



Infection Preventionist (IP) Orientation Manual

2021



Table of Contents

Recommendations for Use	2
IPC Overview: Week 1	3
IPC Informatics & Operations: Week 2 Infection Surveillance	5
IPC Operations: Week 3 – 4 Standard Precautions	8
IPC Operations: Week 5 – 7 Infection Definitions	10
IPC Operations: Week 8 Antimicrobial and Diagnostic Stewardship	13
IPC Informatics & Quality Improvement: Week 9 Use of Data	15
IPC Operations: Week 10 Occupational Health	17
IPC Operations & Quality Improvement: Week 11 Public Health and Emergency Management	20
IPC Operations: Week 12 Construction and Maintenance	22
Research: Week 13	25
Professional Stewardship: Week 14	27
Leadership: Week 15	30

Recommendations for Use

This Orientation Guide is intended for use upon hire for a novice or experienced Infection Preventionist (IP) in any healthcare or public health setting. This document serves as a companion to APIC's Roadmap for the Novice Infection Preventionist, diving further into available resources for each topic. This guide is organized around the six future-oriented competency domains identified in APIC's competency model. Each section includes relevant chapters from the APIC text as well as additional articles from peer-reviewed journals and application activities to support learning.

Novice IP: It is recommended that a novice IP progress through each section of the orientation guide as laid out; starting at Week 1 and ending with Week 15. Discuss key learning objectives with preceptor/mentor along the way to determine understanding and comprehension. Estimated time of completion is at least 15 weeks for a novice IP.

Experienced IP: It is recommended a proficient or expert IP identify specific areas of the competency model where they have less experience and use the guide to identify resources to learn more about those areas. There is no estimated time for completion in using this document in this way as this would differ with the needs of the IP; instead we have provided estimation on time of completion for each section. This information is given with each section.

Online Resources:

CDC STRIVE Training Modules: <https://www.cdc.gov/infectioncontrol/training/strive.html>

APIC On-Demand Webinars: <https://secure.apic.org/web/apic/EStore/webinars.aspx>

APIC Roadmap for the Novice Infection Preventionist: <https://apic.org/professional-practice/roadmap/novice-roadmap-for-the-infection-preventionist/>

IHI Open School Training Modules: <http://www.ihl.org/education/ihlopenschool/Pages/default.aspx>

Resources that should be available provided by the site of hire (available for physical or digital purchase):

- APIC text
- Ready Reference for Microbes, 4th Edition
- The Infection Preventionist's Guide to the Lab
- Fundamental Statistics & Epidemiology in Infection Prevention
- Infection Prevention Manual for Construction and Renovation
- APIC Certification Study Guide
- Additional resources as described in APIC's Roadmap

IPC Overview: Week 1

Estimated completion time = 1 week

Curriculum	Resource
<p>APIC Text Readings:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Chapter 1: Infection Prevention and Control Programs <input type="checkbox"/> Chapter 2: Competency and Certification of Infection Preventionists <input type="checkbox"/> Chapter 4: Accrediting and Regulatory Agencies <input type="checkbox"/> Chapter 17: Performance Measures 	<p>APIC Text of Infection Control and Epidemiology 4th Edition</p>
<p>Associated Reading:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Goldrick BA. The practice of infection control and applied epidemiology: a historical perspective. Am J Infect Control. 2005 Nov; 33, 493–500. <input type="checkbox"/> Seto, W., Otaíza, F., Pessoa-Silva, C., & World Health Organization Infection Prevention and Control Network. (2010). Core Components for Infection Prevention and Control Programs: A World Health Organization Network Report. Infection Control and Hospital Epidemiology, 31(9), 948-950. <input type="checkbox"/> C. Billings, H. Bernard, L. Caffery, S.A. Dolan, J. Donaldson, E. Kalp, et al. Advancing the profession: An updated future-oriented competency model for professional development in infection prevention and control. American Journal of Infection Control, 47 (6) (2019), pp. 602-614. 	<p>https://doi.org/10.1016/j.ajic.2005.04.250</p> <p>DOI: 10.1086/655833</p> <p>https://doi.org/10.1016/j.ajic.2019.04.003</p>
<p>Application Activities:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Explore CDC infection control page <input type="checkbox"/> Meet the Association for Professionals in Infection Control and Epidemiology (APIC) <input type="checkbox"/> Review APIC's Competency Model <input type="checkbox"/> Meet the Certification Board for Infection Control (CBIC) <input type="checkbox"/> State Health Department <input type="checkbox"/> County Health Department <input type="checkbox"/> Meet The Joint Commission (TJC) <input type="checkbox"/> Meet the Centers for Medicare and Medicaid (CMS) <p><i>Know who your public reporting team is and implications for public reported data – know who your regulatory oversight organization is</i></p>	<p>https://www.cdc.gov/infectioncontrol/</p> <p>https://apic.org/about-apic/about-apic-overview/ https://apic.org/professional-practice/infection-preventionist-ip-competency-model/ https://www.cbic.org/CBIC/About-CBIC.htm</p> <p>https://www.kdheks.gov/</p> <p>https://www.jointcommission.org/about-us/</p> <p>https://www.cms.gov/Regulations-and-Guidance/Regulations-and-Guidance</p> <p>https://brenebrown.com/podcast/brene-on-ffts/</p>

