IPAC Advanced Course

Syllabus

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Module 1 - Introduction

Overview

This module introduces learners to the foundational concepts of Infection Prevention and Control (IPAC) in long-term care settings. It outlines the purpose and focus of IPAC programs, highlights the significance of infection control professionals (ICPs), and presents essential frameworks such as the epidemiological triangle and the chain of transmission. Learners will also explore the impact of healthcare-acquired infections (HAIs) on residents, healthcare providers (HCPs), and the broader healthcare system, while identifying strategies to protect vulnerable individuals and promote disease prevention.

Learning Objectives:

By the end of this module, learners will be able to:

1. Define the purpose, focus and core competencies of an IPAC program.
2. Identify the role and importance of an infection control professional (ICP).
3. Label components of the epidemiological triangle and chain of transmission.
4. Recognize key strategies used to protect residents and visitors.
5. Recall the levels of disease prevention using Leavell's framework.
6. Describe the impact of healthcare-acquired infections (HAIs) on individuals and the system.

Module Outline

1. Purpose of the IPAC program
2. Focus of IPAC program
3. The importance of an ICP
4. IPAC core competencies
5. Epidemiological Triangle
6. Chain of Transmission
7. Protecting Residents and Visitors
8. Leavell's Disease Prevention
9. Healthcare-Acquired Infections (HAIs)
10. Impact on Residents
11. Impact on HCPS
12. Impact on the Healthcare System

Module 2 - The Fundamentals Of IPAC

Overview

This module introduces the core elements of Infection Prevention and Control (IPAC) practices, focusing on hand hygiene, personal protective equipment (PPE), and the application of routine and additional precautions. Learners will review step-by-step procedures for hand hygiene and PPE use, explore common challenges to compliance, and understand how to monitor and assess these practices. The module also highlights the role of NIOSH's Hierarchy of Controls, the correct sequences for donning and doffing PPE. It outlines the types and implementation of additional and intensified precautions to minimize transmission risks in healthcare settings.

Learning Objectives:

By the end of this module, learners will be able to:

1. Identify the moments for hand hygiene.
2. Recognize the two types of hand hygiene practices and related barriers.
3. Recall the steps for putting on and taking off PPE in the correct sequence.
4. List examples of personal protective equipment and their purposes.
5. Name the levels of controls in NIOSH's Hierarchy of Control.
6. Define routine practices and additional precautions.
7. Match the types of additional precautions (contact, droplet, airborne) with their use cases.
8. State when to initiate and discontinue additional precautions.

Module Outline

1. Hand Hygiene
2. How to Hand Wash
3. Hand Hygiene & Education
4. The 4 Moments of Hand Hygiene
5. Two Types of Hand Hygiene Practices
6. Impediments to Effective Hand Hygiene
7. Recommendations for Effective Hand Hygiene
8. Improving Hand Hygiene Practices in Your Facility
9. Assessing Hand Hygiene Practices
10. Hand Hygiene Monitoring
11. Indirect Hand Hygiene Monitoring
12. Personal Protective Equipment (PPE)
13. Glove Use

14. Putting On Full PPE
15. Taking Off Full PPE
16. Niosh's Hierarchy of Control
17. What Is the Proper Sequence for Donning?
18. What Is the Proper Sequence for Doffing?
19. Niosh's Hierarchy of Control
20. Which Of the Following is Not a Personal Protective Equipment?
21. Routine Practices
22. Factors for a Successful Routine Practice Program
23. Additional Precautions
24. Elements for an Effective Additional Practice Program
25. Additional Precautions: Contact
26. Additional Precautions: Droplet
27. Additional Precautions: Airborne
28. Mdro: Enhancing Barrier Precaution
29. Intensified Precautions
30. Initiation & Discontinuation of Additional Precautions

Section 2

Module 3.1 - Environmental Cleaning

Overview

This module focuses on the essential principles of cleaning and disinfecting in healthcare settings, with a specific emphasis on long-term care (LTC) facilities. It explains the differences between cleaning, disinfection, and sterilization, outlines policies and procedures, and highlights the importance of mechanical cleaning and the use of various disinfecting agents. Learners will explore levels of disinfection, understand the factors that influence disinfectant effectiveness, and review safe handling and application practices to ensure effective infection prevention and control.

