Session Presentations

• Healthy People 2020 Food Safety Topic Area Objectives — Elisa Elliot
  ▪ Healthy People 2020 Initiative
  ▪ Food Safety Topic Area

• Food Safety at Home: Healthy People 2020
  – Amy Lando
  ▪ Food Safety Survey
  ▪ Healthy People 2020 Food Safety
  ▪ Food Safety Survey 2015
Healthy People 2020
Food Safety Topic Area Objectives
Elisa L. Elliot, Ph.D.
Food and Drug Administration
Coordinated Outbreak Response and Evaluation Network
Healthy People 2020 Food Safety Topic Area Objectives

- Healthy People 2020 Initiative
- Food Safety Topic Area
  - Foodborne infections
  - Foodborne disease outbreaks
  - Antimicrobial resistance
  - Food safety practices and food allergies
  - Retail food facility practices
Healthy People Initiative

- Healthy People provides science-based, 10-year national objectives for improving the health of all Americans.

- Healthy People is grounded in the principle that setting national objectives and monitoring progress can motivate action.

- For the past 30 years, Healthy People has been committed to improving the quality of our nation’s health by producing a framework for public health prevention priorities and actions.
Healthy People Evolves

1979

- 1979 Smallpox Eradicated
- 1970 Clean Air Act

1980

- 1982 AIDS is Infectious

1980s

- 1988 SG Declares Nicotine Addictive

1990

- 1990 Human Genome Project Begins
- 1990s Drinking Water Fluoridation

2000

- 2000s Obesity and Chronic Disease
- September 11, 2001

2000s

- 2009 H1N1 Flu

2010

- 2005 Hurricane Katrina
Mission of Healthy People Initiative

- Identify nationwide health improvement priorities;
- Identify nationwide health improvement priorities;
- Increase public awareness and understanding of the determinants of health, disease, and disability and the opportunities for progress;
Mission of Healthy People Initiative -- continued

- Provide measurable objectives and goals that are applicable at the national, state, and local levels;

- Engage multiple sectors to take actions to strengthen policies and improve practices that are driven by the best available evidence and knowledge; and

- Identify critical research, evaluation, and data collection needs.
Healthy People 2020

- 42 Topic areas

- Topics and objectives and links to the data are on the web at:

  - [www.healthypeople.gov](http://www.healthypeople.gov)
Healthy People 2020 Topic Areas

- Access to Health Services
- Adolescent Health New
- Arthritis, Osteoporosis, and Chronic Back Conditions
- Blood Disorders and Blood Safety New
- Cancer
- Chronic Kidney Disease
- Dementias, Including Alzheimer's Disease New
- Diabetes
- Disability and Health
- Early and Middle Childhood New
- Educational and Community-Based Programs
Healthy People 2020 Topic Areas

- Environmental Health
- Family Planning
- **Food Safety**
- Genomics New
- Global Health New
- Health Communication and Health Information Technology
- Health-Related Quality of Life & Well-Being New
- Healthcare-Associated Infections New
- Hearing and Other Sensory or Communication Disorders
- Heart Disease and Stroke
- HIV
Healthy People 2020 Topic Areas

- Immunization and Infectious Diseases
- Injury and Violence Prevention
- Lesbian, Gay, Bisexual, and Transgender Health New
- Maternal, Infant, and Child Health
- Medical Product Safety
- Mental Health and Mental Disorders
- Nutrition and Weight Status
- Occupational Safety and Health
- Older Adults New
- Oral Health
- Physical Activity
Healthy People 2020 Topic Areas

- Preparedness *New*
- Public Health Infrastructure
- Respiratory Diseases
- Sexually Transmitted Diseases
- Sleep Health *New*
- Social Determinants of Health *New*
- Substance Abuse
- Tobacco Use
- Vision
Overview: Food Safety

- 1 in 6 Americans is affected by foodborne illness each year.
- Costs are estimated between $78 and $152 billion dollars annually (2011 and 2010).
- At least 2 million people acquire serious infections with antibiotic resistant bacteria annually, not all foodborne.

