

E-Learning for Foodborne Illness Outbreak Environmental Assessments

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Overview

- ❑ **Background**

- ❑ **Virtual World Training**
 - Module I
 - Phase II

- ❑ **Participation**

Need and Goal

BACKGROUND

Foodborne Illness Outbreak Environmental Assessments

- ❑ **Describes how the environment contributes to the introduction and or transmission of agents that cause illness**
- ❑ **Objectives of the assessment**
 - Identify contributing factors
 - Identify environmental antecedents
 - Generate recommendations for informed interventions

Using Environmental Assessments to Investigate Illness Outbreaks

- ❑ **Environmental Health Specialists are accustomed to look for violation of regulations**
 - not contributing factors and their environmental antecedents
 - Performing an environmental assessment (EA) requires a different mindset than other environmental food safety activities
- ❑ **No two outbreaks are alike**
 - No single 'checklist' applies to all environmental assessments
- ❑ **Conducting an EA requires a complex set of knowledge and skills including the ability to apply 'critical thinking'**
- ❑ **Training must promote development of competency in the field and not just the acquisition of knowledge**

The Need for Training

- In 2001 Selman and Green surveyed local and state Environmental Health Specialists (EHS) and found
 - EHS focus on pathogens during outbreaks instead of contributing factors and their environmental antecedents
 - A lack of communication between epidemiologist and EHS was found to be a barrier to EHS active engagement in foodborne illness outbreak environmental assessments
 - Local EHS staff require training because they are not involved in outbreaks often enough to attain competency in environmental assessments
 - EHS were in need of a basic training in how to conduct foodborne illness outbreak environmental assessments

Selman, CA and Green, LR (2001). Environmental health specialists' self-reported foodborne illness outbreak investigation practices. Journal of Environmental Health, 20(6), 16-21.

Goal of this Training Effort

- *Use cutting-edge e-learning technologies to develop competency with Foodborne Illness Outbreak Environmental Assessments and deliver training free of charge over the Internet to enhance global food safety*



The Cognitive Domain

- ❑ **Involves knowledge and the development of intellectual skills**
- ❑ **Includes 6 categories of behavior**
 - Knowledge (recall data or information)
 - Comprehension (understanding the meaning)
 - Application (use a concept in a new situation)
 - Analysis (separate materials into component parts)
 - Synthesis (build a pattern from diverse elements)
 - Evaluation (make judgments)

Incorporation of 'Gaming'

- ❑ Each virtual learning experience scenarios is framed as a forensic investigation mystery of an outbreak
- ❑ **Participants decide**
 - Who to interview
 - What topics to interview about
 - Which actions to take
 - What observations to perform and samples to collect
- ❑ **At end, learners must identify contributing factors and environmental antecedents**
- ❑ **Actions and conclusions are tracked and evaluated**
- ❑ **Learners receive individual feedback on results**

Analysis of Learner Performance

- ❑ **Learner receives individualized feedback on:**
 - **Interview effectiveness**
 - Did the learner choose the correct questions?
 - **Interview efficiency**
 - Did the learner choose the questions in the correct order?
 - **Observational skills**
 - Did the learner find all the important embedded clues in the environment?
 - **Critical thinking**
 - Did the learner correctly identify contributing factors and environmental antecedents

Question Category

1. Tasks Performed by this FW
2. Establishment Policies
3. Food Safety Training
4. Personal Health
5. Personal Handwashing/Hygiene
6. Personal Use of Gloves

Thinking back about 5 days ago, what tasks did you perform?