Brené Brown Podcast – Freaking First Times (Explicit language)

Sample CIC Study Questions:

1. The primary functions of an infection prevention and control program should include all except:
 - a. To develop and recommend policies and procedures related to IPC
 - b. To conduct surveillance for HAIs
 - c. To decrease the length of stay for patients
 - d. To educate HCP and patients in IPC practices
2. Which of the following could be an appropriate method to evaluate the quality of an infection prevention program?
 - a. The total number of areas where surveillance was carried out in the past year
 - b. The average amount of time that elapsed between receiving reports from the lab about patients with multidrug-resistant infections and placing those patients on appropriate isolation precautions
 - c. The number of IPs in the program per the number of beds
 - d. The average amount of money spent on isolation gowns this year as compared to last year
3. Which U.S. agency requires a respiratory protection program for HCP?
 - a. Food and drug administration (FDA)
 - b. The Joint Commission (TJC)
 - c. Centers for Disease Control and Prevention (CDC)
 - d. Occupational Safety and Health Administration (OSHA)
4. Which of the following is not an important element of a surveillance program?
 - a. Tracking diseases associated with the healthcare environment
 - b. Environmental sampling
 - c. Reviewing microbiology reports for antibiotic resistant organisms
 - d. Tracking and reporting HAIs as mandated by state/local public health requirements
5. The Joint Commission standards for IPC include all of the following except:
 - a. Collaboration of representatives from relevant components and functions within the organization in the implementation of the program
 - b. Effective management of the IPC program
 - c. Minimizing the risk for development of an healthcare-associated infection (HAI) through an organization-wide IPC program
 - d. Specific staffing requirement of one IP for every 100 beds

CIC Certification Study Guide, 5th Edition, 2014. Association for Professionals in Infection Control and Epidemiology, Inc.

Current edition available: [APIC Certification Study Guide, 6th edition \(apic.org\)](http://apic.org)

Answer Key: 1. C, 2. B, 3. D, 4. B, 5. D

IPC Informatics & Operations: Week 2 Infection Surveillance

Estimated completion time = 1 week

<p style="text-align: center;">Curriculum</p> <p style="text-align: center;"><i>Epidemiology and Surveillance, Outbreak Detection and Management</i></p>	<p style="text-align: center;">Resource</p>
<p>Review APIC competency model domains <i>IPC Operations</i> and <i>IPC Informatics</i> including subdomains <i>Epidemiology and Surveillance</i> and <i>Outbreak Detection and Management</i> and consider how they relate to the content for the week</p>	<p style="text-align: center;">https://apic.org/professional-practice/infection-preventionist-ip-competency-model/</p>
<p>APIC Text Readings:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Chapter 10: General Principles of Epidemiology <input type="checkbox"/> Chapter 11: Surveillance <input type="checkbox"/> Chapter 21: Risk factors facilitating transmission of infectious agents <input type="checkbox"/> Chapter 22: Microbial Pathogenicity and host response <input type="checkbox"/> Chapter 23: Microbiology Basics <input type="checkbox"/> Chapter 24: Laboratory testing and diagnostics <input type="checkbox"/> Chapter 6: Healthcare Informatics and Information Technology <input type="checkbox"/> Chapter 12: Outbreak Investigations 	<p style="text-align: center;">APIC Text of Infection Control and Epidemiology 4th Edition</p>
<p>Associated Reading:</p> <p>Ready Reference for Microbes The Infection Preventionist’s Guide to the Lab <i>No specific chapters to read, review content in each reference to be able to refer to when needed</i></p>	<p style="text-align: center;">Site must purchase – Microbes is \$29 for digital PDF and Guide to the Lab is \$25 for digital PDF</p>
<p>Application Activities:</p> <ul style="list-style-type: none"> <input type="checkbox"/> APIC webinar: Transmission of emerging healthcare-associated pathogens <input type="checkbox"/> APIC webinar: What IPs need to know about the lab <input type="checkbox"/> Sign up for CIDRAP newsletter <input type="checkbox"/> Sign up for COCA newsletters <input type="checkbox"/> Sign up for KS-HAN alerts <input type="checkbox"/> Review reportable disease list <input type="checkbox"/> Meet the Council for State and Territorial Epidemiologists (CSTE) <input type="checkbox"/> Check out This Podcast Will Kill You 	<p style="text-align: center;"> https://www.cidrap.umn.edu/ https://emergency.cdc.gov/coca/index.asp https://kdheks.gov/epi/disease_reporting.html https://www.cste.org/page/About_CSTE https://thispodcastwillkillyou.com/ </p>