Learning Objectives:

By the end of this module, learners will be able to:

1. Define cleaning, disinfection, and sterilization.
2. Identify the components of a cleaning and disinfection plan.
3. List common disinfecting agents used in LTC settings.

4. Recognize factors that affect the disinfection process.
5. Recall safety precautions and correct usage of disinfectants.
6. Name levels of disinfection and types of bio-contaminants.
7. Describe the importance of cleaning in healthcare environments.

Module Outline

1. Cleaning and Disinfecting
2. Cleaning and Disinfection Policies
3. Components of the Cleaning and Disinfection Plan
4. Routine Cleaning & Disinfecting
5. Implementing Improvements
6. Understanding Cleaning, Disinfection, and Sterilization
7. Cleaning in Healthcare Settings
8. Importance of Cleaning
9. Mechanical Cleaning in LTC Facilities
10. Disinfection in Healthcare Settings
11. Factors Affecting Disinfection
12. Proper Use of Disinfecting Chemicals
13. Disinfection and Bacterial Spores
14. Biofilms
15. Understanding Levels of Disinfection
16. Exploring Types of Disinfecting Agents
17. Alcohols
18. Chlorine (And Compounds)
19. Glutaraldehyde
20. Hydrogen Peroxide
21. Ortho-Phthalaldehyde (OPA)
22. Peracetic Acid
23. Phenolics
24. Quaternary Ammonium Compounds (“Quats”)
25. Steam
26. Bleach
27. Disinfecting Agents
28. Factors Affecting Disinfection Processes
29. Safety Precautions and Proper Usage

Module 3.2 - Environmental Cleaning

Overview

This module expands on the principles of sterilization and emphasizes the importance of proper storage, handling, and product selection in environmental cleaning. Learners will be introduced to common sterilizing agents, policies and procedures, and the infection preventionist's (IP's) role in product review and selection. The module also highlights the importance of education, evaluation, adherence to manufacturer instructions, and maintaining a log of products to ensure safety, compliance, and effective infection control.

Learning Objectives:

By the end of this module, learners will be able to:

1. Define sterilization and list common sterilizing agents.
2. Identify proper storage and handling practices.
3. Recall relevant policies and procedures for product use.
4. List key considerations for selecting cleaning and disinfecting products.
5. Recognize the role of the IP in reviewing and evaluating products.
6. State the importance of following the manufacturer's instructions and maintaining product logs.

Module Outline

1. Sterilization
2. Common Sterilizing Agents
3. Storage and Handling
4. Policies and Procedures
5. Wrap Up of Storage and Handling
6. Product Selection
7. IP's Role in Product Review
8. Log Of Cleaning and Disinfecting Products
9. Training and Education
10. Evaluation and Purchasing Decisions
11. New Cleaning or Disinfecting Agents
12. Adherence to Manufacturer's Instructions
13. Interactive Response
14. Product Use and Labelling
15. Considerations For Product Selection

Module 3.3 - Environmental Cleaning

Overview

This module explores specialized considerations in environmental cleaning, including the reprocessing of single-use devices, managing high-risk pathogens like Creutzfeldt-Jakob Disease (CJD), and applying the Spaulding Classification system to determine the appropriate level of cleaning and disinfection. Learners will also examine sterility requirements for critical, semi-critical, and non-critical equipment, and review best practices for cleaning resident personal items, environmental surfaces, and managing blood spills in long-term care settings.

Learning Objectives:

By the end of this module, learners will be able to:

1. Define the Spaulding Classification and its categories.
2. Identify sterility requirements for different types of equipment.
3. List examples of critical, semi-critical, and non-critical equipment in LTC settings.
4. Recognize proper procedures for reprocessing single-use devices and handling CJD-related concerns.
5. Recall best practices for cleaning personal items, environmental surfaces, and managing blood spills.
6. State the importance of training and monitoring in equipment and surface cleaning.