Average question effectiveness
100%

Score
4%
5 / 125 points

TIME REMAINING
9:20

END INTERVIEW

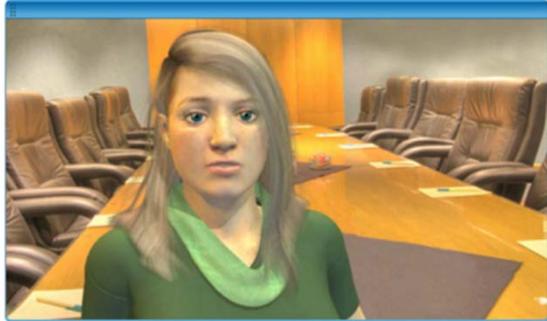
http://www.absolutethinking.com/eric/CDC/dev/main_page.htm

CDC

Module 1: Foundation Skills | Lesson 2: Overview of Foodborne Illness Outbreak Environmental Assessments - Part 1

Overview of Foodborne Illness Outbreak Environmental Assessments

- Introduction
- Terms and definitions
- The farm to fork continuum
- Food establishment system
- Internal system variables
- Contributing factors
- Environmental antecedents
- Interventions
- Comparison of environmental activities
- Challenges
- Process categorization tool



Presenter: Kristin

Slide 1 / 2

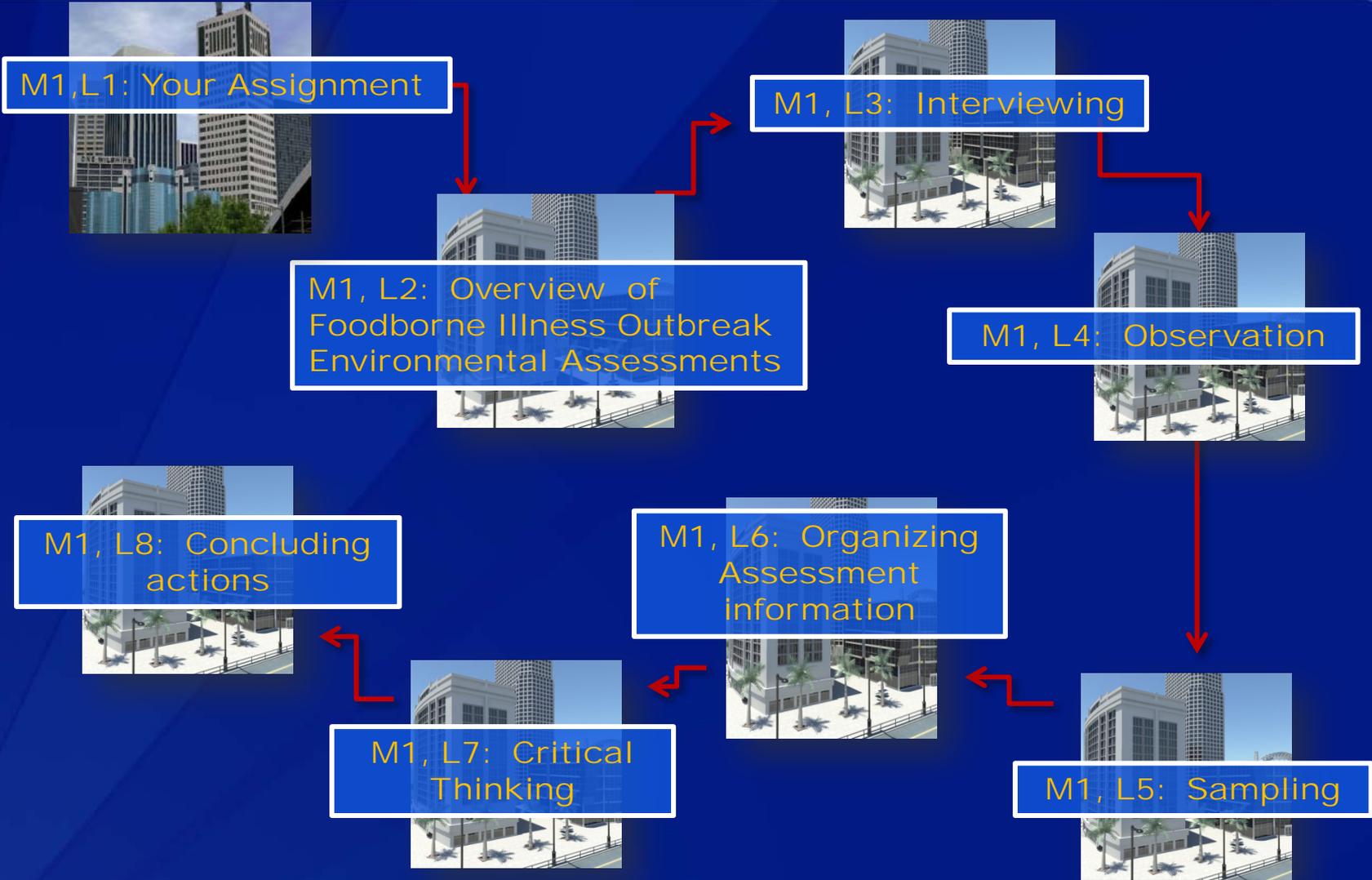
E-Learning on Environmental Assessments of Foodborne Illness Outbreaks