Sample CIC Study Questions:

1. A hospital has hired a new manager of the Microbiology section of the Laboratory. During the initial discussion with the manager about the IPC program, the IP stresses the importance of collaboration between the departments in reducing HAIs. Of the choices below, which activity will best meet this goal?
 - a. The microbiology staff's compliance with the annual flu vaccination program and tuberculosis skin testing.
 - b. The microbiology staff's participation in the periodic infection prevention educational sessions for the hospital staff.
 - c. Microbiology's prompt notification to the IPC department of any organism's unusual resistance pattern.
 - d. The microbiology manager's attendance at local, state and/or national IPC educational conferences.
2. What key IPC activity is defined as the systematic, ongoing collection, management, analysis, and interpretation of data followed by the dissemination of these data to public health programs to stimulate public health action?
 - a. Research
 - b. Surveillance
 - c. Benchmarking
 - d. Accreditation
3. A pandemic differs from an epidemic in that:
 - a. Only one disease is involved
 - b. It is usually vectorborne
 - c. There is a higher mortality rate
 - d. Several countries or continents are involved
4. Specificity of a test for infection or disease is calculated as:
 - a. The number of true negatives divided by the number of true positives found, times 100
 - b. The number of true negatives divided by the total number of persons with disease, times 100
 - c. The number of true positives divided by the total number of persons with disease, times 100
 - d. The number of true negatives divided by the total number of persons without disease, times 100
5. Targeted surveillance focuses on:

CIC Certification Study Guide, 5th Edition, 2014. Association for Professionals in Infection Control and Epidemiology, Inc.

Current edition available: [APIC Certification Study Guide, 6th edition \(apic.org\)](http://apic.org)

<ul style="list-style-type: none">a. Tracking high-risk, high-volume procedures and potentially preventable HAIsb. Providing whole-house infection ratesc. Tracking infections that are publicly reportedd. Using the electronic surveillance system to identify infections	
Answer Key: 1. C, 2. B, 3. D, 4. D, 5. A	