SOURCE: Scharff 2011 and 2010

NOTES: 1 http://www.cdc.gov/drugresistance/threat-report-2013/
Food Safety Challenges

- Too many preventable foodborne illnesses, causing costly disruptions in the marketplace, loss of public confidence in the food supply

- An increasingly complex global supply chains resulting in pressures on food safety and oversight system
Federal Agencies with Major Roles in Food Safety

- U.S. Food and Drug Administration (FDA)
- Food Safety and Inspection Service (FSIS)
- Centers for Disease Control and Prevention (CDC)
CDC leads federal surveillance efforts to collect foodborne illness and outbreak data with these systems:

- **Foodborne Diseases Active Surveillance Network (FoodNet)**
  - tracks laboratory confirmed cases of infection targeting nine pathogens transmitted commonly through food with a network of 10 states, USDA-FSIS and the FDA

- **National Outbreak Reporting System (NORS)**
  - collects reports of enteric disease outbreaks caused by bacterial, viral, parasitic, chemical, toxin, and unknown agents

- **National Antimicrobial Resistance Monitoring System for Enteric Bacteria (NARMS)**
  - tracks antimicrobial resistance in human infections caused by *Salmonella* and other enteric bacteria
## Healthy People 2020
### Food Safety Topic Area Objectives

<table>
<thead>
<tr>
<th>FS-1</th>
<th>Reduce infections caused by key pathogens transmitted commonly through food.</th>
</tr>
</thead>
<tbody>
<tr>
<td>FS-2</td>
<td>Reduce number of outbreak-associated bacterial infections associated with food commodity groups.</td>
</tr>
<tr>
<td>FS-3</td>
<td>Prevent increase in proportion of non-typhoidal <em>Salmonella</em> and <em>Campylobacter jejuni</em> isolates from humans resistant to antimicrobial drugs.</td>
</tr>
<tr>
<td>FS-4</td>
<td>Reduce severe allergic reactions among adults with food allergies.</td>
</tr>
<tr>
<td>FS-5</td>
<td>Increase proportion of consumers who follow key food safety practices.</td>
</tr>
<tr>
<td>FS-6</td>
<td>Improve food safety practices in food service and retail establishments.</td>
</tr>
</tbody>
</table>
FS-1 Reduce infections caused by key pathogens transmitted commonly through food

FS-1.1 *Campylobacter* spp.

FS-1.2 Shiga-toxin producing *Escherichia coli* (STEC) O157

FS-1.3 *Listeria monocytogenes*

FS-1.4 *Salmonella* spp.

FS-1.5 Hemolytic uremic syndrome (HUS) in children < 5

FS-1.6 *Vibrio* species

FS-1.7 *Yersinia* species
Infections Caused by *Campylobacter*, 2006–2008* and 2011

<table>
<thead>
<tr>
<th>Cases per 100,000</th>
<th>2006-2008</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
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<td>&lt;5</td>
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<tr>
<td>5-9</td>
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</tr>
<tr>
<td>10-19</td>
<td></td>
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</tr>
<tr>
<td>20-64</td>
<td></td>
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</tr>
<tr>
<td>65+</td>
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</tr>
</tbody>
</table>

**HP2020 Target: 8.5**

NOTES: Data for age groups between 20 and 64 are similar and were aggregated to highlight the other, most at-risk groups; Rates include both foodborne and non-foodborne illnesses.

SOURCE: Foodborne Diseases Active Surveillance Network (FoodNet), CDC/NCEZID.

* The baseline figure was calculated using a 3-year average (2006-08).
Infections Caused by *E. coli* O157, 2006–2008** and 2011

NOTES: Data for age groups between 20 and 64 are similar and were aggregated to highlight the other, most at-risk groups; Rates include both foodborne and non-foodborne illnesses.

SOURCE: Foodborne Diseases Active Surveillance Network (FoodNet), CDC/NCEZID.

* STEC O157 is a Shiga toxin-producing *Escherichia coli*, serogroup O157.

