this establishment have a policy that requires food workers to minimize bare hand contact with ready-to-eat foods, such as salads, by using gloves, utensils or deli tissues?

- Yes (go to 16a) No (go to 17) Unsure (go to 17) Refused (go to 17)

16a. Is the policy written?

- Yes No Unsure Refused

17. Does this restaurant cook raw animal products such as ground beef, chicken, fish, or eggs?

- Yes (go to 17a) No (go to 18) Unsure (go to 18) Refused (go to 18)

17a. Does this restaurant have a policy that specifies the final cook temperatures for these raw animal products?

- Yes (go to 17b) No (go to 18) Unsure (go to 18) Refused (go to 18)

17b. Is the policy written?

- Yes No Unsure Refused

17c. What does the policy state the final cook temperature is for menu items containing ground beef?

- _____ °F
 No ground beef served The policy does not address ground beef
 Unsure Refused

17d. How do food workers determine the final cook temperature of raw animal foods such as ground beef, chicken, or eggs? (Check all that apply)

- By using a thermometer (go to 17d1) They just know (go to 18)
 By its appearance ("eye-ball" it) (go to 18) Other, Describe: _____ (go to 18)
 By touch or probing with a fork/utensil (go to 18) Unsure (go to 18)
 By using a timer (go to 18) Refused (go to 18)

17d1. Are food workers trained to check the accuracy of these thermometers?

- Yes No Unsure Refused

18. Does this restaurant ever hold hot foods?

- Yes No Unsure Refused

18a. Does this restaurant have a policy that specifies the temperature at which potentially hazardous foods should be hot held?

- Yes (go to 18a1) No (go to 19) Unsure (go to 19) Refused (go to 19)

18a1. What is that temperature? _____ °F N/A Unsure Refused

18a2. Is the policy written?

- Yes No Unsure Refused

19. Does this restaurant have a policy that specifies the temperature at which potentially hazardous foods should be cold held?

- Yes (go to 19a) No (go to 20) Unsure (go to 20) Refused (go to 20)

19a. What is that temperature? _____°F N/A Unsure Refused

19b. Is the policy written?

- Yes No Unsure Refused

20. How do food workers determine the temperature of hot or cold held food? (Check all that apply)

- By using a thermometer (go to 20a) They just know (go to 21)
 By its appearance (“eye-ball” it) (go to 21) Other, Describe: _____ (go to 21)
 By touch or probing with a fork/utensil (go to 21) Unsure (go to 21)
 By using a timer (go to 21) Refused (go to 21)

20a. Are food workers trained to check the accuracy of these thermometers?

- Yes No Unsure Refused

21. Does this restaurant have a policy on how to store in-use wet wiping cloths?

- No in-use wet wiping cloths are stored (go to 22)
 Yes (go to 21a) No (go to 22) Unsure (go to 22) Refused (go to 22)

21a. If yes, does the policy include use of a sanitizing solution?

- Yes No Unsure Refused

21b. Is the policy written?

- Yes No Unsure Refused

22. Does this establishment have a policy on how to set up manual dish washing using a three-bay sink?

- No manual dishwasher in 3-bay sink (go to 23) No 3-bay sink (go to 23)
 Yes (go to 22a) No (go to 23) Unsure (go to 23) Refused (go to 23)

22a. Does the policy include steps on how to measure the concentration of the sanitizing solution?

- Yes No Unsure Refused

22b. Is the policy written?

- Yes No Unsure Refused

23. Does this restaurant have a policy that addresses employee health?

- Yes (go to 23a) No (go to 24) Unsure (go to 24) Refused (go to 24)

23a. Is the policy written?

- Yes No Unsure Refused

Now I am going to ask you a series of questions about your beliefs, your food workers’ beliefs, and your boss’s beliefs. I going to read a series of things, and I’d like to tell me how important you think it is for food workers to do those things. You can say very important, somewhat important, or not really important. So how important do you think it is that food workers properly sanitize equipment and utensils?

Repeat for all actions; repeat for food workers and the boss.