VIRTUAL WORLD TRAINING

Purpose of Module 1

- ❑ **To provide participants with the skills and knowledge to participate effectively in an environmental assessment of a foodborne illness outbreak at a retail point of service**

Foundation Skills



BACK



Left Beef Stew X

- Take temperature
- Get depth of stew
- Get additional info

58°F

OK

TRAINING DEMO

BACK



Ask Food Worker

- When was this food cooked?
- How was this food stored?
- How long do the containers usually sit in the frig before reheating?
- When you want to serve the food, when do you reheat it?
- How do you know when the food is ready to move from the stove to the buffet line?
- How do you know when the food on the serving line is hot enough?
- Do you take the temperature of the food on the serving line?
- Has anyone here been sick recently?



PHASE II – INCORPORATING NEW MODULES

Expanded Purpose of Training based on new FDA and CDC funding

- ❑ To demonstrate how an environmental assessment is performed in a Manufactured Food setting**
- ❑ To demonstrate the process followed to perform a Traceback investigation**
- ❑ To develop basic awareness of Food Defense concepts and principles.**
- ❑ Expand the target audience**
 - Environmental Health Specialists operating at the local level**
 - Now also including State and Local Environmental Health Specialists, Department of Agriculture Inspectors, FDA Investigators and FDA Consumer Safety Officers**

