

2021 CORHA Fall Session: Overview and Update of the Development of HAI/AR Outbreak Training for HAI/AR Program Staff

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Field Support Team (FST) is developing HAI/AR outbreak training

- In 2020, an HAI/AR Program requested healthcare outbreak training assistance
- In-depth interviews with HAI/AR programs identified HAI/AR Program workforce training needs beyond COVI-19
- A wider interest in healthcare outbreak training was noted
 - HAI/AR programs have rapidly expanded their staff over the past year
 - Training is needed beyond COVID-19, especially outbreak training
 - A variety of formats would be acceptable

HAI/AR Program staff suggest HAI/AR outbreak training would be helpful

- “My staff is qualified but they don't have field experience, especially in HAI topics and outbreaks”
- “Our team would benefit from greater uniformity in outbreak investigations.”
- “I am most concerned with providing my staff with outbreak investigations training, as I haven't gone through [formal outbreak training] myself”
- “I haven’t found field epidemiology training specific to healthcare facilities [to give to my employees]”

Existing outbreak training resources do not fully meet the needs of HAI/AR Programs

	A	B	C	D	E	F
1	Num	Title	Year	Outbreak Topic	Training Format	Healthcare specific
2	1	CDC HAI Outbreak Investigations	2020	General Training Resource	Powerpoint	yes
3	2	CDC Field Epi Manual - Ch.18 Healthcare	2018	General Training Resource	Book Chapter	yes
4	3	Field Epidemiology - Gregg, Ch. 16	2008	General Training Resource	Book Chapter	yes
5	4	Intro to Epi - Topic 7 - Investigating an Outbreak	2018	General Training Resource	CDC E-learning Course	no
6	5	Intro to Epi - A Brief Introduction to Data Cleaning	2018	Data Management	CDC E-learning Course	no
7	6	Intro to Epi - Create an Epi Curve	2018	Skills Development	CDC E-learning Course	no
8	7	Intro to Epi - Using an Epi Curve to Determine Mode of Spread	2018	Skills Development	CDC E-learning Course	no
9	8	Intro to Epi - Using an Epi Curve to Determine Mode of Spread	2018	Skills Development	CDC E-learning Course	no
10	9	Tephinet Case Studies - (no healthcare case studies)	2020	Case Studies	Online Training	no
11	10	EIS Resources Page - Case Studies	2016	Case Studies	Online Training	no
12	11	SHEA Outbreak Response Training Program	2019	Hospital Outbreaks	SHEA Online Course	yes
13	12	APIC Infectious Diseases and Pathogens		General Training Resource	Online Training	yes
14	13	APIC EPI in Long-term Care Education Series		General Training Resource	Online Training	yes
15	14	APIC Basic Statistics for Infection Preventionists		Skills Development	Online Training	yes
16	15	APIC EPI Education Series: The Fundamentals of Infection Surveillance, Prevention, and Control		General Training Resource	Online Training	yes
17	16	APIC EPI Intensive Certificate		General Training Resource	In-person	yes
18	17	CDC Quick Learn Lesson - Create an Epi Curve	2011	Skills Development	Online Training	no
19	18	CDC Quick Learn Lesson - Mode of Spread	2011	Skills Development	Online Training	no
20	19	CDC Quick Learn Lesson - Period of Exposure	2011	Skills Development	Online Training	no
21	20	Nursing Home Infection Preventionist Training Course - Module 5 -	2018	General Training Resource	CDC TRAIN Course	yes
22	21	CORHA Training Resources	2020	General Training Resource	Book Chapter	yes
23	22	CDC Train - Introduction to Outbreak Investigations	2019	General Training Resource	Online Training	no
24	23	CDC Train - Outbreak Investigations (Medical Reserve Corps Training)	2013	General Training Resource	Online Training	no
25	24	CDC Train - Field Epidemiology	2008	General Training Resource	Online Training	?
26	25	CDC Train- Analyzing Data (I is for Investigation Series)	2014	General Training Resource	Online Training	no
27	26	CDC Train- Risk and Crisis Communication (I is for Investigation Series)	2014	General Training Resource	Online Training	no
28	27	FL DOH Infection Control Training Series	2018	General Training Resource	Online Training	yes
29	28	LA County Outbreak Training Resources	2020	COVID-19 Outbreaks	Powerpoint	no



The Council for Outbreak Response: Healthcare-Associated Infections and Antimicrobial-Resistant Pathogens