On a scale of... <i>(Show scale)</i> Very Important, Somewhat Important, and Not Really Important...	24. How important do <u>YOU</u> think it is that Food Workers...				25. How important do your <u>FOOD WORKERS</u> think it is that they...				26. How important does <u>YOUR BOSS</u> think it is that Food workers...			
	VI	SI	NRI	UNS	VI	SI	NRI	UNS	VI	SI	NRI	UNS
a. properly sanitize equipment & utensils?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. report any symptoms of illness to kitchen manager?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. get trained in CPR or basic first aid?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. clean their hands effectively?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. properly cook potentially hazardous foods?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f. know the eight major allergens?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g. maintain hot & cold held foods at proper temperatures?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Thanks. Now, just a few more questions about how you see the overall food safety situation here. I'd like you to answer the next questions by choosing a response from this scale – 'Yes, definitely' to 'No, not at all.' Please listen to each question, and choose your answer from one of these here on the scale. *Show scale. Ask each question, and check their response.*

27. Do you feel that you have all the food safety knowledge you need to be able to effectively manage food safety in this establishment? *(show scale)*
- Yes, definitely Yes, sort of Not sure No, not really No, not at all Refused
28. Do you feel that you have all the management skills you need to be able to effectively manage food safety in this establishment? *(show scale)*
- Yes, definitely Yes, sort of Not sure No, not really No, not at all Refused
29. Do you feel that you have been given enough authority/ position by your Boss or Owner to be able to effectively manage food safety in this establishment? *(show scale)*
- Yes, definitely Yes, sort of Not sure No, not really No, not at all Refused
30. What is the highest level of formal education you have completed?
- 8th grade or less College degree
- Some high school Some graduate work
- High school diploma Graduate degree
- Some community college or associate work Other (*describe*) _____
- Community college or associate degree Unsure
- Some college Refused
31. Please indicate which of the following categories best describes your age—15 to 20 years of age, 21 to 30 years of age, 31 to 40 years of age, 41 to 50 years of age, 51 to 60 years of age, or older than 60? *(Show scale)*

- 15 to 20 years of age
- 21 to 30 years of age
- 31 to 40 years of age
- 41 to 50 years of age
- 51 to 60 years of age
- Older than 60
- Unsure
- Refused

32. What is your primary language? *(If respondent needs clarification—primary language is the language you speak best)*

- English
- Spanish
- Russian
- An Asian language
- Other *(describe)*: _____
- Unsure
- Refused

NOT TO BE READ ALOUD: Note the interviewee's gender here:

- Male
- Female
- Unsure

Thank you, that's the end of the interview section. Now I would like you to take this short survey, it's 10 questions and shouldn't take you very long to complete. I'll give you the answers to the questions at the end of my visit.

Very important	Somewhat important	Not very important
Yes, definitely	Yes, sort of	Not sure
No, not really	No, not at all	

15 to 20 years of age
 21 to 30 years of age
 31 to 40 years of age
 41 to 50 years of age
 51 to 60 years of age
 Older than 60

Please choose the best answer and circle your answer choice.

1. What symptom(s) are most likely to indicate an employee has a disease that may be passed through food?

- A. Pink eye
- B. Runny nose and sneezing
- C. Vomiting and diarrhea
- D. All of the above

2. Raw hamburger patties should be cooked to an internal temperature of

- A. 135°F (57°C).
- B. 140°F (60°C).
- C. 150°F (66°C).
- D. 155°F (68°C).

3. What should you do to ensure that the sanitizing solution you are using on a food preparation surface will work properly?

- A. When mixing the solution, use a test kit to check its concentration.
- B. When using the solution, rinse it from the surface and then let it air dry.
- C. After using the solution, test the surface to confirm that no more microorganisms are present.
- D. None of the above.

4. What is the proper procedure for washing your hands?

- A. Wet hands with warm water. Apply soap. Vigorously scrub hands and arms for 10-15 seconds. Rinse hands. Dry hands.
- B. Wet hands with warm water. Apply soap. Vigorously scrub hands and arms for 2-5 seconds. Apply a hand antiseptic. Dry hands.
- C. Wet hands with warm water. Apply soap. Rinse hands. Dry hands.
- D. None of the above.