** The baseline figure was calculated using a 3-year average (2006-08).

Obj. FS-1.2
Decrease desired

NOTES: Data for age groups between 20 and 64 are similar and were aggregated to highlight the other, most at-risk groups; Rates include both foodborne and non-foodborne illnesses.

SOURCE: Foodborne Diseases Active Surveillance Network (FoodNet), CDC/NCEZID.

*The baseline figure was calculated using a 3-year average (2006-08).
†Zero cases in 2006 through 2008, and 2011.

Obj. FS-1.3
Decrease desired
Listeria monocytogenes

- Joint risk assessment (FSIS & FDA) to evaluate public health impact of retail practices and conditions
- Zero tolerance in Ready-to-Eat foods
- Continued sampling and testing foods, food contact surfaces, and the environment
Infections Caused by *Salmonella*, 2006–2008* and 2011

**Cases per 100,000**

<table>
<thead>
<tr>
<th>Age Group (years)</th>
<th>2006-2008</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
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<tr>
<td>65+</td>
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</tbody>
</table>

**HP2020 Target: 11.4**

NOTES: Data for age groups between 20 and 64 are similar and were aggregated to highlight the other, most at-risk groups; Rates include both foodborne and non-foodborne illnesses.

SOURCE: Foodborne Diseases Active Surveillance Network (FoodNet), CDC/NCEZID.

* The baseline figure was calculated using a 3-year average (2006-08).

Obj. FS-1.4
Decrease desired
FS-2 Reduce the number of outbreak-associated infections due to Shiga toxin-producing *E. coli* O157, or *Campylobacter*, *Listeria*, or *Salmonella* species associated with food commodity groups.

FS-2.1 Beef
FS-2.2 Dairy
FS-2.3 Fruits and nuts
FS-2.4 Leafy vegetables
FS-2.5 Poultry
FS-2: Reduce Outbreak-Associated Infections Associated with Food Categories

- Agencies need to know how many cases of foodborne disease are attributable to each food commodity group they regulate
- CDC, FSIS, and FDA have historically pursued their own attribution analyses
- Interagency Food Safety Analytics Collaboration (IFSAC) formed to improve coordination of Federal food safety agencies
  - Developed a shared tri-agency food scheme for attribution analysis
  - Updated attribution estimates
Outbreak-Associated Infections Attributed to Five Food Groups, 2006–2008* through 2011

*The baseline figure was calculated using a 3-year average (2006-08).
SOURCE: National Outbreak Reporting System (NORS), CDC/NCEZID and CSTE.

Obj. FS-2.1 through 2.5
Decrease desired
Food Safety Topic Area
Objectives—Antibiotic Resistance

FS-3 Prevent an increase in the proportion of nontyphoidal *Salmonella* and *Campylobacter jejuni* isolates from humans that are resistant to antimicrobial drugs.

FS-3.1 *Salmonella* isolates—quinolone (Note change to ciprofloxacin from nalidixic acid)

FS-3.2 *Salmonella* isolates—ceftriaxone (third-generation cephalosporin)

FS-3.4 *Salmonella* isolates—gentamicin

FS-3.5 *Salmonella* isolates—ampicillin

FS-3.6 *Salmonella* isolates—three or more antimicrobials

FS-3.7 *Campylobacter jejuni* isolates—erythromycin
Percent of *Salmonella* and *Campylobacter* Clinical Isolates Resistant to Antibiotics, 2006–2008* and 2011

**NOTES:** I = 95% confidence interval; FS-3.5 tracks resistance of 3 or more from among 24 antibiotics; Confidence intervals were not available for baseline estimates.

**SOURCE:** National Antimicrobial Resistance Monitoring System for Enteric Bacteria (NARMS), CDC/NCEZID.

* The baseline is a 3-year average (2006-08).
Food Safety Topic Area
Objectives—Food Allergies

**FS-4** Reduce severe allergic reactions to food among adults with a food allergy diagnosis.
Severe Allergic Reactions to Food Among Adults with a Food Allergy Diagnosis, 2006 and 2010

NOTE: I = 95% confidence interval. Data are statistically unreliable for age 65+ year and less than high school education.
SOURCE: Food Safety Survey, FDA/CFSAN.