Chapter 5: Investigation of Healthcare-Associated Infection and Antibiotic-Resistant Pathogen Outbreaks
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The Council for Outbreak Response: Healthcare-Associated Infections and Antimicrobial-Resistant Pathogens

Chapter 4: Healthcare-Associated Infections and Antimicrobial-Resistant Pathogens

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The Council for Outbreak Response: Healthcare-Associated Infections and Antimicrobial-Resistant Pathogens

Chapter 2: Functions and Roles of the Council for Outbreak Response

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Existing outbreak training resources do not meet the needs of HAI/AR Programs

1. Few target state and local HD staff; most do not discuss nuance, variability, and jurisdictional/regulatory challenges
2. Few are comprehensive (e.g., case studies or supplemental materials)
3. Few have fully implemented [Quality Training Standards](#) for adult learning (e.g., learner engagement)

In January 2018, education leaders from across the Centers for Disease Control and Prevention (CDC) finalized eight science-based training standards. They serve as a measure of quality for any trainings developed or funded by CDC and provide training developers with guidance for developing quality training.

A quality training is one that meets all eight standards

- 1 Training **NEEDS ASSESSMENT** informs training development
- 2 Training includes **LEARNING OBJECTIVES**
- 3 Training content is **ACCURATE AND RELEVANT**
- 4 Training includes opportunities for **LEARNER ENGAGEMENT**
- 5 Training is designed for **USABILITY AND ACCESSIBILITY**
- 6 Training **EVALUATION** informs improvement
- 7 Training includes opportunity for **LEARNER ASSESSMENT**
- 8 Training includes **FOLLOW-UP SUPPORT** for the learner

Learn more at: www.cdc.gov/TrainingStandards



U.S. Department of
Health and Human Services
Centers for Disease
Control and Prevention

We are developing HAI/AR Outbreak Training

- Online, asynchronous training, e-learning modules with a dedicated and publicly available webpage that provides healthcare-associated outbreak training to HAI/AR program staff.

1) Interactive modules

2) Case studies

3) Supplemental materials

1) Interactive modules review the process of healthcare outbreak investigations

- Healthcare outbreak content divided into e-learning modules
- Focus is on state and local HD approaches and best practices, using content from
 - CORHA Guidance
 - Existing Training Materials
 - CDC Field Manual

LESSON ONE

This lesson will cover the following topics:

- The purpose of an IPC program
- Core IPC

Susceptibility of Nursing Home Residents to Infection

Nursing home residents are potentially susceptible to infections from pathogens for multiple reasons.

Please select each example to learn why it is a risk for infection susceptibility.

© In Lesson One, program.

© Nursing home residents are potentially susceptible to infections from disease-causing bacteria, viruses, fungi, or parasites—which are collectively referred to as pathogens—for multiple reasons. Please select each example to learn why it is a risk for infection susceptibility.

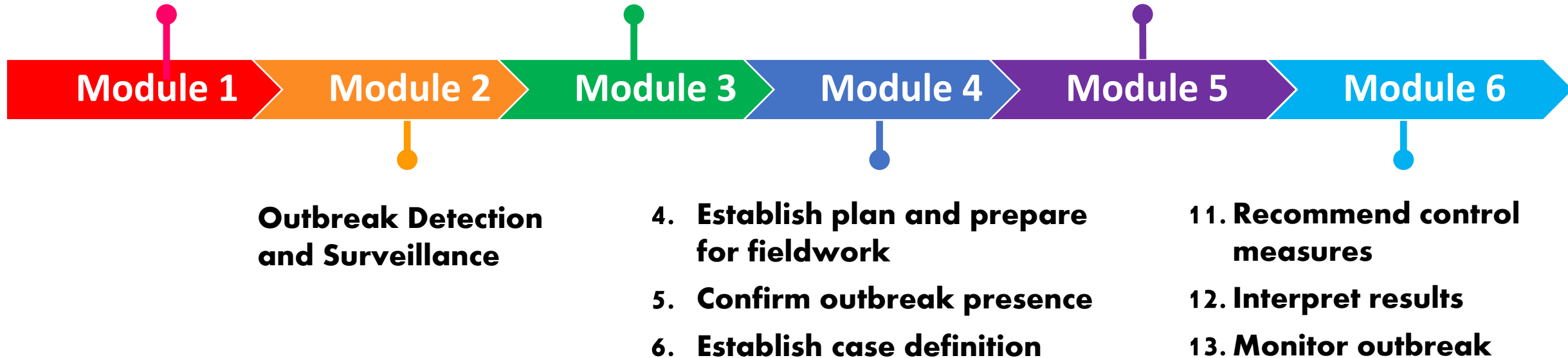
TABLE OF CONTENTS ? HELP CC CAPTIONS SOUND 9 of 63 < BACK NEXT >

