

10

Food Safety

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- 10-3o Gentamicin
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- 10-7 Organophosphate pesticide exposure

10-1. Reduce infections caused by key foodborne pathogens.

10-1a. *Campylobacter* species.

National Data Source	Foodborne Disease Active Surveillance Network (FoodNet), CDC, NCID, FDA, CFSAN, USDA, FSIS, OPHS, and State agencies.
State Data Source	State Health Department reports to CDC and sites participating in FoodNet active surveillance.
Healthy People 2000 Objective	12.1 (Food and Drug Safety).
Measure	Rate per 100,000 population.
Baseline	24.6 (1997) (selected sites—see Comments).
Numerator	Number of culture-confirmed cases of illness caused by <i>Campylobacter</i> species reported to CDC.
Denominator	Number of persons.
Population Targeted	Resident population (selected sites—see Comments).
Questions Used To Obtain the National Data	Not applicable.
Expected Periodicity	Annual.
Comments	<p>FoodNet is a collaborative effort among CDC, FDA, USDA, and participating State Health Departments. This network collects population-based surveillance data on culture-confirmed cases of foodborne illnesses from more than 300 participating clinical laboratories.</p> <p>In March 2000, the population at FoodNet sites was 25.4 million persons (10 percent of the resident population) for active surveillance of bacterial pathogens. Baseline information for bacterial infections is based on 1997 active surveillance at FoodNet sites, which included areas of California, Connecticut, Georgia, Minnesota, Oregon, and New York. Since 1997, additional counties or additional sites (New York and Maryland in 1998, Tennessee in 2000, and Colorado in 2001) have been added to the network.</p>

The data, received by CDC from the States, are based on isolates from human case specimens. The cause of the illness in many, but not all, of the cases, is a contaminated food. The denominator is from Internet site <http://www.census.gov/population/www/estimates/popest.html>.

For more information on FoodNet from the Internet, go to <http://www.cdc.gov/ncidod/dbmd/foodnet>.

See Appendix A for focus area contact information.



10-1b. *Escherichia coli* O157:H7.

National Data Source	Foodborne Disease Active Surveillance Network (FoodNet), CDC, NCID, FDA, CFSAN, USDA, FSIS, OPHS, and State agencies.
State Data Source	State Health Department reports to CDC and sites participating in FoodNet active surveillance.
Healthy People 2000 Objective	12.1 (Food and Drug Safety).
Measure	Rate per 100,000 population.
Baseline	2.1 (1997) (selected sites—see Comments).
Numerator	Number of culture-confirmed cases of illness caused by <i>Escherichia coli</i> O157:H7 reported to CDC.
Denominator	Number of persons.
Population Targeted	Resident population (selected sites—see Comments).
Questions Used To Obtain the National Data	Not applicable.
Expected Periodicity	Annual.
Comments	See Comments provided with objective 10-1a for more information.



10-1c. *Listeria monocytogenes*.

National Data Source	Foodborne Disease Active Surveillance Network (FoodNet), CDC, NCID, FDA, CFSAN, USDA, FSIS, OPHS, and State agencies.
State Data Source	State Health Department reports to CDC and sites participating in FoodNet active surveillance.
Healthy People 2000 Objective	12.1 (Food and Drug Safety).
Measure	Rate per 100,000 population.
Baseline	0.5 (1997) (selected sites—see Comments).
Numerator	Number of culture-confirmed cases of illness caused by <i>Listeria monocytogenes</i> reported to CDC.
Denominator	Number of persons.
Population Targeted	Resident population (selected sites—see Comments).
Questions Used To Obtain the National Data	Not applicable.
Expected Periodicity	Annual.
Comments	See Comments provided with objective 10-1a for more information.



10-1d. *Salmonella* species.

National Data Source	Foodborne Disease Active Surveillance Network (FoodNet), CDC, NCID, FDA, CFSAN, USDA, FSIS, OPHS, and State agencies.
State Data Source	State Health Department reports to CDC and sites participating in FoodNet active surveillance.
Healthy People 2000 Objective	12.1 (Food and Drug Safety).
Measure	Rate per 100,000 population.
Baseline	13.7 (1997) (selected sites—see Comments).