Obj. FS-4
Decrease desired

NOTE: I = 95% confidence interval. Data are statistically unreliable for age 65+ year and less than high school education.
SOURCE: Food Safety Survey, FDA/CFSAN.
Food Safety Topic Area
Objectives--Consumer

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

FS-5.1  Clean: wash hands and surfaces often

FS-5.2  Separate: don’t cross-contaminate

FS-5.3  Cook: cook to proper temperatures

FS-5.4  Chill: refrigerate promptly
Key Food Safety Practices, 2006 and 2010

NOTES: I = 95% confidence interval.

FightBAC!™ Messages:

**Clean** – Wash hands and surfaces often
**Cook** – Cook to proper temperature
**Separate** – Don’t cross-contaminate
**Chill** – Refrigerate promptly

SOURCE: Food Safety Survey, FDA/CFSAN.
FS-6  Increase the proportion of fast-food and full-service restaurants that follow food safety practices that prevent foodborne illness outbreaks.

- Developmental at beginning of decade
- Measureable as of September 2014
- 2006 Baselines
- 2020 Targets are 10% improvement
<table>
<thead>
<tr>
<th>Fast-Food (Obj. No.)</th>
<th>Full Service (Obj. No.)</th>
<th>Increase the proportion of restaurants where:</th>
</tr>
</thead>
<tbody>
<tr>
<td>FS-6.1</td>
<td>FS-6.6</td>
<td>Employees practice proper handwashing</td>
</tr>
<tr>
<td>FS-6.2</td>
<td>FS-6.7</td>
<td>No contact of bare hands with ready-to-eat (RTE) foods</td>
</tr>
<tr>
<td>FS-6.3</td>
<td>FS-6.8</td>
<td>Food contact surfaces are cleaned and sanitized</td>
</tr>
<tr>
<td>FS-6.4</td>
<td>FS-6.9</td>
<td>Foods requiring refrigeration are held at the proper temperature</td>
</tr>
<tr>
<td>FS-6.5</td>
<td>FS-6.10</td>
<td>Foods displayed or stored hot are held at the proper temperature</td>
</tr>
<tr>
<td>Obj. No.</td>
<td>Objective Short Title</td>
<td>2008 Baseline (%)</td>
</tr>
<tr>
<td>---------</td>
<td>--------------------------------------------------------------------------------------</td>
<td>-------------------</td>
</tr>
<tr>
<td>FS-6.1</td>
<td>Proper handwashing in fast-food restaurants</td>
<td>61</td>
</tr>
<tr>
<td>FS-6.2</td>
<td>No bare hand contact of RTE foods in fast-food restaurants</td>
<td>74</td>
</tr>
<tr>
<td>FS-6.3</td>
<td>Food contact surfaces cleaned and sanitized in fast-food restaurants</td>
<td>58</td>
</tr>
<tr>
<td>FS-6.4</td>
<td>Proper refrigeration in fast-food restaurants</td>
<td>32</td>
</tr>
<tr>
<td>FS-6.5</td>
<td>Proper hot holding in fast-food restaurants</td>
<td>71</td>
</tr>
<tr>
<td>FS-6.6</td>
<td>Proper handwashing in full-service restaurants</td>
<td>24</td>
</tr>
<tr>
<td>FS-6.7</td>
<td>No bare hand contact of RTE foods in full-service restaurants</td>
<td>54</td>
</tr>
<tr>
<td>FS-6.8</td>
<td>Food contact surfaces cleaned and sanitized in full-service restaurants</td>
<td>36</td>
</tr>
<tr>
<td>FS-6.9</td>
<td>Proper refrigeration in full-service restaurants</td>
<td>28</td>
</tr>
<tr>
<td>FS-6.10</td>
<td>Proper hot holding in full-service restaurants</td>
<td>60</td>
</tr>
</tbody>
</table>
Foodborne pathogens continue to be a major cause of illnesses, despite significant reduction in some infections.
  - The very young and the elderly are the most vulnerable to foodborne illnesses.
  - Antimicrobial drugs are still effective against *Salmonella* and *Campylobacter*.