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- 5. At what maximum internal temperature should cold potentially hazardous foods (PHF) be held?**
- A. 0°F (-17°C)
 - B. 32°F (0°C)
 - C. 41°F (5°C)
 - D. 60°F (16°C)
- 6. Food handlers should change their gloves:**
- A. When they become soiled or torn
 - B. After taking out the trash
 - C. After handling raw meat and before handling ready-to-eat foods
 - D. All of the above
- 7. At what minimum internal temperature should hot potentially hazardous foods (PHF) be held?**
- A. 115°F (46°C)
 - B. 125°F (52°C)
 - C. 135°F (57°C)
 - D. 155°F (68°C)
- 8. What is the correct way to clean and sanitize a prep table?**
- A. Rinse, wash, sanitize
 - B. Wash, rinse, sanitize
 - C. Sanitize, wash, rinse
 - D. Rinse, sanitize, wash
- 9. Poultry, stuffed meat, and all stuffing should be cooked to a minimum internal temperature of:**
- A. 165° F (74°C)
 - B. 150° F (66°C)
 - C. 145° F (63°C)
 - D. 155° F (68°C)
- 10. Food handlers must wash their hands before they start work and after:**
- A. Using the restroom.
 - B. Sneezing, coughing, or using a tissue.
 - C. Handling raw meat, poultry, or seafood.
 - D. All of the above.

Answer Summary

1. **What symptom(s) are most likely to indicate an employee has a disease that may be passed through food?**

Answer: *C. Vomiting and diarrhea.* These are common symptoms of many illnesses caused by germs in food.

2. **Raw hamburger patties should be cooked to an internal temperature of**

Answer: *D. 155 °F (68 °C).* Cooking raw hamburger patties to an internal temperature of 155°F will kill most foodborne germs in the meat.

3. **What should you do to ensure that the sanitizing solution you are using on a food preparation surface will work properly?**

Answer: *A. When mixing the solution, use a test kit to check its concentration.*

Using a test kit to ensure that the sanitizer solution is at the concentration recommended by the maker is the best way to ensure that the solution will work properly.

4. **What is the proper procedure for washing your hands?**

Answer: *A. Wet hands with warm water. Apply soap. Vigorously scrub hands and arms for 10-15 seconds.*

Rinse hands. Dry hands. These handwashing steps are recommended by the FDA and will help ensure clean hands.

5. **At what maximum internal temperature should cold potentially hazardous foods (PHF) be held?**

Answer: *C. 41 °F (5 °C).* Ensuring that cold potentially hazardous food does not reach a temperature higher than 41°F will help prevent the growth of germs in the food.

6. **Food handlers should change their gloves:**

Answer: *D. All of the above.* Changing gloves after they become dirty or torn, taking out the trash, and handling raw meat and before handling ready-to-eat foods will help ensure you don't contaminate food or objects with dirty gloves.

7. **At what minimum internal temperature should hot potentially hazardous foods (PHF) be held?**

Answer: *C. 135 °F (57 °C).* Ensuring that hot potentially hazardous food does not go below a temperature of 135°F will help prevent the growth of germs in the food.

8. **What is the correct way to clean and sanitize a prep table?**

Answer: *B. Wash, rinse, sanitize.* These cleaning and sanitizing steps are recommended by the FDA and will help ensure clean food surfaces.

9. **Poultry, stuffed meat, and all stuffing should be cooked to a minimum internal temperature of:**

Answer: *A. 165 °F (74 °C).* Cooking poultry, stuffed meat, and stuffing to an internal temperature of 165° F will kill most foodborne germs in the food.

10. **Food handlers must wash their hands before they start work and after:**

Answer: *D. All of the above.* Washing hands after using the restroom, sneezing, coughing, or using a tissue, and handling raw meat, poultry or seafood will help ensure you don't contaminate food or objects with dirty hands.

EHS-Net KMC Study: Worker Recruiting Script and Informed Consent

Let me give you a little background on why I'm here. I'm working with _____ (health department) on a research project. Your restaurant was picked at random to be in this project, and your manager said that it would be okay for you to talk to me for a few minutes. However, your participation is voluntary—you don't have to talk to me if you don't want to- I won't tell your manager. If you do talk with me, I won't tell your manager anything that you say.

Would you be willing to talk to me for about 10 minutes about your work behavior and this restaurant's policies and practices?

No → Okay, thanks for your time. (*End interview*)

Yes → Great, thanks.