Numerator	Number of culture-confirmed cases of illness caused by <i>Salmonella</i> species reported to CDC.
Denominator	Number of persons.
Population Targeted	Resident population (selected sites—see Comments).
Questions Used To Obtain the National Data	Not applicable.
Expected Periodicity	Annual.
Comments	See Comments provided with objective 10-1a for more information.



10-1e. (Developmental) *Cyclospora cayetanensis*.

Comments An operational definition could not be specified at the time of publication.

A proposed national data source is FoodNet, a collaborative effort among CDC, FDA, USDA, and participating State Health Departments. Proposed State data sources are the State Health Department passive reporting to CDC and participants in FoodNet active surveillance. *Cyclospora cayetanensis* has only recently been made a nationally notifiable disease and added to Food Net surveillance. National estimates will be based on active surveillance at FoodNet sites. Final 1997 data for *Cyclospora cayetanensis* were not available at the time of publication. In 1998, the population at FoodNet sites was 24.7 million persons for active surveillance of *Cyclospora cayetanensis*.

See Appendix A for focus area contact information.



10-1f. (Developmental) Postdiarrheal hemolytic uremic syndrome.

Comments An operational definition could not be specified at the time of publication.

A proposed national data source is FoodNet, a collaborative effort among CDC, FDA, USDA, and participating State Health Departments. Proposed State data sources are the State Health Department passive reporting to CDC and participants in FoodNet active surveillance. Postdiarrheal hemolytic uremic syndrome has only recently been made a nationally notifiable disease and added to FoodNet surveillance. National estimates will be based on active surveillance at FoodNet sites. Final 1997 data for postdiarrheal hemolytic uremic syndrome were not available at the time of publication.

See Appendix A for focus area contact information.



10-1g. (Developmental) Congenital *Toxoplasma gondii*.

Comments

An operational definition could not be specified at the time of publication.

A proposed national and State data source is the National Notifiable Disease Surveillance System (NNDSS), CDC, NCID.

As occurs with other parasitic diseases, examination for toxoplasmosis is often not available or is done infrequently. Efforts are underway in the United States to make congenital toxoplasmosis a nationally notifiable disease, with serological data collection beginning in calendar year 2000. Implementation will be done in a stepwise fashion among the States. Congenital toxoplasmosis data will include neonates and their mothers.

See Appendix A for focus area contact information.



10-2. Reduce outbreaks of infections caused by key foodborne bacteria.

10-2a. *Escherichia coli* O157:H7.

National Data Source	Foodborne Disease Outbreak Surveillance System, CDC, NCID.
State Data Source	State Health Department passive reports to CDC and sites participating in FoodNet active surveillance.
Healthy People 2000 Objective	Adapted from 12.2 (Food and Drug Safety).
Measure	Number.
Baseline	22 (1997).
Numerator	Number of outbreaks of infections caused by <i>Escherichia coli</i> O157:H7 in the U.S. resident population.
Denominator	Not applicable.
Questions Used To Obtain the National Data	Not applicable.
Expected Periodicity	Annual.
Comments	<p>A foodborne disease outbreak (FBDO) is defined as the occurrence of two or more cases of a similar illness resulting from the ingestion of a common food. FBDOs are reported to CDC on a standard reporting form. Outbreaks of known etiology are those for which laboratory evidence of a specific agent is obtained, and specified criteria are met. Most reports are received from State and local health departments; they also may be received from Federal agencies and, occasionally, from private physicians. Not included in this surveillance system are FBDOs on cruise ships; FBDOs if the food is eaten outside United States, even if the illness occurs within the United States; and if the route of transmission from the contaminated food to the infected person is indirect.</p> <p>Many foods contain several ingredients, but only one food-vehicle category is chosen for categorizing each outbreak. Therefore, the reported number of outbreaks attributed to a particular food item may not include all the reported outbreaks caused by that item. For example, homemade ice cream containing milk and eggs is listed under "ice cream" rather than "milk" or "eggs." The category "Mexican food" includes vehicles made from beef, cheese, lettuce, and other ingredients.</p>

For information on FoodNet, see Comments provided with objective 10-1a.

This objective differs from Healthy People 2000 objective 12.2, which only tracked outbreaks from *Salmonella* Enteritidis.

See Appendix A for focus area contact information.



10-2b. *Salmonella* serotype Enteritidis.