Severe allergic food reactions in adults have decreased and have nearly met the HP2020 target.

Most consumer food safety practices are near their HP2020 target.
Acknowledgments

- Healthy People Food Safety Working Group
- Jeff Pearcy, CDC National Center for Health Statistics
- Tim Ihry, USDA Food Safety and Inspection Service -- Co-Chair of Healthy People FSWG
- Olga Henao, CDC National Center for Emerging and Zoonotic Infectious Diseases
- Amy Lando, FDA Center for Food Safety and Applied Nutrition (CFSAN)
- Laurie Williams, FDA CFSAN
Stay Connected

JOIN THE HEALTHY PEOPLE LISTSERV & CONSORTIUM

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EMAIL  hp2020@hhs.gov
TWITTER  @gohealthypeople
LINKEDIN  Healthy People 2020
YOUTUBE  ODPHP (search “healthy
Questions?
Foodborne illnesses caused by 31 major pathogens annually account for:

- 9.4 million episodes of foodborne illnesses
- 55,961 hospitalizations
- 1,351 deaths

Estimates of the illnesses caused by four key pathogens tracked annually in Healthy People are:

- **Salmonella**
  - 1,027,561 illnesses; 19,336 hospitalizations; and 378 deaths

- **Campylobacter**
  - 845,024 illnesses; 8,463 hospitalizations; and 76 deaths

- Shiga toxin producing **Escherichia coli** serogroup O157
  - 63,153 illnesses; 2,138 hospitalizations; and 20 deaths

- **Listeria monocytogenes**
  - 1,591 illnesses; 1,455 hospitalizations; and 255 deaths

FS-4: Reduce Illness from Food Allergies

Reducing the presence of undeclared allergens by:

- Reducing cross-contamination through modernized food GMPs and new preventive controls
- Conducting focused enforcement activities for problematic allergens in foods
- Developing improved methods for accurate measurement of allergens in complex foods
- Completing a risk assessment to determine if thresholds can be established for undeclared allergens
FS-5: Consumer Focused Safe Food Handling Education and Outreach

- **http://www.Foodsafety.gov**
  - Food Safety Recalls & Tips Widget; Tips includes 4 FightBac!® Messages - Clean, Separate, Cook, and Chill

- **http://www.fda.gov**
  - FDA launched a new version of its website Nov 2013
  - Works well with most mobile devices, including smartphones and tablets
  - Continues to support traditional desktop and laptop computers.
  - Provides easy access to the most popular content
  - Makes it easier for people to report problems with FDA regulated products to the Agency

- CFSAN Food and Cosmetics Information Center
  - Phone: 1-888-SAFEFOOD (1-888-723-2266)
  - Web: [https://cfsan.secure.force.com/Inquirypage](https://cfsan.secure.force.com/Inquirypage)
**FS-5: Consumer Focused Safe Food Handling Education and Outreach**

  - Food Safety Recalls & Tips Widget
  - Tips includes 4 FightBac!® messages
    - Clean: Wash hands and surfaces often
    - Separate: Don’t cross-contaminate
    - Cook: Cook to proper temperatures
    - Chill: Refrigerate promptly
FS-5: Consumer Focused Safe Food Handling  Education and Outreach

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FS-6: Retail Food Safety

- Prevent foodborne illness from foods prepared in retail establishments through a collaborative Federal, state, and local effort, with the FDA as the lead Federal agency

- Develop / implement strategies to leverage and enhance food safety and defense capacities of state/ local/ tribal regulatory retail food protection programs

- Form cooperative working relationships with foodservice and retail food industries to promote the implementation of effective food safety management systems

- Update the Food Code, engage the Conference for Food Protection
  - Food Code published in December 2013

- Maintain the Retail Program Standards