IPC Operations: Week 3 – 4 Standard Precautions

Estimated completion time = 2 weeks

<p style="text-align: center;">Curriculum <i>Education, IPC Rounding, Outbreak Detection and Management, Cleaning, Disinfection and Sterilization</i></p>	<p style="text-align: center;">Resource</p>
<p>Review APIC's competency model domain <i>IPC Operations</i> and subdomains <i>Education, IPC Rounding, Outbreak Detection and Management, and Cleaning and Disinfection</i> and consider how they relate to the content for the week</p>	<p style="text-align: center;">https://apic.org/professional-practice/infection-preventionist-ip-competency-model/</p>
<p>APIC Text Readings:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Chapter 27: Hand Hygiene <input type="checkbox"/> Chapter 28: Standard Precautions <input type="checkbox"/> Chapter 29: Isolation Precautions <input type="checkbox"/> Chapter 30: Aseptic Technique <input type="checkbox"/> Chapter 31: Cleaning, Disinfection and Sterilization <input type="checkbox"/> Chapter 32: Reprocessing Single-Use Devices <input type="checkbox"/> Chapter 109: Sterile Processing <input type="checkbox"/> Chapter 110: Environmental Services 	<p style="text-align: center;">APIC Text of Infection Control and Epidemiology 4th Edition</p>
<p>Associated Reading:</p> <ul style="list-style-type: none"> <input type="checkbox"/> WHO's HH tools <input type="checkbox"/> CDC's Using PPE tools <input type="checkbox"/> Southworth, P. M. (2014). Infections and exposures: reported incidents associated with unsuccessful decontamination of reusable surgical instruments. <i>Journal of Hospital Infection</i>, 88(3), 127-131. 	<p style="text-align: center;"> https://www.who.int/gpsc/5may/tools/en/ https://www.cdc.gov/coronavirus/2019-ncov/hcp/using-ppe.html https://doi.org/10.1016/j.jhin.2014.08.007 </p>
<p>Application Activities:</p> <ul style="list-style-type: none"> <input type="checkbox"/> STRIVE module: Competency-based Training, Audits and Feedback - WB4220 <input type="checkbox"/> STRIVE module: Hand Hygiene – WB4221 <input type="checkbox"/> STRIVE module: Environmental Cleaning – WB4224 <input type="checkbox"/> STRIVE module: Personal Protective Equipment – WB4225 <input type="checkbox"/> STRIVE module: Patient and Family Engagement – WB4226 <input type="checkbox"/> APIC Webinar: PPE donning and doffing 	<p style="text-align: center;">https://www.aami.org/standards/what-are-standards</p>

<ul style="list-style-type: none"> <input type="checkbox"/> Check out the Association for the Advancement of Medical Instrumentation (AAMI) Standards <input type="checkbox"/> APIC Webinar: Disinfection of Non-Critical Surfaces and Equipment <input type="checkbox"/> APIC Webinar: Disinfection and Sterilization- Best Practices <input type="checkbox"/> APIC Webinar: Sterile Processing Department 	
<p>Sample CIC Study Questions:</p> <ol style="list-style-type: none"> 1. Most healthcare-associated pathogens are transmitted from patient to patient via: <ol style="list-style-type: none"> a. Improper isolation practices b. Inadequate sterilization of medical instruments c. Hands of healthcare personnel d. Ineffective disinfection of medical devices 2. Which type of isolation always requires a private room? <ol style="list-style-type: none"> a. Contact precautions b. Standard precautions c. Airborne precautions d. Droplet precautions 3. Which of the following statements is false regarding the storage of sterilized items in the sterile processing department? <ol style="list-style-type: none"> a. Sterilized items should be stored on a shelf with a solid bottom b. Sterilized items should be stored in high traffic areas for easy access c. Sterilized items should be stored in a room with positive air pressure d. Sterilized items should be stored 8-10 inches from the floor 4. Of the following methods of disinfection and sterilization, which will kill all organisms, including bacterial spores? <ol style="list-style-type: none"> a. Pasteurization and steam sterilization b. Orthophthalaldehyde and Ethylene oxide c. Steam sterilization and Ethylene Oxide d. Pasteurization and Orthophthalaldehyde 5. What type of respiratory protection (mask) is recommended for immune and nonimmune healthcare personnel when caring for a patient with smallpox? <ol style="list-style-type: none"> a. Surgical mask b. Exam mask c. N95 or higher-level respirator d. Procedure mask 	<p style="text-align: center;">CIC Certification Study Guide, 5th Edition, 2014. Association for Professionals in Infection Control and Epidemiology, Inc.</p> <p style="text-align: center;">Current edition available: APIC Certification Study Guide, 6th edition (apic.org)</p>
<p>Answer key: 1. C, 2. C, 3. B, 4. C, 5. C</p>	