Module Outline

1. Repurposing/Reprocessing Single-Use Devices
2. Creutzfeldt-Jakob Disease - CJD
3. The Spaulding Classification
4. Sterility Requirements
5. Critical Equipment in LTC Facilities
6. Training and Monitoring
7. Semi-Critical Equipment
8. Non-Critical Equipment
9. Resident Care - Personal Items
10. Environmental Surfaces
11. Blood Spills

Module 3.4 - Environmental Cleaning

Overview

This module focuses on implementing and evaluating environmental cleaning practices within long-term care (LTC) facilities. Learners will review routine and additional cleaning schedules, understand appropriate techniques for cleaning various surfaces and materials—including high-touch areas, textiles, and electronics—and explore tools for monitoring and improving cleaning outcomes. The content emphasizes consistency in following policies and procedures to ensure effective infection prevention.

Learning Objectives:

By the end of this module, learners will be able to:

1. Identify routine and additional environmental cleaning schedules in LTC settings.
2. List cleaning techniques and equipment appropriate for different surfaces and materials.
3. Recognize high-touch surfaces, textiles, and electronics that require special attention.
4. Recall steps for monitoring and evaluating environmental cleaning practices.
5. Define key policies and procedures that support consistent cleaning practices.

Module Outline

1. Environmental Cleaning in the Long-Term Care Facility
2. Policies, Procedures, and Schedules
3. Routine Cleaning Schedules
4. Additional Schedules and Procedures
5. Cleaning Equipment and Techniques
6. High-Touch Surfaces, Textiles, And Electronics
7. High-Touch Surfaces in LTC Facilities
8. Textiles in LTC Facilities
9. Electronics in LTC Facilities
10. Environmental Cleaning Evaluation and Improvement
11. Observation in Environmental Monitoring
12. Environmental Monitoring Techniques

Module 3.5 - Environmental Cleaning

Overview:

This module addresses water management and its critical role in infection prevention and control in long-term care (LTC) homes. Learners will examine sources of water-related contamination, understand the risks of waterborne pathogens, and explore infection preventionist (IP) responsibilities in maintaining safe water systems. Topics include stagnant water, water features, plumbing fixtures, and design considerations that influence health risks. Emphasis is placed on preventive measures, temperature controls, maintenance protocols, and disinfection strategies to reduce the risk of healthcare-associated infections (HAIs).

Learning Objectives:

By the end of this module, learners will be able to:

1. Identify sources and risks of water-related contamination in LTC facilities.
2. List contributing factors to waterborne infections and HAIs.
3. Recognize the IP's role in water quality monitoring and outbreak prevention.
4. Recall preventive measures and design considerations for sinks, outlets, and water systems.
5. Describe disinfection and maintenance practices for water facilities and equipment.

Module Outline

1. Water Facilities in Long-Term Care Homes
2. Water Quality in Long-Term Care Homes
3. Water Management
4. Water-Related Outbreaks
5. IP's Role
6. Factors Influencing Hais
7. Reservoirs of Water-Associated Pathogens
8. Environmental Contamination
9. Stagnant Water Systems
10. Indirect Contamination
11. Temperature Specifications and Legionella Prevention
12. Decorative Water Fountains, Water Walls
13. Contributing Factors
14. Preventive Measures
15. Associated Health Risks in Water Dispensers
16. Sinks, Flushing Rim Sinks, Hoppers, And Toilets
17. Faucet Aerators and Waterborne Organisms

18. Toilets and Contamination Risks
19. Ice Machines
20. Sink Design and Infection Control
21. Design Considerations for Handwashing Stations
22. Sink Controls and Infection Risk
23. Outlets and Storage Tank Considerations
24. Disinfection and Maintenance

Module 3.6 - Environmental Cleaning

Overview

This module covers two critical areas of environmental safety in long-term care (LTC) facilities: controlling Legionella and managing infectious waste. Learners will explore control strategies, design challenges in preventing Legionella, and the impact of waste on infection transmission. The module also introduces regulatory considerations, waste categories, and essential components of a healthcare waste management plan. Special attention is given to sharps safety, injection practices, and methods to prevent needlestick injuries in LTC environments.

Learning Objectives:

By the end of this module, learners will be able to:

1. List specific control strategies for *Legionella* prevention in LTC settings.
2. Identify design and methodological challenges in tracing *Legionella*-related outbreaks.
3. Define infectious waste and describe relevant regulatory requirements.
4. Recognize the categories of infectious waste and factors affecting its transmission.
5. Describe key elements of a waste management plan and strategies for cost reduction.
6. Recall best practices for sharps handling, injection safety, and needlestick injury prevention.