I'm going to ask you some questions, and if any of the questions make you uncomfortable you can choose not to answer them. The information we collect today will be combined with information from other restaurants in various states. Your name and your restaurant's name will not be linked in any way to the information we collect, nor will they be included in any reports.

The information you provide will be valuable in helping us understand food safety knowledge and attitudes of food workers, so we ask you to be as open and honest as possible.

Do you have any questions?

If you have any questions at a later time, you can contact: (Local Contact Name). (If have card) My information is on this card.

Public reporting burden for this collection of information is estimated to average 3 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to: CDC/ATSDR Information Collection Review Office, MS D-74; 1600 Clifton Road NE, Atlanta, Ga. 30333; ATTN: PRA (0920-0792)

Only bold text is to be read aloud by the data collector. Instructions to data collector are italicized.

1. What are your primary job responsibilities here? *(Check all that apply)*

- Food Preparation
- Cleaning
- Cooking
- Other *(describe)* _____
- Food storage
- Unsure
- Washing dishes
- Refused

2. Approximately how long have you worked in the foodservice industry? _____ Unsure Refused

3. Approximately how long have you worked as a food worker here? _____ Unsure Refused

Now I am going to ask you a few questions about food safety training.

4. While employed here, have you received food safety training on topics such as how to prevent cross contamination or how to do a proper hand wash?

- Yes *(go to 4a)*
- No *(go to 5)*
- Unsure *(go to 5)*
- Refused *(go to 5)*

4a. Who conducted that training? *(Check all that apply)*

- Management
- Other *(describe)* _____
- Owner
- Unsure
- Supervisor
- Refused
- Co-worker

4b. Did the training include any of the following?

- 1...Classroom training** Yes No Unsure Refused
- 2...On-the-job training in the restaurant** Yes No Unsure Refused
- 3...Online training** Yes No Unsure Refused
- 4...A manual or employee handbook** Yes No Unsure Refused
- 5...other kinds of written materials** Yes No Unsure Refused
- 6...Videos or DVDs** Yes No Unsure Refused

Public reporting burden for this collection of information is estimated to average 10 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to: CDC/ATSDR Information Collection Review Office, MS D-74; 1600 Clifton Road NE, Atlanta, Ga. 30333; ATTN: PRA (0920-0792)

4c. Did the food safety training include instruction on:

1. How, when, and where to do a hand wash?

- Yes No N/A Unsure Refused

2. How and when to use gloves to prevent contamination of foods?

- Yes No N/A Unsure Refused

3. Time and temperature control of potentially hazardous foods?

- Yes No N/A Unsure Refused

4. How to properly clean and sanitize equipment and food contact surfaces?

- Yes No N/A Unsure Refused

5. How to prevent or reduce the risk of cross contaminating food during storage, preparation, holding and service?

- Yes No N/A Unsure Refused

6. How to use a thermometer to check food temperatures?

- Yes No N/A Unsure Refused

7. Final cook temperatures of potential hazardous foods?

- Yes No N/A Unsure Refused

4d. Did you find the training very useful, somewhat useful, not very useful, or not useful at all? (Show scale)

- Very useful Somewhat useful Not very useful Not useful at all Unsure Refused

5. Do you think it's important to handle food safely? (Show scale)

- Yes, definitely Yes, sort of Not sure No, not really No, not at all Refused

6. Do your co-workers think it's important that they handle food safely? (Show scale)

- Yes, definitely Yes, sort of Not sure No, not really No, not at all Refused

7. Does your boss/owner think it's important that food workers handle food safely? (Show scale)

- Yes, definitely Yes, sort of Not sure No, not really No, not at all Refused

8. Are you food safety certified? By certified I mean you have taken a food safety test and been issued a card or certificate?