National Data Source	Foodborne Disease Outbreak Surveillance System, CDC, NCID.
State Data Source	State Health Department passive reports to CDC and sites participating in FoodNet active surveillance.
Healthy People 2000 Objective	Adapted from 12.2 (Food and Drug Safety).
Measure	Number.
Baseline	44 (1997).
Numerator	Number of outbreaks of infections caused by <i>Salmonella</i> serotype Enteritidis in the U.S. resident population.
Denominator	Not applicable.
Questions Used To Obtain the National Data	Not applicable.
Expected Periodicity	Annual.
Comments	See Comments provided with objective 10-2a for more information.



10-3. Prevent an increase in the proportion of isolates of *Salmonella* species, from humans and from animals at slaughter, that are resistant to antimicrobial drugs.

10-3a. *Salmonella* from humans that are resistant to fluoroquinolones.

National Data Sources	The National Antimicrobial Resistance Monitoring System: Enteric Bacteria-Salmonella (NARMS: Enteric Bacteria), NCID, CDC; FDA, CVM; USDA, Agriculture Research Service (ARS); Foodborne Disease Active Surveillance Network (FoodNet) FDA, CDC, and USDA, FSIS.
State Data Sources	Participating local and State health departments in 17 NARMS sites—see Comments.
Healthy People 2000 Objective	Not applicable.
Measure	Percent.
Baseline	0 (1997).
Numerator	Number of <i>Salmonella</i> species isolates that are resistant to fluoroquinolones.
Denominator	Number of <i>Salmonella</i> species isolates tested for resistance to fluoroquinolones.
Questions Used To Obtain the National Data	Not applicable.
Expected Periodicity	Annual.
Comments	<p><i>Salmonella</i> species isolates from humans (every 10th <i>Salmonella</i> species isolate from each of 17 locations representing 32 percent of the U.S. population), will be tested for resistance to antimicrobial drugs.</p> <p>The 17 NARMS sites (including the 8 FoodNet sites) are participating local and State health departments that include California, Colorado, Connecticut, Florida, Georgia, Kansas, Los Angeles County, Massachusetts, Maryland, Minnesota, New Jersey, New York City, New York State, Oregon, Tennessee, Washington, and West Virginia. See Comments provided with objective 10-1a for more information on FoodNet.</p> <p>See Appendix A for focus area contact information.</p>



10-3b. *Salmonella* from humans that are resistant to third-generation cephalosporins.

National Data Sources	The National Antimicrobial Resistance Monitoring System: Enteric Bacteria-Salmonella (NARMS: Enteric Bacteria), NCID, CDC; FDA, CVM; USDA, ARS; Foodborne Disease Active Surveillance Network (FoodNet) FDA, CDC, and USDA, FSIS.
State Data Source	Foodborne Disease Active Surveillance Network (FoodNet), FDA, CDC, and USDA, FSIS.
Healthy People 2000 Objective	Not applicable.
Measure	Percent.
Baseline	0 (1997).
Numerator	Number of <i>Salmonella</i> species isolates that are resistant to third-generation cephalosporins.
Denominator	Number of <i>Salmonella</i> species isolates tested for resistance to third-generation cephalosporins.
Questions Used To Obtain the National Data	Not applicable.
Expected Periodicity	Annual.
Comments	See Comments provided with objective 10-3a for more information.



10-3c. *Salmonella* from humans that are resistant to gentamicin.

National Data Sources	The National Antimicrobial Resistance Monitoring System: Enteric Bacteria-Salmonella (NARMS: Enteric Bacteria), NCID, CDC; FDA, CVM; USDA, ARS; Foodborne Disease Active Surveillance Network (FoodNet), FDA, CDC, and USDA, FSIS.
State Data Source	Foodborne Disease Active Surveillance Network (FoodNet), CDC, FDA, USDA, and FSIS.
Healthy People 2000 Objective	Not applicable.
Measure	Percent.

Baseline	3 (1997).
Numerator	Number of <i>Salmonella</i> species isolates that are resistant to gentamicin.
Denominator	Number of <i>Salmonella</i> species isolates tested for resistance to gentamicin.
Questions Used To Obtain the National Data	Not applicable.
Expected Periodicity	Annual.
Comments	See Comments provided with objective 10-3a for more information.



10-3d. *Salmonella* from humans that are resistant to ampicillin.