Module Outline

1. Specific Considerations for Controlling Legionella
2. Methodological and Design Limitations for Establishing Causality
3. Control Strategies and Guidelines
4. Waste Management in Long-Term Care Facilities

5. Waste Management
6. Factors Affecting Infectious Waste Transmission
7. Categories of Infectious Waste
8. Regulatory Oversight in Healthcare Waste Management
9. Defining Infectious Waste and Regulatory Considerations
10. Key Components of the Waste Management Plan
11. Collaboration and Cost Reduction
12. All Things Sharps
13. Injection Safety in LTC Facilities
14. Preventing Needlestick Injuries

Module 3.7 - Environmental Cleaning

Overview

This module focuses on laundry management within long-term care facilities, emphasizing safe handling, transport, and processing of linens. Learners will review key management practices, laundry area organization, staff protection measures, and critical factors influencing laundry efficacy such as detergents, water temperature, and advanced cleaning technologies. The importance of monitoring the laundry process and understanding chemical usage will also be addressed to ensure infection prevention and resident safety.

Learning Objectives:

By the end of this module, learners will be able to:

1. Identify key management practices in laundry handling and processing.
2. Describe safe procedures for linen transport, storage, and distribution.
3. List protective measures for staff working with laundry.
4. Recall factors affecting laundry cleaning, including detergents, water temperature, and antimicrobial textiles.
5. Recognize methods for monitoring the laundry process and knowledge of laundry chemicals.

Module Outline

1. Laundry Management and Handling
2. Overall Management Practices
3. Laundry Area

4. Linen Transport
5. Linen Storage
6. Linen Distribution
7. Soiled Linen
8. Laundry Service and Process
9. Staff Protection
10. Laundry Cleaning Factors
11. Laundry Detergents
12. Water Temperatures
13. Ozone Cleaning System
14. Antimicrobial Textiles
15. Monitoring The Laundry Process
16. Knowledge of Laundry Chemicals

Module 3.8 - Environmental Cleaning

Overview

This module explores emerging technologies and innovative strategies to enhance infection control within long-term care facilities. Learners will examine key elements of cleaning and disinfection policies, including development, implementation, and additional considerations such as vector control and environmental management of infestations. The module also discusses the role of pets and animals in LTC settings, addressing policies and programs related to their presence to ensure resident safety and well-being.

Learning Objectives:

By the end of this module, learners will be able to:

1. List emerging technologies relevant to infection control in LTC facilities.
2. Identify key elements of cleaning and disinfection policies and their implementation.
3. Recall basic strategies for vector control and managing infestations.
4. Describe considerations and requirements related to pets and animals in LTC settings.
5. Recognize the importance of establishing a strong Environmental Services (EVS) team.

Module Outline

1. Emerging Technologies
2. Technological Advancements for Infection Control
3. Examples of Emerging Technologies
4. Implementing Emerging Technologies
5. Establishing A Strong EVS Team in Your Long-Term Care Facility
6. Cleaning Policies and Schedules
7. Cleaning And Disinfection Policy Development and Implementation
8. Key Elements of Cleaning and Disinfection Policies
9. Additional Considerations in Cleaning Policies
10. Vector Control
11. Environmental Management for Infestation
12. Infestation – Lice & Bedbugs
13. Pets And Animals in Long-Term Care Facilities
14. Considerations With Pets and Animals
15. Pet & Animal Requirements
16. Animal Programs

Section 3

Module 4 - Developing your IPAC Program

Overview

This module guides learners through the development and implementation of an Infection Prevention and Control (IPAC) program tailored to long-term care (LTC) settings. It emphasizes the interdisciplinary nature of IPAC teams, integrating various service areas such as dietary, environmental, and ancillary services. The module also covers the management of medical devices, strategies to reduce bloodstream infections (BSIs), and considerations for special populations and social interactions within LTC facilities.

Learning Objectives:

By the end of this module, learners will be able to:

1. Describe key components of an IPAC program in long-term care.
2. Identify the roles of interdisciplinary team members and service areas involved in IPAC.
3. List common medical devices used in LTC and associated infection risks.
4. Recall interventions to reduce bloodstream infections (BSIs).