- Yes (go to 8a) No (go to 9) Unsure (go to 9) Refused (go to 9)

8a. What organization provided the certification ServSafe, National Registry of Food Safety Professionals, Thomson Prometric, a state or local health department, or some other organization? (Check all that apply)

- ServSafe
 National Registry of Food Safety Professionals
 Thomson Prometric (formerly known as: Experior Assessments, National Assessment Institute, Chauncy, Educational Testing Service)
 A state or local health department
 Other, describe: _____
 Unsure
 Refused

9. For the following statements, please tell me if you think the statement is correct by saying Yes, No, or Not Sure.
- a. It's okay to dry your hands on your apron after washing them when you are really busy.
 Yes No Unsure Refused
- b. It's okay to thaw frozen raw chicken on the counter at room temperature.
 Yes No Unsure Refused
- c. Hamburger patties should be cooked to an internal temperature of 155 degrees Fahrenheit or higher.
 Yes No Unsure Refused
- d. During hand washing, food workers must scrub their hands and arms for 4 or 5 seconds.
 Yes No Unsure Refused
- e. Food workers should wash hands between glove changes.
 Yes No Unsure Refused
- f. Wiping cloths used to clean food spills should be stored in a sanitizer solution.
 Yes No Unsure Refused
- g. Food held hot on a steam table should be maintained at 130 degrees Fahrenheit.
 Yes No Unsure Refused
- h. Cold held food should be maintained at 41 degrees Fahrenheit or lower.
 Yes No Unsure Refused
10. What is the highest level of formal education you have completed?
- | | | |
|---|--|---------------------------------------|
| <input type="radio"/> 8 th grade or less | <input type="radio"/> Community college/associate degree | <input type="radio"/> Graduate degree |
| <input type="radio"/> Some high school | <input type="radio"/> Some college | <input type="radio"/> Other _____ |
| <input type="radio"/> High school diploma | <input type="radio"/> College degree | <input type="radio"/> Unsure |
| <input type="radio"/> Some community college/associate work | <input type="radio"/> Some graduate work | <input type="radio"/> Refused |
11. Please indicate which of the following categories best describes your age—15 to 20 years of age, 21 to 30 years of age, 31 to 40 years of age, 41 to 50 years of age, 51 to 60 years of age, or older than 60?
- | | |
|---|---|
| <input type="radio"/> 15 to 20 years of age | <input type="radio"/> 51 to 60 years of age |
| <input type="radio"/> 21 to 30 years of age | <input type="radio"/> Older than 60 |
| <input type="radio"/> 31 to 40 years of age | <input type="radio"/> Unsure |
| <input type="radio"/> 41 to 50 years of age | <input type="radio"/> Refused |
12. What is your primary language? (If respondent needs clarification—primary language is the language you speak best)
- | | |
|---|--|
| <input type="radio"/> English | <input type="radio"/> Other (describe) _____ |
| <input type="radio"/> Spanish | <input type="radio"/> Unsure |
| <input type="radio"/> Russian | <input type="radio"/> Refused |
| <input type="radio"/> An Asian language | |

NOT TO BE READ ALOUD: Note the interviewee's gender here: <input type="radio"/> Male <input type="radio"/> Female

That's the end of the interview. Thank you for your time.

Very
useful

Somewhat
useful

Not very
useful

Not useful
at all

Yes,
definitely

Yes,
sort of

Not
sure

No, not
really

No, not
at all

15 to 20 years of age

21 to 30 years of age

31 to 40 years of age

41 to 50 years of age

51 to 60 years of age

Older than 60

Answer Summary

a. It's okay to dry your hands on your apron after washing them when you are really busy.

Answer: *No.* It is possible that your apron is dirty or contaminated with germs and can contaminate your hands; the FDA recommends that clean paper towels, clean unused cloth towels or hand drying devices are used for drying.

b. It's okay to thaw frozen raw chicken on the counter at room temperature.

Answer: *No.* Thawing frozen temperature at room temperature can lead to growth of germs on the chicken. The FDA suggests that frozen food be thawed in the refrigerator, under cold running water, or as part of the cooking process.

c. Hamburger patties should be cooked to an internal temperature of 155 degrees Fahrenheit or higher.

Answer: *Yes.* Cooking raw hamburger patties to an internal temperature of 155°F will kill most foodborne germs in the meat.

d. During hand washing, food workers must scrub their hands and arms for 4 or 5 seconds.

Answer: *No.* The FDA suggests that to ensure clean hands, food workers should scrub their hands and arms for 10-15 seconds.

e. Food workers should wash hands between glove changes.

Answer: *Yes.* The FDA suggests that to ensure clean hands, food workers should wash their hands between glove changes.

f. Wiping cloths used to clean food spills should be stored in a sanitizer solution.

Answer: *No.* Wiping cloths used to clean food spills should be dry cloths.

g. Food held hot on a steam table should be maintained at 130 degrees Fahrenheit.