IPC Operations: Week 5 – 7 Infection Definitions

Estimated completion time = 3 weeks

<p style="text-align: center;">Curriculum <i>Epidemiology and Surveillance</i></p>	<p style="text-align: center;">Resource</p>
<p>Review APIC's competency model domain <i>IPC Operations</i> and subdomain <i>Epidemiology and Surveillance</i> and consider how they relate to the content for the week</p>	<p style="text-align: center;">https://apic.org/professional-practice/infection-preventionist-ip-competency-model/</p>
<p>APIC Text Readings:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Chapter 34: Urinary Tract Infection <input type="checkbox"/> Chapter 35: Vascular Access Device-Associated Infections <input type="checkbox"/> Chapter 36: Infections in Indwelling Medical Devices <input type="checkbox"/> Chapter 37: Pneumonia <input type="checkbox"/> Chapter 38: Surgical Site Infection <input type="checkbox"/> Chapter 73: C. diff infection and Pseudomembranous Colitis <input type="checkbox"/> Chapter 85: Influenza <input type="checkbox"/> Chapter 71: Biofilms <input type="checkbox"/> Chapter 76: Enterobacteriaceae <input type="checkbox"/> Chapter 78: Environmental Gram-negative bacilli <input type="checkbox"/> Chapter 94: Staphylococci 	<p style="text-align: center;">APIC Text of Infection Control and Epidemiology 4th Edition</p>
<p>National Health and Safety Network (NHSN) Training Activities:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Patient Safety Component modules <ul style="list-style-type: none"> o Device associated Module: <ul style="list-style-type: none"> <input type="checkbox"/> Intro to device associated modules <input type="checkbox"/> CLABSI <input type="checkbox"/> CAUTI o Procedure Associated Module <ul style="list-style-type: none"> <input type="checkbox"/> Intro to procedure associated module training <input type="checkbox"/> SSI training <input type="checkbox"/> Data entry, import and customization <input type="checkbox"/> Intro to NHSN analysis 	<p style="text-align: center;">https://www.cdc.gov/nhsn/index.html</p>

<input type="checkbox"/> Advanced NHSN analysis	
<p>Application Activities:</p> <input type="checkbox"/> Enroll in NHSN, complete mandatory CDC NHSN training, apply for SAMS (if applicable)	
<p>Application Activities:</p> <input type="checkbox"/> Identify references for device associated infection prevention bundles (SHEA, HICPAC, IHI)	
<ul style="list-style-type: none"> ○ STRIVE modules: <ul style="list-style-type: none"> <input type="checkbox"/> Catheter-Associated Urinary Tract Infection (CAUTI) – WB4222 <input type="checkbox"/> Central Line-Associated Blood Stream Infection (CLABSI) – WB4229 <input type="checkbox"/> C. difficile Infection (CDI) – WB4230 <input type="checkbox"/> MRSA Bacteremia – WB4228 <p>Sample CIC Study Questions:</p> <ol style="list-style-type: none"> 1. The most common reservoir for highly pathogenic avian influenza H5N1 virus is: <ol style="list-style-type: none"> a. Migratory birds b. Pigeons and doves c. Water fowl d. Domestic poultry 2. A 40-year-old female is admitted with a 3-day history of diarrhea and fever. She is placed in contact precautions for suspected <i>C. diff</i> infection (CDI). The patient also reports that she has had increasing abdominal pain for the past year, and inflammatory bowel disease (IBD) is in the list of potential diagnoses. Which of the following statements is most accurate regarding the relationship between IBD and CDI? <ol style="list-style-type: none"> a. IBD is associated with increased morbidity and mortality associated with CDI b. Most patients with IBD acquire CDI in inpatient settings c. CDI generally develops more slowly after hospital admission among patients with IBD compared with patients without IBD d. IBD does not affect the risk of CDI from antibiotic exposure 3. CDC recommendations for decreasing CLABSI include all of the following except: <ol style="list-style-type: none"> a. Educational programs b. Routine replacement of catheters c. The use of chlorhexidine for skin antisepsis d. The use of maximal sterile barrier precautions 	<p>CIC Certification Study Guide, 5th Edition, 2014. Association for Professionals in Infection Control and Epidemiology, Inc.</p> <p>Current edition available: APIC Certification Study Guide, 6th edition (apic.org)</p>

<p>4. During an influenza outbreak in an acute care setting, all of the following measures should be implemented except:</p> <ul style="list-style-type: none"> a. Perform rapid influenza virus testing of patients and personnel with recent onset of symptoms suggestive of influenza b. Implement airborne precautions for all patients with suspected or confirmed influenza c. Restrict staff movement from areas of the facility having outbreaks d. Restrict or limit elective medical and surgical admissions <p>5. The IP receives a call from a nurse who is scheduling a patient for surgery at her ambulatory surgery center. The nurse tells the IP that the patient is colonized with MRSA. Which of the following best describes colonization?</p> <ul style="list-style-type: none"> a. The presentation of clinical signs of illness or inflammation b. An acute bacterial disease caused by an obligate anaerobic, non-spore-forming rod c. The permanent presence of a bacteria that is part of the normal flora d. The presence of microorganisms without the signs/symptoms of an infection 	
<p>Answer Key: 1. D, 2. A, 3. B, 4. B, 5. D</p>	