5. Recognize special population needs and social considerations in infection prevention.

Module Outline

1. Long-Term Care and Infection Prevention
2. Implementing Your IPAC Program
3. Your Team Interdisciplinary
4. Ancillary Services
5. Dietary Services
6. Environmental Services
7. Other Services
8. General Medical Devices
9. Ventilator
10. Ventricular Access Devices (VADs)
11. Central Venous Catheters (CVCS)
12. Peripheral Vascular Devices
13. Midline Catheter
14. PICC Lines
15. Tunnelled Catheters
16. Implanted Ports
17. Interventions to Reduce BSIs
18. Dialysis
19. ESRD & Infection Risk Factors
20. Short Term Vs. Long Term Dialysis
21. Other Special Populations and Socialization Considerations
22. Special Populations
23. Social Gatherings

Section 4

Module 5 - Surveillance

Overview

This module introduces learners to the principles and practices of surveillance in infection prevention and control. It covers the development and evaluation of surveillance plans, data collection methods, and analysis techniques. The module also explains important epidemiological concepts, criteria used for surveillance (such as McGeer and NHSN), and how surveillance informs interventions to reduce healthcare-associated infections.

Learning Objectives:

By the end of this module, learners will be able to:

1. Define surveillance and its role in infection prevention.
2. Describe components of a surveillance plan and evaluation process.
3. List types and sources of surveillance data.
4. Identify common surveillance criteria, including McCreer, McGeer, and NHSN.
5. Recall basic epidemiological terminology related to surveillance.

Module Outline

1. What is Surveillance?
2. Surveillance Plan
3. Surveillance Event
4. Surveillance Plan Evaluation
5. Evaluation
6. Resource Gap Identification
7. Use of Surveillance in it
8. Process Surveillance
9. Process Surveillance Interventions
10. Data Collection
11. Types of Data
12. Data Collection Methodologies
13. Concurrent Data Collection
14. Retrospective Data Collection
15. Surveillance Data Categories
16. Surveillance Data Source
17. Surveillance Data Analysis
18. Surveillance Criteria
19. McCreer Criteria
20. McGeer Criteria for C. Diff
21. What Is Epidemiology
22. Important Terminology
23. NHSN Criteria

Section 5

Module 6.1 - Microbiology

Overview

This module introduces fundamental microbiology concepts related to infection and colonization within healthcare settings. Learners will explore infection dynamics, including incubation, latent periods, and transmission. The module also covers key terms such as infectivity, pathogenicity, and virulence, as well as factors affecting colonization and progression to infection, especially in long-term care environments.

Learning Objectives:

By the end of this module, learners will be able to:

1. Define infection, colonization, and their differences.
2. Describe incubation and latent periods, including pre-symptomatic transmission.
3. Identify factors influencing colonization and infection progression.
4. List sources of healthcare-associated infections and contamination risks.
5. Recall key microbiology terms including infectivity, pathogenicity, and virulence.

Module Outline

1. Understanding Infection
2. Understanding Incubation and Latent Periods
3. Pre-Symptomatic Transmission
4. Understanding Colonization
5. Differentiating Colonization and Infection
6. Practical Implications of Differentiation
7. Factors Contributing to Colonization Progression
8. Colonization Pressure and Its Impact
9. Healthcare-Associated Infections (HAIs) And Their Source
10. Contamination in Health Care Settings
11. Visitors And Outbreaks in Healthcare Facilities
12. Infectivity
13. Pathogenicity
14. Virulence
15. Survival and Transmission
16. Attachment and Multiplication
17. Evasions and Exotoxins

Module 6.2 - Microbiology

Overview

This module explores the body's immune responses to infection, detailing both the cellular and humoral immune systems. Learners will understand how different defence mechanisms collaborate to protect the host, including innate and adaptive immunity. The module also covers immune regulation, memory, and additional protective barriers that contribute to comprehensive immune defence.

Learning Objectives:

By the end of this module, learners will be able to:

1. Identify components of the cellular and humoral immune systems.
2. Describe basic functions of immune cells and antibodies.
3. List additional physical and biological defence mechanisms.
4. Explain the concept of immune memory and its importance.
5. Recognize how the immune system collaborates to protect the host.