Answer: *No.* Hot potentially hazardous food should be maintained at a temperature of 135°F to help prevent the growth of germs in the food.

h. Cold held food should be maintained at 41 degrees Fahrenheit or lower.

Answer: *Yes.* Cold potentially hazardous food should not go higher than a temperature of 41°F to help prevent the growth of germs in the food.

Time observation began: _____

Form Approved
OMB No. 0920-0792
Exp. Date 10/31/2011

EHS-Net KMC Study: Kitchen Observation

Data collector will spend approximately an hour observing food handling in the kitchen and the kitchen environment.

Hand Washing

Observe 1 or 2 food workers or a hand sink for about 15 minutes; attempt to observe at least 2-4 hand washes during that time. Only count an observation if you are able to observe the FW from the time they get to the hand sink to the time they leave it. A complete hand wash includes the use of soap, a 10-15 second scrub, rinse, and dry with an approved drying method. An example of an attempted hand wash would include a rinse and dry, no soap, OR a wash with soap, rinse, and dry on wiping cloth.

1. Did you observe food worker(s) attempting to wash his/her hands? Yes (go to 1a) No (go to 2)
 - 1a. # of *attempted* hand washes observed_____.
 - 1b. # of *complete* hand washes observed_____.
2. How many hand sinks were available in the kitchen? _____ (If zero sinks, go to 7)
 - 2a. Was warm water (min 100°F) available at all of the sink(s)? Yes No
 - 2b. Was soap available at (or near) all work area hand sinks? Yes No
 - 2c. Were all the sink(s) equipped with disposable paper towels or an approved drying device? Yes No
3. Was a conveniently located hand sink available to the food workers? Yes No
4. Did you observe food worker(s) wearing disposable gloves? Yes (go to 4a) No (go to 5)
 - 4a. Did food worker(s) change their gloves once they became contaminated?
 Yes No N/A they were not contaminated during my observation
 - 4b. Was a supply of disposable gloves available to food workers? Yes No
5. Did you observe bare hand contact with ready-to-eat foods?
 Yes No No RTE food prep occurring
6. Did you observe bare hand contact with non-ready-to-eat foods?
 Yes No No non-RTE food prep occurring

Thermometers and Temperatures

Attempt to determine if one or more of the available thermometers are accurate. Ask the KM to insert the thermometer in a food item or ice bath, insert your (calibrated and sanitized) thermometer or thermocouple into the same food item, if the KM thermometer(s) are within +/- 2 °F of yours, then check yes, if there is a variation of more than 2 °F check no.

7. Were thermometers available to food workers? Yes (go to 7a) No (go to 8)

Public reporting burden for this collection of information is estimated to average 50 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to: CDC/ATSDR Information Collection Review Office, MS D-74; 1600 Clifton Road NE, Atlanta, Ga. 30333; ATTN: PRA (0920-0792)

7a. Were the thermometers accurate? Yes No

7b. Did you observe a thermometer being used to check final cook temperatures?

Yes No No final cooking observed

7c. Did you observe a thermometer being used to check hot or cold holding temperatures?

Yes No No holding observed

7d. If you observed a thermometer in use, was it sanitized before being placed in the food item?

If the thermometer was not sanitized before being placed in the food item used for #7b check "no".

Yes No No thermometer in use

8. Did you observe temperature logs? Yes (go to 8a) No (go to 9)

8a. What type of temperature logs did you observe? (Check all that apply)

Log documenting the final cook temperatures of PHFs

For foods in the process of cooling

For freezer units

For hot held foods

For refrigeration units

For cold held foods

For incoming foods

Other (describe) _____

9. Did you observe any raw animal foods in the final stages of cooking?

Yes (go to 9a) No (go to 10)

9a. Did the food reach its required final cook temperature?

Yes No

Cold Holding/Storage

10. Were any foods being cold held or stored?

Yes No (go to 11)

Attempt to measure the temperatures of at least 4-6 different potentially hazardous foods in at least 2 different cold holding units. If there are more than 2 units attempt to get a food temperature in up to 4 units. For example, if there are 3 units then temp 2 foods in each unit. If there are 4 units, temp 1 or 2 foods in each unit.