IPC Operations: Week 8 Antimicrobial and Diagnostic Stewardship

Estimated completion time = 1 week

<p style="text-align: center;">Curriculum <i>Antimicrobial and Diagnostic Stewardship</i></p>	<p style="text-align: center;">Resource</p>
<p>Review APIC's competency model domain <i>IPC Operations</i> and subdomains <i>Antimicrobial Stewardship</i> and <i>Diagnostic Stewardship</i> and consider how they relate to the content for the week</p>	<p>https://apic.org/professional-practice/infection-preventionist-ip-competency-model/</p>
<p>APIC Text Readings:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Chapter 26: Antimicrobials and Resistance <input type="checkbox"/> Chapter 33: Antimicrobial Stewardship Programs 	<p>APIC Text of Infection Control and Epidemiology 4th Edition</p>
<p>Associated Reading:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Manning ML, Septimus EJ, Ashley ESD, Cosgrove SE, Fakhri MG, Schweon SJ, et al. Antimicrobial stewardship and infection prevention-leveraging the synergy: A position paper update. American journal of infection control. 2018 Apr;46(4):364-8. <input type="checkbox"/> Moody J, Cosgrove SE, Olmstead R, Septimus E, Aureden K, Oriola S, et al. Antimicrobial stewardship: a collaborative partnership between infection preventionists and health care epidemiologists. Am J Infect Control 2012; 40:94-5. <input type="checkbox"/> CDC blog post on Diagnostic Stewardship 	<p>DOI: 10.1017/ice.2018.33</p> <p>DOI: 10.1016/j.ajic.2012.01.001</p> <p>https://blogs.cdc.gov/safehealthcare/advancing-laboratory-diagnostic-stewardship-for-healthcare-associated-infections-hais-antibiotic-resistance-and-sepsis/</p>
<p>Application Activities:</p> <ul style="list-style-type: none"> <input type="checkbox"/> CDC's page on Antibiotic/Antimicrobial Resistance <input type="checkbox"/> CDC's AR Threat Report <input type="checkbox"/> Check out KDHE's HAI/AR program resources for stewardship <input type="checkbox"/> APIC's stewardship page <input type="checkbox"/> CDC's Core Elements of Antibiotic Stewardship <input type="checkbox"/> Ted Talk: Maryn McKenna: What do we do when antibiotics don't work anymore? <input type="checkbox"/> YouTube: Coronavirus is just the start. Something far worse is coming. 	<p>https://www.cdc.gov/drugresistance/about.html https://www.cdc.gov/drugresistance/biggest-threats.html</p> <p>https://kdheks.gov/epi/hai.htm https://apic.org/resources/topic-specific-infection-prevention/antimicrobial-stewardship/</p> <p>https://www.cdc.gov/antibiotic-use/core-elements/index.html https://youtu.be/o3oDpCb7VqI https://youtu.be/gnQL-brl-9I</p>
<p>Sample CIC Study Questions:</p> <ol style="list-style-type: none"> 1. An "antibiotic time out" occurs: 	

<ol style="list-style-type: none"> a. Daily b. Weekly c. Within 24-48 hours of culture results being available d. Within 96 hours of culture results being available <ol style="list-style-type: none"> 2. The IP has been asked to join the Antimicrobial Stewardship Team at their facility. The IP reviews current recommendations and understands that effective strategies to curb antimicrobial resistance include all of the following except: <ol style="list-style-type: none"> a. Formulary restriction b. Administer antibiotics with overlapping activity c. Automatic stop orders d. Antimicrobial cycling 3. Antimicrobial stewardship promotes the judicious use of antimicrobials to: <ol style="list-style-type: none"> a. Increase antimicrobial selective pressure b. Ensure that the right therapy is given to the right patient with the right dose and duration c. Support the development of new antimicrobials d. Contain healthcare costs 4. The purpose of the antibiogram is to: <ol style="list-style-type: none"> a. Provide a monthly report on new and emerging antimicrobials b. Give IPs another metric to track c. Provide information on antimicrobial usage and resistance patterns in the community d. Give hospitals information needed for reporting data through the National Healthcare Safety Network (NHSN) 5. The IP on the Antimicrobial Stewardship team is thinking of ways that they can support efforts and add to the success of the team in decreasing antimicrobial resistance. Which of the following activities that the IP can do would not help the mission of the of the team? <ol style="list-style-type: none"> a. Calculate multidrug-resistant organism (MDRO) infection rates b. Detect asymptomatic carriers using active surveillance cultures c. Use molecular typing for investigating outbreaks d. Collect environmental cultures of isolation rooms 	<p style="text-align: center;">CIC Certification Study Guide, 5th Edition, 2014. Association for Professionals in Infection Control and Epidemiology, Inc.</p> <p style="text-align: center;">Current edition available: APIC Certification Study Guide, 6th edition (apic.org)</p>
<p>Answer Key: 1. C, 2. B, 3. B, 4. C, 5. D</p>	