National Data Sources	The National Antimicrobial Resistance Monitoring System: Enteric Bacteria-Salmonella (NARMS: Enteric Bacteria), NCID, CDC; FDA, CVM; USDA, ARS; Foodborne Disease Active Surveillance Network (FoodNet), FDA, CDC, and USDA, FSIS.
State Data Source	Foodborne Disease Active Surveillance Network (FoodNet), CDC, FDA, USDA, and FSIS.
Healthy People 2000 Objective	Not applicable.
Measure	Percent.
Baseline	18 (1997).
Numerator	Number of <i>Salmonella</i> species isolates that are resistant to ampicillin.
Denominator	Number of <i>Salmonella</i> species isolates tested for resistance to ampicillin.
Questions Used To Obtain the National Data	Not applicable.
Expected Periodicity	Annual.
Comments	See Comments provided with objective 10-3a for more information.



10-3e. (Developmental) *Salmonella* from cattle at slaughter that are resistant to fluoroquinolones.

Comments

An operational definition could not be specified at the time of publication.

The proposed national data source for animals at slaughter is the National Antimicrobial Resistance Monitoring System: Enteric Bacteria-Salmonella (NARMS: Enteric Bacteria), supported by surveillance and research activities of FDA, CDC, FSIS, ARS, and USDA, Animal and Plant Health Inspection Service (APHIS). Data are being collected, but were not available at the time of publication. *Salmonella* species isolates from animals at slaughter (isolates from USDA, FSIS's Hazard Analysis and Critical Control Point [HACCP] and pathogen reduction program testing for *Salmonella* species) are being tested for resistance to antimicrobial drugs.

See Appendix A for focus area contact information.



10-3f. (Developmental) *Salmonella* from cattle at slaughter that are resistant to third-generation cephalosporins.

Comments

See Comments provided with objective 10-3e for more information.



10-3g. (Developmental) *Salmonella* from cattle at slaughter that are resistant to gentamicin.

Comments

See Comments provided with objective 10-3e for more information.



10-3h. (Developmental) *Salmonella* from cattle at slaughter that are resistant to ampicillin.

Comments See Comments provided with objective 10-3e for more information.



10-3i. (Developmental) *Salmonella* from broilers at slaughter that are resistant to fluoroquinolones.

Comments See Comments provided with objective 10-3e for more information.



10-3j. (Developmental) *Salmonella* from broilers at slaughter that are resistant to third-generation cephalosporins.

Comments See Comments provided with objective 10-3e for more information.



10-3k. (Developmental) *Salmonella* from broilers at slaughter that are resistant to gentamicin.

Comments See Comments provided with objective 10-3e for more information.



10-3l. (Developmental) *Salmonella* from broilers at slaughter that are resistant to ampicillin.

Comments See Comments provided with objective 10-3e for more information.



10-3m. (Developmental) *Salmonella* from swine at slaughter that are resistant to fluoroquinolones.

Comments See Comments provided with objective 10-3e for more information.



10-3n. (Developmental) *Salmonella* from swine at slaughter that are resistant to third-generation cephalosporins.

Comments See Comments provided with objective 10-3e for more information.



10-3o. (Developmental) *Salmonella* from swine at slaughter that are resistant to gentamicin.

Comments See Comments provided with objective 10-3e for more information.



10-3p. (Developmental) *Salmonella* from swine at slaughter that are resistant to ampicillin.

Comments See Comments provided with objective 10-3e for more information.



10-4. (Developmental) Reduce deaths from anaphylaxis caused by food allergies.

Comments An operational definition could not be specified at the time of publication.

The proposed data source is the mortality component of the National Vital Statistics System. The ICD-10 assigns a code to death from food-induced anaphylaxis, although identifiers have not been assigned for various food sources, for example, peanuts, milk products, and eggs. Codes have been assigned to anaphylactic shock due to adverse food reaction in the ICD-9-CM for nonfatal anaphylactic shock due to nonpoisonous foods.

See Appendix A for focus area contact information.



10-5. Increase the proportion of consumers who follow key food safety practices.

