Sanitation and You Who? Top 10 Foodborne Illness Outbreaks

Be Prepared

UND UNIVERSITY OF NORTH DAKOTA LEADERS IN ACTION

1

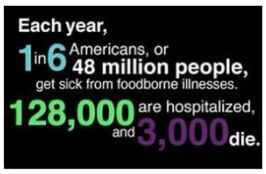
Learning Objectives

- At the end of the session, learners will be able to:
  - Define Foodborne Illness and discuss the risks and causes of foodborne illness;
  - List the Top 10 Foodborne Pathogens;
  - List the Top 10 Food Safety Issues and how to prevent foodborne outbreaks.

UND UNIVERSITY OF NORTH DAKOTA

2

Foodborne Illness



UND UNIVERSITY OF NORTH DAKOTA

3

At-Risk Populations

UND UNIVERSITY OF NORTH DAKOTA

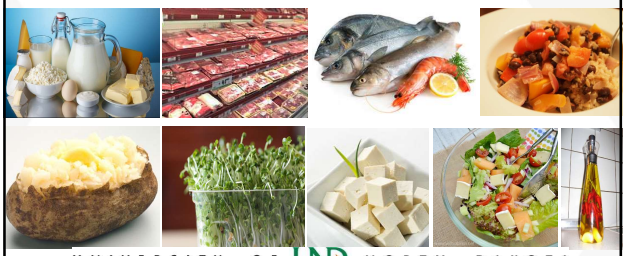
4

Cost

UND UNIVERSITY OF NORTH DAKOTA

5

PHF/TCS Foods



UNIVERSITY OF UND NORTH DAKOTA

UND UNIVERSITY OF NORTH DAKOTA

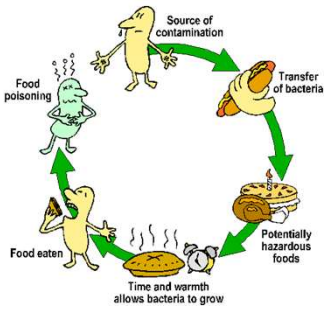
6

Foodborne Illness Defined

UND UNIVERSITY OF NORTH DAKOTA

7

Microbial World



UND UNIVERSITY OF NORTH DAKOTA

8

Activity

UND UNIVERSITY OF NORTH DAKOTA

9

Activity:

- Number your paper 1-10
- List as many microorganisms that you can think of that cause foodborne illnesses
- Exchange them with a partner until the end of the class