Module Outline

1. Host Response to Infection
2. Cellular Immune System
3. Humoral Immune System
4. Other Protective Measures
5. Collaborations of Defence Mechanisms
6. Systematic Response to Infection
7. Importance of Host Response
8. Cellular Immune Response
9. Innate Immune System and Phagocytic Cells
10. Antigen Processing and Presentation
11. Adaptive Immune System and Antigen Response
12. Effector Functions of T-Lymphocytes
13. Regulation of the Immune Response
14. Memory T-Lymphocytes and Long-Term Immunity
15. Humoral Immune System
16. Antibody Structure And Function
17. Different Types Of Immunoglobulins
18. Functions Of Immunoglobulins
19. Immune Response Elicitors
20. Additional Defense Mechanisms
21. Physical Barriers
22. Normal Microbial Flora

23. Physiological Characteristics And Responses
24. Macro-Level Defense Mechanisms
25. Comprehensive Protection
26. Systemic Operation
27. Collaborative Nature Of System
28. Immune Protection Beyond Pathogens
29. Immune Memory

Module 6.3 - Microbiology

Overview

This module covers the fundamental characteristics and classification of bacteria, emphasizing their structure, reproduction, and mechanisms of gene transfer. Learners will understand the clinical significance of gram-positive and gram-negative bacteria, bacterial toxins, and adaptive forms such as spores and biofilms, particularly in long-term care settings. The module also explores the role and dynamics of normal microbial flora in relation to the human host.

Learning Objectives:

By the end of this module, learners will be able to:

1. Define basic bacterial classification and cell structure.
2. Identify gram-positive and gram-negative bacteria and their significance.
3. List key bacterial characteristics, including toxins and adaptive forms.
4. Describe the concept of biofilms and their relevance in healthcare environments.
5. Explain the roles of normal flora and their relationships with the human host.

Module Outline

1. Basics of Bacteria
2. Classifying Bacteria
3. Phenotypic Classification and Gram Stain
4. Genus and Species
5. Significance of Gram Classification in LTC Facilities
6. Bacterial Characteristics
7. Reproduction
8. Mechanisms of Gene Transfer
9. Exploring Bacterial Cell Structure and Traits

10. The Significance of Gram-Positive and Gram-Negative Cell Walls
11. Diversity In Glycocalyx and Cell Wall Structures
12. Impact of Cell Wall Structures on Bacterial Characteristics
13. Exploring Bacterial Cell Shape and Organization
14. Cocci
15. Bacilli
16. Diagnostic Significance and Preliminary Characteristics
17. Bacterial Toxins
18. Exotoxins
19. Endotoxins
20. Significance of Bacterial Toxins
21. Adaptive Bacterial Forms and Structures
22. Sporulation
23. Biofilms
24. Biofilms In LTC and Healthcare Environments
25. Diversity and Relationships of Normal Flora
26. Resident and Transient Flora
27. Three Relationships with the Human Host
28. Dynamic Nature of Flora

Module 6.4 - Microbiology

Overview

This module focuses on key epidemiologically significant bacteria commonly encountered in healthcare, especially in long-term care settings. It covers the characteristics and clinical importance of various bacteria such as Staphylococcus, Streptococcus, Clostridioides, Escherichia, and others. Additionally, the module introduces viruses, their reproduction, classification, and the unique infectious agents called prions.

Learning Objectives:

By the end of this module, learners will be able to:

1. Identify important bacteria that impact infection control in healthcare.
2. Recognize the characteristics and clinical relevance of each bacterial genus listed.
3. Explain basic concepts related to viruses including size, reproduction, and classification.
4. Describe prions and their role in infectious diseases.

Module Outline

1. Epidemiologically Significant Bacteria
2. Staphylococcus
3. Streptococcus
4. Enterococci
5. Clostridioides
6. Listeria
7. Neisseria
8. Bacillus
9. Escherichia
10. Proteus
11. Enterobacter
12. Serratia
13. Helicobacter
14. Salmonella
15. Klebsiella
16. Legionella
17. Pseudomonas
18. Acinetobacter
19. Campylobacter
20. Bordetella
21. Mycobacterium
22. Understanding Viruses
23. Virus Size and Reproduction
24. Classification and Taxonomy
25. Prions

Module 6.5 - Microbiology

Overview

This module explores key epidemiologically significant viruses and fungi that impact infection prevention and control in healthcare settings. It covers important viral families such as Pneumovirus, Influenza, SARS-CoV-2, and others, as well as fungal pathogens including Candida, Aspergillus, and Cryptococcus. Learners will gain an understanding of fungal infections (mycoses), their classifications, and significance in healthcare environments.