National Data Source	Food Safety Survey (FSS), FDA, CFSAN, USDA, and FSIS.
State Data Source	See Comments.
Healthy People 2000 Objective	Adapted from 12.3 (Food and Drug Safety).
Measure	Weighted average percent.
Baseline	72 (1998).
Numerator	The sum of the average percents of consumers who report they follow each of the four key food safety practices: clean, separate, cook, and chill.
Denominator	Number of practices measured (four) among persons aged 18 years and older who prepare food (consumers).
Population Targeted	U.S. civilian, noninstitutionalized population.
Questions Used To Obtain the National Data	From the 1998 Food Safety Survey: CLEAN ➤ <i>Before you begin preparing food, how often do you wash your hands with soap? Would you say . . .</i> 1) <i>All of the time*</i> 2) <i>Most of the time</i> 3) <i>Some of the time, or</i> 4) <i>Rarely</i>

- *After you have cracked open raw eggs, do you usually continue cooking, or do you first rinse your hands with water, wipe them, or wash them with soap?*
 - 1) *Continue cooking*
 - 2) *Rinse or wipe hands*
 - 3) *Wash with soap**

Open-ended code:

 - 4) *Never handle raw eggs*

- *After handling raw meat or chicken, do you usually continue cooking, or do you first rinse your hands with water, or wipe them, or wash them with soap?*
 - 1) *Continue cooking*
 - 2) *Rinse or wipe hands*
 - 3) *Wash with soap**

Open-ended code:

 - 4) *Don't cut raw meat or chicken*

- *After handling raw fish, do you usually continue cooking, or do you first rinse your hands with water, wipe them, or wash them with soap?*
 - 1) *Continue cooking*
 - 2) *Rinse or wipe hands*
 - 3) *Wash with soap**

Open-ended code:

 - 4) *Never handle raw fish*

SEPARATE

- *After you have used a cutting board or other surface for cutting raw meat or chicken, do you use it as it is for cutting other food to be eaten raw for the same meal, or do you first rinse it, or wipe it, or wash it with soap?*
 - 1) *Use it as it is*
 - 2) *Rinse or wipe it*
 - 3) *Wash with soap**

Open-ended codes:

 - 4) *Wash with bleach**
 - 5) *Use a different cutting board**6) *Don't cut raw meat or poultry*

- *After cutting raw fish or shellfish, what do you do with the cutting board or surface? [Do you use it as it is for cutting food to be eaten raw for the same meal, or do you first rinse it, or wipe it, or wash it with soap?]*
(NOTE: MATERIAL IN BRACKETS MAY NOT NEED TO BE READ).
 - 1) *Use it as it is*
 - 2) *Rinse or wipe it*
 - 3) *Wash with soap**

Open-ended codes:

 - 4) *Wash with bleach**
 - 5) *Use a different cutting board**

COOK--PREFERENCE

- *In your home, are hamburgers usually served...(PROBE: IF DIFFERENT WAYS FOR DIFFERENT PEOPLE: What is the rarest degree of doneness hamburgers are served?)*
 - 1) *Rare*
 - 2) *Medium, or*
 - 3) *Well done?**Open-ended code:
 - 4) *Hamburgers are never served*
- *If (2), When you say hamburgers are usually served "medium," do you mean they are...*
 - 1) *Brown all the way through,* or*
 - 2) *Still have some pink in the middle?*
- *In the past 12 months, did you eat any of the following foods that contain raw eggs? (Did you eat. . .) (In the past 12 months, did you eat . . .)*
 - a) *Raw, homemade cookie or cake batter?*
 - b) *Homemade frosting with raw egg?*
 - c) *Caesar salad with raw egg?*
 - d) *Chocolate mousse with raw egg?*
 - e) *Homemade eggnog?*
 - f) *Homemade mayonnaise?*
 - g) *Homemade ice cream with raw egg?*
 - h) *Shakes with raw egg?*
 - i) *Homemade hollandaise sauce?*

(NOTE TO INTERVIEWERS: COMMERCIAL FROZEN OR REFRIGERATED COOKIE DOUGH IS PASTEURIZED; IT DOES NOT CONTAIN RAW EGGS EVEN BEFORE IT IS BAKED. COMMERCIAL CAKE AND COOKIE MIXES USUALLY CALL FOR ADDING RAW EGGS, SO THEY COUNT AS EATING RAW EGGS.)