Food item #	a. Food temp? (In Fahrenheit)	b. Type of cold holding unit? <input type="radio"/> Reach in fridge <input type="radio"/> Open top/pizza/deli fridge <input type="radio"/> Walk-in fridge <input type="radio"/> Other (describe) <input type="radio"/> Under counter fridge <input type="radio"/> Unsure <input type="radio"/> Refrigerated drawers <input type="radio"/> Refused	c. Did unit have a thermometer? <input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unable to determine	d. Were thermometers in units accurate to +/- 2 °F? <input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unable to determine
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				

Hot Holding

11. Were any foods being hot held?

- Yes No (go to 12)

Attempt to measure the temperature of 2-4 potentially hazardous foods being hot held. Temp different hot hold holding units if there is more than 1.

Food item number	11a. Food temperature	11b. Type of hot holding unit
1		
2		
3		
4		
5		

Wiping Cloths

12. Were wiping cloths used in this restaurant?

- Yes (go to 12a) No (go to 13)

12a. Were any wet wiping cloths stored in a sanitizer solution between uses?

- Yes (go to 12b) No (go to 12d)

12b. Were test strips available to measure the concentration of the sanitizing solution?

- Yes (go to 12c) No (go to 12d) No sanitizing solution is used (go to 12d)

12c. Was the concentration of the sanitizer at the required level?

- Yes No No sanitizing solution is used/was available to test (go to 12d)

12d. Did you observe the use of dry soiled wiping cloths?

- Yes No No dry wiping cloths Unable to determine

Cross Contamination

13. Did you observe potential for cross contamination during the observation period:

13a. from bare hands to ready-to-eat foods? *Ex.: Dirty or clean hands used to handle RTE dinner rolls*

- Yes No No ready-to-eat food preparation observed

13b. from dirty bare hands to clean equipment or clean food prep surfaces? *Ex.: Dirty hands to clean serving platter*

- Yes No No bare hands observed or no handling of clean equipment or clean food prep surfaces observed

13c. from dirty equipment or utensils to ready-to-eat foods? *Ex.: In-use knife wiped on soiled dry cloth and used to cut tomato*

- Yes No No ready-to-eat food preparation observed

13d. from dirty gloves to ready-to-eat foods?

- Yes No No glove use or ready-to-eat food preparation observed

13e. from dirty gloved hands to clean equipment or surfaces? *Ex.: Dirty gloved hand to clean serving platter*

- Yes No No glove use observed or no handling of clean equipment or clean food prep surfaces observed

13f. from a wiping cloth (not properly stored in sanitizer) to clean equipment or clean food prep surfaces? *Ex.: Wet or dry soiled cloth placed on or used on clean equipment or surface*

- Yes No No handling of clean equipment or clean food prep surfaces observed

13g. from a wiping cloth (not properly stored in sanitizer) to clean hands or hands with clean gloves? *Ex.: Wet or dry soiled cloth to wipe bare hands or gloves*

- Yes No

13h. in a refrigeration unit from raw animal foods stored over or on cooked or ready-to-eat foods?

- Yes No No raw animal foods or no ready-to-eat foods observed

13i. Other (please describe) _____

Demographics

14. Establishment type:

- Prep Serve Cook Serve Complex

15. FoodNet establishment type:

- Quick Service Regular Sit-down Service Cafeteria / Buffet Service

16. Please check all of the following that describe this establishment.

- sit-down restaurant buffet establishment quick service/fast food
 banquet hall ethnic establishment caterer

17. What is the highest priced food entree on the menu? _____ *Record this for every menu with entrees the restaurant has.*

18. What is the lowest priced food entree on the menu? _____ *Record this for every menu with entrees the restaurant has.*

19. How many critical violations did this restaurant receive on its last routine inspection? _____

Time observation ended: _____

Handwashing Table

Handwash observation number	Soap (Y/N)	Scrub for 10+ Seconds (Y/N)	Rinse (Y/N)	Dry with paper towel/ Approved drying device (Y/N)	Avoid recontamination of hands and arms by using a clean barrier when turning off faucets (Y/N)	Notes
1						
2						
3						
4						
5						
6						
7						
8						

Kitchen Hand Sink Water Temperature

Hand sink number	Temperature of warm water after 10 seconds	Notes
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		