IPC Informatics & Quality Improvement: Week 9 Use of Data

Estimated completion time = 1 week

<p style="text-align: center;">Curriculum</p> <p style="text-align: center;"><i>IP as SME, Performance Improvement, Patient Safety, Data Utilization, Risk assessment/reduction, Data management, analysis and visualization, Application of diagnostic testing data and techniques</i></p>	<p style="text-align: center;">Resource</p>
<p>Review APIC's competency model domains <i>Quality Improvement</i> and <i>IPC Informatics</i> and subdomains <i>IP as SME, Performance Improvement, Patient Safety, Data Utilization, Risk assessment/reduction, Data management, analysis and visualization, Application of diagnostic testing data and techniques</i> and consider how they relate to the content for the week</p>	<p style="text-align: center;">https://apic.org/professional-practice/infection-preventionist-ip-competency-model/</p>
<p>APIC Text Readings:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Chapter 16: Quality Concepts <input type="checkbox"/> Chapter 18: Patient Safety <input type="checkbox"/> Chapter 12: Use of Statistics in Infection Prevention 	<p>APIC Text of Infection Control and Epidemiology 4th Edition</p>
<p>Associated Readings:</p> <p>Fundamental Statistics and Epidemiology in Infection Prevention</p> <p style="text-align: center;"><i>No specific chapters to read, review content in reference to be able to refer to when needed</i></p>	<p>Site must purchase - \$89 for digital PDF</p>
<p>Application Activities:</p> <ul style="list-style-type: none"> <input type="checkbox"/> STRIVE module: Strategies for Preventing HAIs - WB4223 <input type="checkbox"/> APIC webinar: Data Visualization and Infection Prevention <input type="checkbox"/> Meet the Institute for Healthcare Improvement (IHI) <input type="checkbox"/> IHI Patient Safety modules: 101-106 (\$\$) <input type="checkbox"/> IHI Quality Improvement: 101-105 <input type="checkbox"/> Meet the Agency for Healthcare Research & Quality (AHRQ) <input type="checkbox"/> Meet the National Association for Healthcare Quality (NAHQ) <input type="checkbox"/> Risk Assessments 	<p style="text-align: center;">http://www.ihl.org/about/Pages/default.aspx</p> <p>(IHI catalog of courses is \$349 per person or free per student account)</p> <p style="text-align: center;">https://www.ahrq.gov/cpi/about/profile/index.html</p> <p style="text-align: center;">https://nahq.org/about/about-national-association-healthcare-quality/</p> <p style="text-align: center;">https://www.infectioncontroltoday.com/view/10-elements-consider-when-conducting-infection-risk-assessment</p>
<p>Sample CIC Study Questions:</p> <ol style="list-style-type: none"> The purpose of a root cause analysis is to: 	

<ol style="list-style-type: none"> a. Determine which individual made an error so that the employee may be disciplined or terminated b. Review the basic processes that are in place and then turn that review over to a unit-specific team so that they can determine how they should modify their practices c. Provide a process that requires little time or training but allows employees to identify culpability after an adverse event d. Include participants from diverse areas of the organization to delve into the cause of an error or systems failure and identify changes in practice and/or policy that will prevent a repeat of that error or event <p>2. If chance is a likely explanation for the difference between a sample statistic and the corresponding null hypothesis population value, then:</p> <ol style="list-style-type: none"> a. The difference is not statistically significant b. The sample results are not compatible with the null hypothesis c. The difference is statistically significant d. The null hypothesis can be rejected <p>3. The director of the IPC department has assigned one IP to cofacilitate in a root cause analysis of an adverse event in collaboration with the performance improvement team. The IP plans to use process improvement tools and techniques during the analysis. Which of the following methods would best outline the possible causes of the event?</p> <ol style="list-style-type: none"> a. Brainstorming b. Affinity diagrams c. Fishbone diagram d. Pareto chart <p>4. Which is an example of actions taken during the study phase of the “plan, do, study, act” performance improvement model?</p> <ol style="list-style-type: none"> a. Identifying goals for the project b. Performing staff education sessions c. Trending and benchmarking of data collected d. Tweaking the program based on results <p>5. Which of the following statements is true regarding statistical process control (SPC)?</p> <ol style="list-style-type: none"> a. May be used to monitor outcomes or processes of care b. Ensures quality when focus remains on infectious processes c. Identifies HAIs as data points d. Focuses on the use of run charts, rather than control charts, to measure variation 	<p>CIC Certification Study Guide, 5th Edition, 2014. Association for Professionals in Infection Control and Epidemiology, Inc.</p> <p>Current edition available: APIC Certification Study Guide, 6th edition (apic.org)</p>
<p>Answer Key: 1. D, 2. A, 3. C, 4. C, 5. A</p>	