- *In the past 12 months, which of the following raw foods did you eat?*
 - a) *Raw oysters*
 - b) *Sushi, ceviche (se - VEE - chay), or other raw fish*

COOK--IMPLEMENTATION

- *Thinking of your usual habits over the past year, when you prepare the following foods, how often do you use a thermometer?*
 - a) *Roasts or other large pieces of meat--how often do you use a thermometer when you cook roasts? Would you say. . .*
 - 1) *Always**
 - 2) *Often**
 - 3) *Sometimes,* or*
 - 4) *Never*Open-ended code:
 - 5) *Never cook the food*

b) *Chicken parts, such as breasts or legs--how often do you use a thermometer when you cook chicken parts? Would you say. . .*

- 1) *Always**
- 2) *Often**
- 3) *Sometimes,* or*
- 4) *Never*

Open-ended code:

- 5) *Never cook the food*

c) *How about hamburgers--how often do you use a thermometer when you cook hamburgers? Would you say. . .*

- 1) *Always**
- 2) *Often**
- 3) *Sometimes,* or*
- 4) *Never*

Open-ended code:

- 5) *Never cook the food*

CHILL

- *If you cook a large pot of soup, stew, or other food with meat or chicken and want to save it for the next day, when do you put the food in the refrigerator? Would it be (READ 1-3) . . .*

- 1) *Immediately**
- 2) *After first cooling it at room temperature, or*
- 3) *After first cooling it in cold water?**

Open-ended codes:

- 4) *Do not cook such foods*
- 5) *Would not refrigerate it*

- *If (2): For about how long would you let it cool at room temperature? (DO NOT READ LIST)*

- 1) *Less than 2 hours**
- 2) *2 hours or more*

- *How about if the soup or stew contains fish or shellfish instead of meat or chicken. If you want to save it for the next day, when do you put the food in the refrigerator? Would it be (READ 1-3) . . .*

- 1) *Immediately**
- 2) *After first cooling it at room temperature, or*
- 3) *After first cooling it in cold water?**

Open-ended codes:

- 4) *Do not cook such foods*
- 5) *Would not refrigerate it*

- *If (2): For about how long would you let it cool at room temperature? (DO NOT READ LIST)*

- 1) *Less than 2 hours**
- 2) *2 hours or more*

*Response is coded as safe.

Expected Periodicity

Periodic.

Comments

The key food safety practices are the four Fight BAC™ Campaign messages: 1) clean: wash hands and surfaces often; 2) separate: don't cross-contaminate; 3) cook: cook to proper temperatures; and 4) chill: refrigerate promptly.

Calculating the estimate for this objective is a three-step process. First, the percent of consumers who have a safe response for each measure of each practice in which they have the opportunity to engage is calculated (the safe responses are indicated with an asterisk in the questionnaire above). The percents for all items that measure each practice are averaged to obtain an average percent who follow each of the four recommendations. These four average percents are summed and divided by 4 to obtain the estimate.

For all practice estimates, the base is the number of people who engage in the behavior and who answered the question. For example, people who did not cook meat or poultry were excluded from the sample base of the questions about meat or poultry; people who did not cook fish were excluded from the practice questions about fish. The total base (excluding nonresponses) was used for the question on hand washing before preparing food and for the questions on consumption of raw foods.

The FSS is based on 30-minute telephone interviews with consumers to determine food safety knowledge, concern level, food handling practices, perception of risk, and consumption of potentially hazardous foods by consumers. The FSS is not a regularly scheduled survey. Previous surveys have been conducted in 1988 (3,200 people surveyed), 1993 (1,620 people surveyed), and 1998 (2,001 people surveyed). Because FSS is part of the Food Safety Initiative, more frequent data collection is anticipated in the future. A fourth collection is tentatively scheduled for 2001.

A proposed State data source is the Behavioral Risk Factor Surveillance System (BRFSS). In the past, the BRFSS has included an optional food safety module that has questions that are similar but not identical to FSS questions on hand washing and cutting surfaces. It has also included a question about eating hamburgers that are pink in the middle, but no question about using a food thermometer to judge when hamburgers are done. It has no question about chilling foods. The food safety module has been available since 1995. In that year, five States included the module in their BRFSS. Additional States have used the module in subsequent years, but the number of States collecting the food safety data remains low.