HAI/AR Outbreak Investigation Toolkit

Introduction to HAI/AR Outbreaks

1. Perform initial assessment
2. Verify diagnosis
3. Assemble outbreak response team

7. Identify and count cases
8. Collect, organize, and analyze data
9. Perform infection control assessment
10. Consider environmental assessment



Not all steps might be performed in every outbreak response. Steps might not be performed in order, and some steps might occur concurrently.

2) Case studies demonstrate investigation process with real world examples

- Scenario-based vignettes using exemplary outbreaks
- Goal is to outline the outbreak investigation process
- Initial plan is to create 4 case studies covering common healthcare settings and pathogens

Healthcare-associated Infections/Antimicrobial Resistance (HAI/AR) Outbreak Training Case Study Series

SARS-CoV-2 Infection in a Neonatal Intensive Care

Healthcare-associated Infections/Antimicrobial Resistance (HAI/AR) Outbreak Training Case Study Series

Group A Streptococcal (GAS) Infections Among Residents of a Skilled Nursing Facility (SNF)

Instructor Version

Learning Objectives

After completing this case study, the learner should be able to:

1. Describe the epidemiologic and laboratory methods for investigating a suspected invasive GAS outbreak in long-term care settings;
2. Describe the process for identifying additional cases of GAS and for developing and refining case definitions;
3. Organize cases into a line list and create and interpret an epi curve;
4. Describe the process for conducting an on-site infection prevention and control assessment and for ensuring gap mitigation;
5. Describe strategies to manage and control GAS transmission in long-term care settings

Estimated Time to Complete: 80 Minutes

Last Updated: 09/10

This case study is intended for the education of infection control coordinators, healthcare workers, and other healthcare personnel.

Learning Objectives:

After completing this case study, the learner should be able to:

1. Describe the epidemiologic and laboratory methods for investigating a suspected invasive GAS outbreak in long-term care settings;
2. Describe the process for identifying additional cases of GAS and for developing and refining case definitions;
3. Organize cases into a line list and create and interpret an epi curve;
4. Describe the process for conducting an on-site infection prevention and control assessment and for ensuring gap mitigation;
5. Describe strategies to manage and control GAS transmission in long-term care settings

Estimated Time to Complete: 80 Minutes

3) Supplemental materials provide useful examples of outbreak tools

- Resources Inventory*
- Outbreak Investigation Checklist
- Line List Template*
- Case Definition Template
- Outbreak Investigation Report Form*