UND UNIVERSITY OF NORTH DAKOTA

10

Top 10 Foodborne Illnesses

UND UNIVERSITY OF NORTH DAKOTA

11

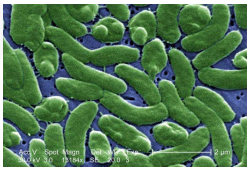
YOU WHO? #10: Shigella

- Timing of illness
- Signs and Symptoms
- Duration
- Food Sources

UND UNIVERSITY OF NORTH DAKOTA

12

YOU WHO? #9: Vibrio vulnificus

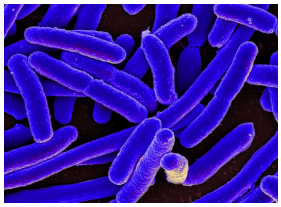


- Timing of illness
- Signs and Symptoms
- Duration
- Food Sources

UND UNIVERSITY OF NORTH DAKOTA

13

YOU WHO? #8: Escherichia coli

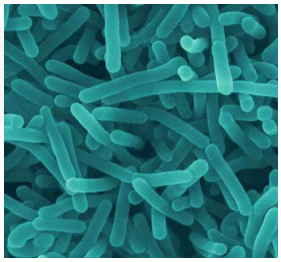


- Timing of illness
- Signs and Symptoms
- Duration
- Food Sources

UND UNIVERSITY OF NORTH DAKOTA

14

YOU WHO? #7: Listeria monocytogenes

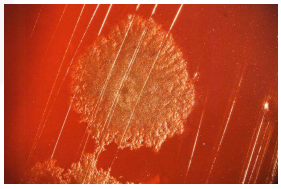


- Timing of illness
- Signs and Symptoms
- Duration
- Food Sources

UND UNIVERSITY OF NORTH DAKOTA

15

YOU WHO?
#6: Clostridium botulinum

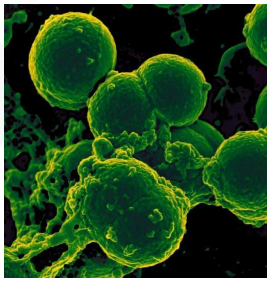


- Timing of illness
- Signs and Symptoms
- Duration
- Food Sources

UND UNIVERSITY OF NORTH DAKOTA

16

YOU WHO?
#5: Staphylococcus aureus



- Timing of illness
- Signs and Symptoms
- Duration
- Food Sources

UND UNIVERSITY OF NORTH DAKOTA

17

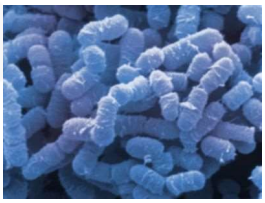
YOU WHO? #4: Campylobactor

- Timing of illness
- Signs and Symptoms
- Duration
- Food Sources

UND UNIVERSITY OF NORTH DAKOTA

18

YOU WHO?
#3: Clostridium perfringes

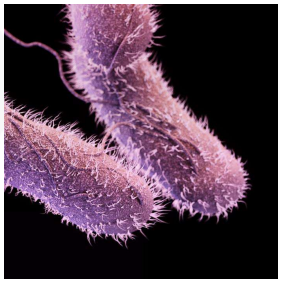


- Timing of illness
- Signs and Symptoms
- Duration
- Food Sources

UND UNIVERSITY OF NORTH DAKOTA

19

YOU WHO? #2: Salmonella

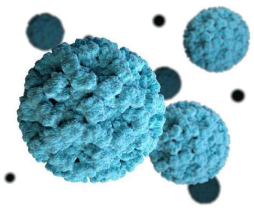


- Timing of illness
- Signs and Symptoms
- Duration
- Food Sources

UND UNIVERSITY OF NORTH DAKOTA

20

YOU WHO? #1: Norovirus



- Timing of illness
- Signs and Symptoms
- Duration
- Food Sources

UND UNIVERSITY OF NORTH DAKOTA

21

Leading causes of:

Death

- Salmonella
- Toxoplasma
- Listeria
- Norovirus

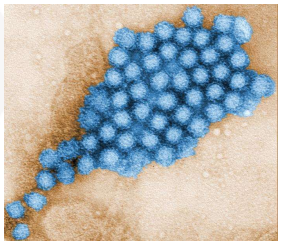
Hospitalizations

- Salmonella
- Toxoplasma
- Campylobacter
- Norovirus

UND UNIVERSITY OF NORTH DAKOTA

22

What caused the most illness?



UND UNIVERSITY OF NORTH DAKOTA

23

Activity

UND UNIVERSITY OF NORTH DAKOTA

24

Activity:

- Number your paper 1-10
- List what you think are the Top 10 Food Safety Issues
- Exchange them with a partner until the end of the class