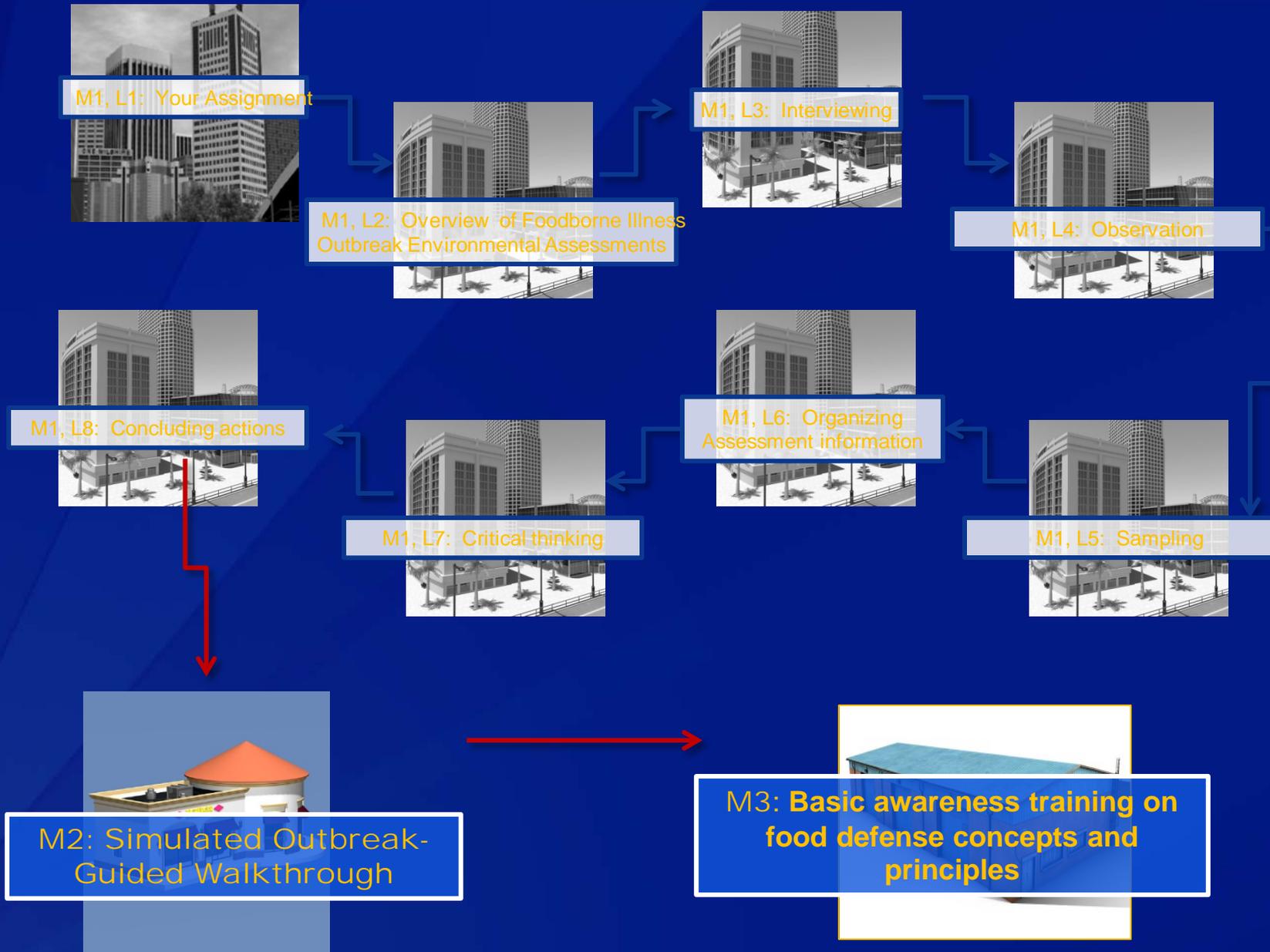
Next Modules

- ❑ **Module 2 will be developed to enable participants to practice using EA skills within the context of a simulated outbreak and/or observe how an environmental assessment and/or traceback is conducted. At this point, we expect that the module will include three types of scenarios:**
 - **Outbreak linked to a retail point of service**
 - **Outbreak linked to a manufactured food setting**
 - **Traceback of the manufactured food outbreak**

Next Modules

- ❑ **Module 3 will be developed to provide basic awareness training on food defense concepts and principles**
 - The content for this module will be based on the new FDA Food Defense E-learning program titled “FDA Food Defense 101”, and specifically the lesson titled “Food Defense Awareness for the Food Professional”
 - After completing this Module, individuals who wish to learn more about Food Defense Concepts and Principles will be directed to the full program available on the FDA web site at <http://www.fda.gov/Food/FoodDefense/ToolsEducationalMaterials/ucm353774.htm>

Virtual Field Training Foundation Skills



PARTICIPATING IN THE TRAINING

Information

- ❑ **www.cdc.gov/nceh/ehs**
 - Provides information about e-Learning on Environmental Assessments of Foodborne Illness Outbreaks and NVEAIS
 - **Registration information**
 - Complete the registration
 - Take the pre-test

**Thank you
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<http://www.cdc.gov/nceh/ehs/EHSNet/index.htm>

**For more information please contact Centers for Disease Control and
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The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

National Center for Environmental Health
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