*Version already created by DHQP

LTC Acute Gastroenteritis Surveillance Line List				Date: __/__/__
This worksheet was created to help nursing homes and other LTC facilities detect, characterize, and investigate a possible outbreak of acute gastroenteritis.				
A. Case Demographics	B. Case Location	C. Signs and Symptoms (s/s)	D. Diagnostics	E. Outcome During Outbreak ^a
LTC Acute Gastroenteritis Outbreak Summary				
1. Facility Information				
Health Dept. Contact Name: _____		Health Dept. Contact Phone Number: _____		
Health Dept. Fax Number: _____		Date First Notified Health Dept.: __/__/__		
Total # of Residents at facility: _____		Total # of Employees (staff and contract personnel): _____		
Summary Form Status: Date initiated: __/__/__		Date completed: __/__/__		
2. Case Definition				
Summarize the definition of a symptomatic case during the outbreak, including symptoms, time range, and location (if appropriate) within facility: _____				
3. Outbreak Period Information				
Outbreak Start (Date of symptom onset of first case): __/__/__		Total # of Cases		
Average Length of Illness: _____		Residents: _____		Staff: _____
Outbreak End (Symptom resolution date of last case): __/__/__				
4. Staff Information				
Were any ill staff delivering resident care at the beginning or during the outbreak? ☐ Yes ☐ No If yes, how many: _____				
Were any of the ill staff responsible for handling food at the beginning or during the outbreak? ☐ Yes ☐ No If yes, how many: _____				
Did any ill staff seek outside medical care at the beginning or during the outbreak? ☐ Yes ☐ No If yes, how many: _____				
ED Visit: ☐ Yes ☐ No If yes, how many: _____ Hospitalization: ☐ Yes ☐ No If yes, how many: _____				
5. Laboratory Tests				
Which organisms were identified through laboratory testing?				
Bacterial: Specify _____ Viral: Specify _____ Other: Specify _____				
Diagnostic testing results		Microbiology Culture	PCR	Other Test: Specify
Organism 1 _____		Residents: _____ Staff: _____	Residents: _____ Staff: _____	Residents: _____ Staff: _____
Organism 2 _____		Residents: _____ Staff: _____	Residents: _____ Staff: _____	Residents: _____ Staff: _____
Organism 3 _____		Residents: _____ Staff: _____	Residents: _____ Staff: _____	Residents: _____ Staff: _____
6. Resident Outcome				
Hospitalizations: ☐ Yes ☐ No If yes, how many: _____		Deaths: ☐ Yes ☐ No If yes, how many: _____		
7. Facility Outbreak Control Measures (Check if control measure used and provide date of implementation)				
☐ Educated on hand hygiene (HH) practices: Date: __/__/__		☐ Monitored appropriate HH and PPE use by staff: Date: __/__/__		
☐ Implemented Transmission-Based Precautions: Date: __/__/__		☐ Cohorted ill residents within unit/building: Date: __/__/__		
☐ Dedicated staff to care for only affected residents: Date: __/__/__		☐ Placed ill staff on furlough: Date: __/__/__		
☐ Suspended activities on affected unit: Date: __/__/__		☐ Restricted new admissions to affected unit: Date: __/__/__		
☐ Notified family/visitors about outbreak: Date: __/__/__		☐ Educated family/visitors about outbreak: Date: __/__/__		
☐ Other: _____		☐ Other: _____		

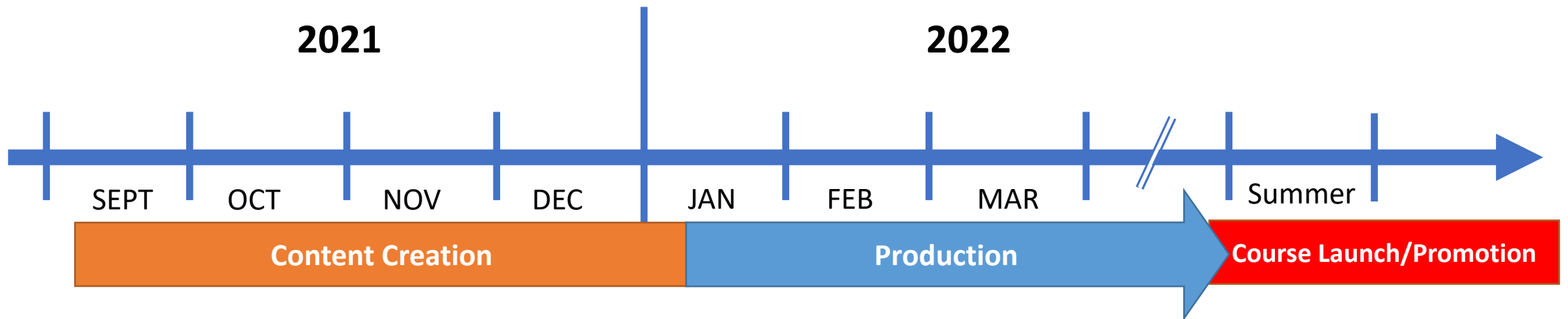
1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

Name _____

If faxing to your local Public Health Agency:
Facility Name: _____
Contact Person: _____

^a Note: Outbreak period

The projected training launch date is Summer 2022



Updates Since Summer 2021

- A full-length rough draft storyboard has been created and is under review
- Two out of four case studies have been drafted
- We are working with Puja Shah at CSTE as a part of a broader CoAg to identify an instructional designer to create the training

HAI/AR Programs will be regularly involved during training development

- January 2021 - Preliminary identification of training needs (KIIs)
- Fall 2021 - Presentations on proposed training
 - Original KII participants (n=6 HAI/AR Programs)
 - CORHA CSTE/NACCHO health department representatives (n=5)
- Winter 2021-22 - Review of draft outbreak modules and case studies
- Spring 2022 - Feedback after production phase

We welcome opportunities to collaborate
further on this training

Summary

- Learners will gain a foundational understanding of the fundamentals of HAI/AR outbreak response

1) Interactive modules

2) Case Studies

3) Supplemental materials

Questions and Feedback