UND UNIVERSITY OF NORTH DAKOTA

25

ANFP Top 10 Food Safety Issues

UND UNIVERSITY OF NORTH DAKOTA

26

YOU WHO? Human Factors

UND UNIVERSITY OF NORTH DAKOTA

27

YOU WHO?
#10: Unsafe Food Storage

UND UNIVERSITY OF NORTH DAKOTA

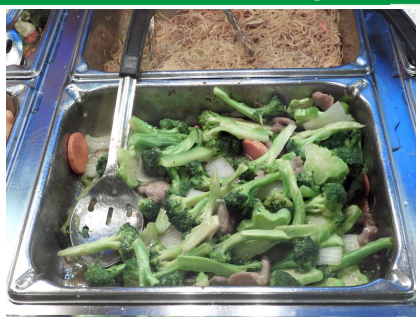
28

YOU WHO?
#9: Sick Employees & Food Prep

UND UNIVERSITY OF NORTH DAKOTA

29

YOU WHO?
#8: Unsafe Food Holding



UND UNIVERSITY OF NORTH DAKOTA

30

YOU WHO?
#7: Untrained Employees

UND UNIVERSITY OF NORTH DAKOTA

31

YOU WHO?
#6: Washing Meat & Poultry

UND UNIVERSITY OF NORTH DAKOTA

32

YOU WHO?
#5: Confusing Labeling

UND UNIVERSITY OF NORTH DAKOTA

33

YOU WHO?
#4: Improper Cooking Temperature

Product	Minimum Internal Temperature & Rest Time
Beef, Pork, Veal & Lamb Steaks, chops, roasts	145 °F (62.8 °C) and allow to rest for at least 3 minutes
Ground Meats	160 °F (71.1 °C)
Ground Poultry	165 °F
Ham, fresh or smoked (uncooked)	145 °F (62.8 °C) and allow to rest for at least 3 minutes
Fully Cooked Ham (to reheat)	Reheat cooked hams packaged in USDA-inspected plants to 140 °F (60 °C) and all others to 165 °F (73.9 °C).
All Poultry (breasts, whole bird, legs, thighs, wings, ground poultry, giblets, and stuffing)	165 °F (73.9 °C)
Eggs	160 °F (71.1 °C)
Fish & Shellfish	145 °F (62.8 °C)
Leftovers	165 °F (73.9 °C)
Casseroles	165 °F (73.9 °C)

USDA Food Safety and Inspection Service
U.S. DEPARTMENT OF AGRICULTURE

UND UNIVERSITY OF NORTH DAKOTA

34

YOU WHO?
#3: Same Cutting Board

UND UNIVERSITY OF NORTH DAKOTA

35

YOU WHO?
#2: Improper Sanitation

UND UNIVERSITY OF NORTH DAKOTA

36

YOU WHO?
#1: Improper Hand Washing

UND UNIVERSITY OF NORTH DAKOTA

37

ANFP Top 10 List

UND UNIVERSITY OF NORTH DAKOTA

38

Core Four Practices

UND UNIVERSITY OF NORTH DAKOTA

39

Clean

UND UNIVERSITY OF NORTH DAKOTA

40

Separate

UND UNIVERSITY OF NORTH DAKOTA

41

Cook

Safe Cooking Guidelines

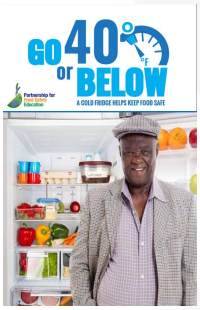
SAFE MINIMUM INTERNAL TEMPERATURES
as measured with a food thermometer

Beef, pork, veal and lamb (roast, steaks and chops)	145 °F with a three-minute "rest time" after removal from the heat source
Ground meats	160°F
Poultry (whole, parts or ground)	165 °F
Eggs and egg dishes	160 °F, but cook eggs until both the yolk and the white are firm; scrambled eggs should not be runny
Leftovers	165 °F
Finfish	145 °F

UND UNIVERSITY OF NORTH DAKOTA

42

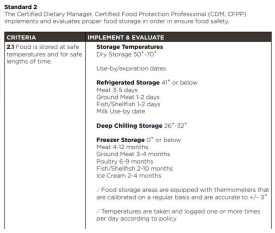
Chill



UND UNIVERSITY OF NORTH DAKOTA

43

CBDM Practice Standards



Standard 2
The Certified Dietary Manager, Certified Food Protection Professional (CDM, CFPP) implements and evaluates proper food storage in order in ensure food safety.

CRITERIA	IMPLEMENT & EVALUATE
2.1 Food is stored at safe temperatures and for safe lengths of time.	**Storage Temperatures** Dry Storage 50°-70° Use-by/expiration dates **Refrigerated Storage** 41° or below Meat 3-5 days Ground Meat 1-2 days Fish/Shellfish 1-2 days Milk Use-by date **Deep Chilling Storage** 26°-32° **Freezer Storage** 0° or below Meat 4-12 months Ground Meat 3-4 months Poultry 6-9 months Fish/Shellfish 2-10 months Ice Cream 2-4 months ✓ Food storage areas are equipped with thermometers that are calibrated on a regular basis and are accurate to +/- 3° ✓ Temperatures are taken and logged one or more times per day according to policy