Note: According to a USDA study on premature browning, more than 25 percent of ground beef patties turn brown before reaching a safe internal temperature (160 degrees F).¹ Information from the CDC links eating undercooked, pink ground beef with a higher risk of illness.² Therefore, consumers should not eat ground beef patties unless a food thermometer is used to verify the temperature.^{3, 4, 5, 6}

This objective differs from Healthy People 2000 objective 12.3, which tracked refrigerating perishable foods, washing cutting boards with soap, and washing utensils with soap as individual behaviors, instead of tracking the four key food safety practices combined.

See Appendix A for focus area contact information.



10-6. (Developmental) Improve food employee behaviors and food preparation practices that directly relate to foodborne illnesses in retail food establishments.

Comments

An operational definition could not be specified at the time of publication.

The expected national data source for this objective is the Retail Food Database of Foodborne Illness Risk Factors, FDA, and CFSAN. The expected State data source will result from FDA/State cooperation in inspections.

The expected numerator will be the sum of the number of data elements (food employee behaviors and food preparation practices) directly related to foodborne illness risk that are observed to be in compliance during FDA inspections of institutions, restaurants, and retail stores.

The expected denominator will be the sum of the number of data elements (food employee behaviors and food preparation practices) directly related to foodborne illness risk that were observable (in or out of compliance) during FDA inspections of institutions, restaurants, and retail stores.

Forty-six questions, listed below from the FDA Retail Food Database of Foodborne Illness Risk Factors, will be used to obtain the data. The questions selected are critical items in the Food Code that directly relate to each risk factor group. The form was drafted for the specific purpose of collecting data regarding the occurrence at the retail level of CDC-identified risk factors associated with foodborne illness outbreaks. It was/is not intended to serve as a comprehensive, Food Code-based inspection form for food establishment inspections.

This ongoing data collection focuses on known risk factors for foodborne illness in institutions (elementary schools, hospitals, and nursing homes), restaurants (fast-food and full service), and retail stores (deli departments, meat and poultry departments, produce departments, and seafood departments of grocery stores). The following in-compliance indicators were under observation: proper holding temperatures, adequate cooking, good personal hygiene, clean equipment, and foods from safe sources.

RISK FACTOR: FOODS FROM UNSAFE SOURCE

- Approved Source
 - A. All food from Regulated Food Processing Plants/No home prepared / canned foods.
 - B. All shellfish from National Shellfish Sanitation Program (NSSP) listed sources. No recreationally caught shellfish received or sold.
 - C. Game, wild mushrooms harvested with approval of Regulatory Authority.
- Receiving/Condition
 - A. Food received at proper temperatures/protected from contamination during transportation and receiving/food is safe, unadulterated.
- Records
 - A. Shell stock tags/labels retained for 90 days from the date the container is emptied.
 - B. As required, written documentation of parasite destruction maintained for fish products.
 - C. CCP monitoring records maintained in accordance with HACCP plan when required.

RISK FACTOR: INADEQUATE COOKING

- Proper Cooking Temperature per potentially hazardous food (PHF)
 - A. Raw eggs broken for immediate service cooked to 145° F for 15 seconds, eggs not prepared for immediate service cooked to 155° F for 15 seconds.
 - B. Comminuted fish, meats, game animals 155° F for 15 seconds.
 - C. Beef roasts, including formed roasts, are cooked to 130° F for 121 minutes or as chart specified and according to oven parameters per chart.
 - D. Poultry; stuffed fish, meat, pasta, poultry, stuffed ratites, or stuffing containing fish, meat, poultry or ratites cooked to 165° F for 15 seconds.
 - E. Wild game animals cooked to 165° F for 15 seconds.
 - F. Raw animal foods cooked in microwave are rotated, stirred, covered, and heated to 165° F. Food is allowed to stand covered for 2 minutes after cooking.
 - G. Pork, ratites, injected meats are cooked to 155° F for 15 seconds
 - H. All other PHF cooked to 145° F for 15 seconds.

- Rapid Reheating for Hot Holding
 - A. PHF are rapidly reheated to 165° F for 15 seconds.
 - B. Food reheated in a microwave is heated to 165° F or higher
 - C. Commercially processed ready-to-eat food, if reheated, held at 140° F or above.
 - D. Remaining unsliced portions of beef roasts are reheated for hot holding using minimum oven parameters.