Learning Objectives:

By the end of this module, learners will be able to:

1. Identify major viruses relevant to healthcare-associated infections.
2. Describe the characteristics and clinical implications of specific viruses, including Influenza and SARS-CoV-2.
3. Explain the classification and types of fungal infections (mycoses).
4. Recognize epidemiologically significant fungi and their impact on patient care.

Module Outline

1. Epidemiologically Significant Viruses
2. Pneumovirus
3. Influenza
4. Sars-Cov-2
5. Paramyxovirus
6. Enterovirus
7. Respirovirus
8. Adenovirus
9. Varicella
10. Norovirus
11. Lentivirus
12. Orthopoxvirus
13. Fungi & Mycosis
14. Categories of Mycosis
15. Fungal Infections
16. Epidemiologically Significant Fungi
17. Candida
18. Aspergillus
19. Cryptococcus
20. Histoplasma
21. Coccidiodes and Blastomyces
22. Pneumocystis

Module 6.6 - Microbiology

Overview

This module provides an in-depth look at parasites relevant to infection prevention and control, particularly in long-term care (LTC) settings. It covers the classification of human parasites, their epidemiological significance, and common parasitic infestations such as scabies, bedbugs, and lice. The module also introduces diagnostic methods and the use of antibiograms in managing parasitic infections.

Learning Objectives:

By the end of this module, learners will be able to:

1. Identify major categories of human parasites and their relevance in LTC facilities.
2. Describe the epidemiology and control of common parasitic infestations including scabies, bedbugs, and lice.
3. Explain diagnostic techniques used to detect parasitic infections.
4. Understand the concept and application of antibiograms in managing parasite susceptibility and treatment.

Module Outline

1. Parasites
2. Categorizing Human Parasites
3. Parasitic Impacts and LTC Facilities
4. Epidemiologically Significant Parasites
5. Scabies
6. Bedbugs
7. Lice
8. Giardia
9. Common Tests
10. Understanding Susceptibility
11. Pattern Interpretation
12. Antibiograms
13. Understanding How Antibiograms are Used and Analyzed

Section 6

Module 7.1 - The Infection Prevention and Control Program

Overview

This module explores the foundational elements of an effective Infection Prevention and Control (IPAC) program in long-term care (LTC) settings. It emphasizes the importance of conducting comprehensive risk assessments, implementing antimicrobial stewardship strategies, and interpreting surveillance data using key statistical concepts. Learners will also examine tools such as SBAR for communication and gain insights into diagnostic and antimicrobial stewardship to promote safer care environments.

Learning Objectives:

By the end of this module, learners will be able to:

1. Conduct facility-wide and community-based risk assessments using standardized tools and frameworks such as FEMA's THIRA.
2. Explain the principles and implementation of antimicrobial stewardship, including the CDC's Core Elements.
3. Differentiate between types of antimicrobials and understand antimicrobial susceptibility and resistance mechanisms.
4. Interpret antibiograms and use diagnostic stewardship to support appropriate antimicrobial use.
5. Apply statistical concepts such as hypothesis testing, reliability, and rates of association to analyze infection-related data.
6. Utilize communication tools such as SBAR to report and manage infection prevention strategies effectively.

Module Outline

1. Risk Assessment
2. Risky Business
3. Community and Facility-Wide Risk Assessments
4. FEMA's Thira
5. Typical LTC Facility Demographics to Consider
6. Examples of IPAC Risk Assessment Tools
7. Implementation of Policies
8. Antimicrobial Stewardship
9. CDC's Core Elements of Antibiotic Stewardship
10. Antimicrobial Effectiveness
11. Antimicrobial Susceptibility Testing
12. Different Types of Antimicrobials
13. Antibiograms
14. Antimicrobial Misuse
15. Cellular Mechanisms of Antimicrobial Resistance

16. Types of Antimicrobials
17. Uses of Antimicrobials
18. Factors That Affect Antimicrobial Use Outcomes
19. Diagnostic Stewardship
20. Analyzing Statistics and Understand Terms
21. Sbar Tool, for Communication
22. Hypothesis Testing and Interpreting Statistical Significance
23. Reliability Test
24. Other Rates, Rations and Measures of Association

Module 7.2 - The Infection Prevention and Control Program

Overview

This module provides a comprehensive overview of essential components that strengthen an Infection Prevention and Control (IPAC) program in long-term care (LTC) settings. Topics span across education and training for healthcare providers, safety and occupational health, emergency preparedness, and immunization programs. Learners will explore effective teaching strategies, evaluation methods, and the creation of a safety culture that supports both staff and resident well-being.