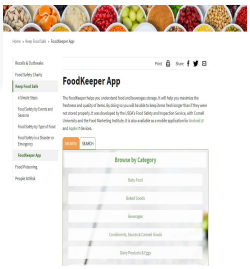
- Competence Area 4
  - Sanitation & Safety
    - Food Safety
    - Food Storage Guidelines

UND UNIVERSITY OF NORTH DAKOTA

44

U.S. Department of Health & Human Services

- FoodKeeper App

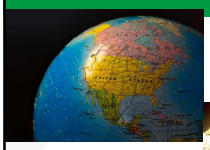


https://www.foodsafety.gov/keep-food-safe/foodkeeper-app

UND UNIVERSITY OF NORTH DAKOTA

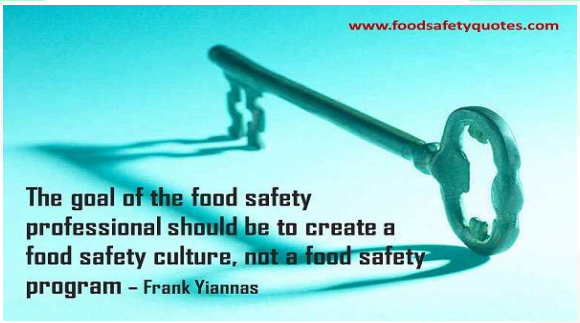
45

Perfect World



UND UNIVERSITY OF NORTH DAKOTA

46



UND UNIVERSITY OF NORTH DAKOTA

47

Resources

Centers for Disease Control and Prevention

- https://www.cdc.gov/foodsafety/diseases/index.html
- https://www.cdc.gov/norovirus/
- https://www.cdc.gov/norovirus/downloads/foodhandlers.pdf
- https://www.cdc.gov/hai/pdfs/norovirus/229110-ANoroCaseFactSheet508.pdf
- https://www.cdc.gov/vitalsigns/norovirus/index.html

Academy of Nutrition & Dietetics

- https://www.eatright.org/homefoodsafety/safety-tips/food-poisoning/most-common-foodborne-pathogens

Practice Standards – ANFP

- https://www.cbdmonline.org/cdm-resources/practice-standards/competency-area-2-sanitation-safety/food-storage-guidelines

Food Keeper App, U.S. Department of Health & Human Services

- https://www.foodsafety.gov/keep-food-safe/foodkeeper-app

UND UNIVERSITY OF NORTH DAKOTA

48

Resources

Partnership for Food Safety Education

- https://www.fightbac.org/food-poisoning/foodborne-pathogens

United States Department of Agriculture, Food Safety and Inspection Service

- https://www.fsis.usda.gov/food-safety/safe-food-handling-and-preparation/food-safety-basics/washing-food-does-it-promote-food
- https://www.fsis.usda.gov/food-safety/safe-food-handling-and-preparation/food-safety-basics/safe-temperature-chart
- https://www.fsis.usda.gov/food-safety/safe-food-handling-and-preparation/food-safety-basics/cutting-boards

UND UNIVERSITY OF NORTH DAKOTA

49

Resources

The Four Core Practices – Partnership for Food Safety Education – Fightbac.org

- https://www.fightbac.org/food-safety-basics/the-core-four-practices/

United States Department of Agriculture, Food Safety and Inspection Service

- https://www.fsis.usda.gov/food-safety/safe-food-handling-and-preparation/food-safety-basics/washing-food-does-it-promote-food
- https://www.fsis.usda.gov/food-safety/safe-food-handling-and-preparation/food-safety-basics/safe-temperature-chart

UND UNIVERSITY OF NORTH DAKOTA

50

Resources

ANFP Top 10 List for Food Safety Issues

- https://www.anfponline.org/docs/default-source/top-10-resource-lists/top-10-food-safety-issues.pdf

CBDM CDM, CFPP Practice Standards: Competence Area 4: Sanitation & Safety

- https://www.cbdmonline.org/cdm-resources/practice-standards/competency-area-2-sanitation-safety/food-safety
- https://www.cbdmonline.org/cdm-resources/practice-standards/competency-area-2-sanitation-safety/food-storage-guidelines

UND UNIVERSITY OF NORTH DAKOTA

51