RISK FACTOR: IMPROPER HOLDING

- Proper Cooling Procedures (Note any temperature above 41° F)
 - A. Cooked PHF is cooled from 140° F to 70° F within 2 hours and from 70° F to 41° F or below within 4 hours.
 - B. Cooked PHF is cooled from 140° F to 70° F within 2 hours and from 70° F to 45° F or below within 4 hours.
 - C. PHF (from ambient ingredients) is cooled to 41° F or below within 4 hours.
 - D. PHF (from ambient ingredients) is cooled to 45° F or below within 4 hours.
 - E. Foods received at a temperature according to Law are cooled to 41° F within 4 hours.
 - F. Foods received at a temperature according to Law are cooled to 45° F within 4 hours.
- Cold Hold (41° F/45° F)
 - A. PHF is maintained at 41° F or below, except during preparation, cooking, or cooling or when time is used as a public health control.
 - B. PHF is maintained at 45° F or below, except during preparation, cooking, or cooling or when time is used as a public health control.
- Hot Hold (140° F)
 - A. PHF is maintained at 140° F or above, except during preparation, cooking, or cooling or when time is used as a public health control.
 - B. Roasts are held at a temperature of 130° F or above.
- Time
 - A. Ready-to-eat PHF held for more than 24 hours is date marked as required (prepared on-site).
 - B. Ready to eat PHF, held at 45° F for 4 days or 41° F for 7 days and discarded as required.
 - C. Commercially prepared ready-to-eat PHF is date marked as required.
 - D. When only time is used as a public health control, food is cooked and served within 4 hours as required.

RISK FACTOR: CONTAMINATED EQUIPMENT

- *Separation/Segregation/Protection*
 - A. *Food is protected from cross contamination by separating raw animal foods from raw, ready-to-eat food and by separating raw animal foods from cooked, ready-to-eat food.*
 - B. *Raw animal foods are separated from each other during storage, preparation, holding, and display.*
 - C. *Food is protected from environmental contamination.*
 - D. *After being served or sold to a consumer, food is not re-served.*
- *Food Contact Surfaces*
 - A. *Food contact surfaces and utensils are clean to sight and touch and sanitized before use.*

RISK FACTOR: POOR PERSONAL HYGIENE

- *Proper, Adequate Handwashing*
 - A. *Hands are clean and properly washed when and as required.*
- *Good Hygienic Practices*
 - A. *Food employees eat, drink, and use tobacco only in designated areas/do not use a utensil more than once to taste food that is sold or served/do not handle or care for animals present. Food employees experiencing persistent sneezing, coughing, or runny nose do not work with exposed food, clean equipment, utensils, linens, unwrapped single-service, or single-use articles.*
- *Prevention of Contamination From Hands*
 - A. *Employees do not contact exposed, ready-to-eat food with their bare hands.*
- *Handwash Facilities*
 - A. *Handwash facilities conveniently located and accessible for employees.*
 - B. *Handwash facilities supplied with hand cleanser/sanitary towels/hand-drying devices.*

RISK FACTOR: OTHER

- *CHEMICAL*
 - A. *No unapproved food or color additives. Sulfites are not applied to fresh fruits and vegetables intended for raw consumption.*
 - B. *Poisonous or toxic materials, chemicals, lubricants, pesticides, medicines, first aid supplies, and other personal care items properly identified, stored, and used.*
 - C. *Poisonous or toxic materials held for retail sale are properly stored.*

The expected baseline data were collected by Retail Food Specialists (FDA, Office of Regulatory Affairs) through their field inspections conducted in 1998–99. Additional national benchmark data will be obtained during FDA/State inspection activities and FDA specialists' audits of programs to include incorporation of Food Code interventions.

See Appendix A for focus area contact information.



10-7. (Developmental) Reduce human exposure to organophosphate pesticides from food.

Comments

An operational definition could not be specified at the time of publication.

A proposed national data source is the Total Diet Study, FDA, to determine the levels of chemical contaminants, including organophosphate pesticides, present in foods. There will be continuous quarterly data collection for the Total Diet Study during the next 10 years.

The current food consumption estimates, needed for the human exposure baseline calculation, are 10 years old. During FY 2000, FDA will be updating food consumption data collection and will then be able to calculate a baseline for human exposure to selected organophosphate pesticides from food.

See Appendix A for focus area contact information.



References

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