Learning Objectives:

By the end of this module, learners will be able to:

1. Design and deliver effective infection prevention education using active learning strategies and measurable teaching objectives.
2. Differentiate between active and passive learning techniques and evaluate the effectiveness of educational programs.
3. Integrate Quality Assurance and Performance Improvement (QAPI) into IPAC education initiatives.
4. Recognize the role of emergency preparedness, including planning for pandemics, bioterrorism, and emergency phases.
5. Promote a culture of safety through effective risk and incident reporting and by understanding the impact of human error.
6. Apply occupational health principles, including the prevention of needlestick injuries, tuberculosis control, and fit-for-duty practices.
7. Develop and implement Healthcare Personnel (HCP) immunization programs based on national recommendations and best practices.

Module Outline

1. IP Education and Training
2. Teaching Goals and Objectives
3. Active Vs Passive Learning
4. Teaching and Learning Techniques
5. Evaluation of Educational Programs
6. Quality Assurance and Performance Improvement
7. Qualitative Research Methods
8. The Basics of Emergency Preparedness
9. Pandemics
10. Bioterrorism
11. The Phases
12. Safety and Occupational Health
13. Risk and Incident Reporting
14. Creating a Safety Culture
15. Understanding Human Error in Health Care Facilities
16. Occupational Health
17. Ccohs's And Phac on Needlestick and Injuries
18. Avoiding Infections
19. Canadian TB Standards
20. Fitness for Duty
21. When Employers Discover Employees have an Infection or Exposure
22. Occupational Exposure
23. HCP Immunization Programs
24. Establishing an HCP Immunization Program
25. Vaccine Recommendations for HCPs

Section 7

Module 8 - Infection Prevention For Ancillary Services

Overview

Ancillary services play a critical role in maintaining a safe and hygienic environment in long-term care (LTC) settings. This module explores the infection prevention and control (IPAC) considerations specific to services such as food safety, HVAC systems, surface materials, and maintenance and construction activities. Through practical guidelines, risk

assessments, and policy frameworks, learners will gain a deeper understanding of how non-clinical functions contribute to infection control efforts in LTC facilities.

Learning Objectives:

By the end of this module, learners will be able to:

1. Implement essential food safety practices based on HACCP principles and organizational policies.
2. Identify appropriate procedures for purchasing, receiving, and storing food to prevent foodborne disease outbreaks (FBDOs).
3. Apply IPAC controls during FBDO investigations using a structured 7-step process.
4. Recognize common foodborne illnesses and their impact in LTC environments.
5. Understand Infection Control Risk Assessments (ICRAs) and their role in non-clinical service planning.
6. Evaluate HVAC needs and key components to support optimal air quality and infection control.
7. Assess the risks associated with surface finishes, furnishings, and construction activities.
8. Apply strategies for dust control, barrier system setup, and risk mitigation during indoor and outdoor maintenance or construction work.

Module Outline

1. Food Safety
2. Basic Rules to Follow
3. Policies and Procedures
4. Hazard Analysis and Critical Control Points Guidelines (HACCP)
5. Food Purchasing, Receiving and Storage
6. Foodborne Disease Outbreak (FBDO) Control
7. 7 Step Process in an FDBO Investigation
8. Outbreak IPAC Controls
9. Common Foodborne Illnesses in LTC
10. ICRA
11. Heating, Air Condition and Ventilation Needs
12. Ventilation Management
13. HVAC Key Components
14. Surface Finishes and Furnishing Materials
15. Risk Management During Construction
16. Barrier Systems
17. Dust Control

18. Consideration for Outdoor Projects
19. Risk Mitigation During Maintenance
20. Course Overview

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