IPC Operations: Week 10 Occupational Health

Estimated completion time = 1 week

<p style="text-align: center;">Curriculum</p> <p style="text-align: center;"><i>Education, Outbreak Detection and Management</i></p>	<p style="text-align: center;">Resource</p>
<p>Review APIC's competency model domain <i>IPC Operations</i> and subdomains <i>Education</i> and <i>Outbreak Detection and Management</i> and consider how they relate to the content for the week</p>	<p style="text-align: center;">https://apic.org/professional-practice/infection-preventionist-ip-competency-model/</p>
<p>APIC Text Readings:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Chapter 103: Occupational Health <input type="checkbox"/> Chapter 104: Occupational Exposure to Bloodborne Pathogens <input type="checkbox"/> Chapter 105: Volunteers, Contract Workers, and other nonemployees who interact with patients <input type="checkbox"/> Chapter 106: Immunization of Healthcare Personnel <input type="checkbox"/> Chapter 107: Minimizing Exposure to blood and body fluids <input type="checkbox"/> Chapter 55: Emergency and Other Pre-hospital Medical Services <input type="checkbox"/> Chapter 84: HIV/AIDS <input type="checkbox"/> Chapter 98: Tuberculosis 	<p style="text-align: center;">APIC Text of Infection Control and Epidemiology 4th Edition</p>
<p>Associated Reading:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Sydnor, E., & Perl, T. M. (2014). Healthcare providers as sources of vaccine-preventable diseases. <i>Vaccine</i>, 32(38), 4814-4822. <input type="checkbox"/> Warner, A. E., Schaefer, M. K., Patel, P. R., Drobeniuc, J., Xia, G., Lin, Y., ... & Thompson, N. D. (2015). Outbreak of hepatitis C virus infection associated with narcotics diversion by a hepatitis C virus–infected surgical technician. <i>American journal of infection control</i>, 43(1), 53-58. <input type="checkbox"/> Gawande A. (2004). On washing hands. <i>NEJM</i>, 350:1283-86. <input type="checkbox"/> Vos, M. C., & Memish, Z. A. (2018). The Healthcare Worker as a Source of Transmission. Memish ZA. <i>Guide To Infection Control In the Healthcare Setting</i>. International Society For Infectious Diseases. 	<p style="text-align: center;">https://doi.org/10.1016/j.vaccine.2014.03.097</p> <p style="text-align: center;">DOI: https://doi.org/10.1016/j.ajic.2014.09.012</p> <p style="text-align: center;">https://internal.medicine.ufl.edu/files/2012/07/5.17.14.-Handwashing.pdf</p> <p style="text-align: center;">http://isid.org/wp-content/uploads/2018/12/ISIDInfectionGuideChapter11.pdf</p> <p style="text-align: center;">DOI: https://doi.org/10.1097/ALN.0000000000003295</p>

<input type="checkbox"/> Andrew Bowdle, L. Silvia Munoz-Price; Preventing Infection of Patients and Healthcare Workers Should Be the New Normal in the Era of Novel Coronavirus Epidemics. <i>Anesthesiology</i> 2020; 132:1292–1295.	
<p>Application Activities:</p> <input type="checkbox"/> CDC’s page on Injection Safety <input type="checkbox"/> CDC’s One and Only Campaign <input type="checkbox"/> CDC’S TB program	<p>https://www.cdc.gov/injectionsafety/ https://www.cdc.gov/injectionsafety/one-and-only.html https://www.cdc.gov/tb/webcourses/tb101/intro.html</p>
<p>Sample CIC Study Questions:</p> <ol style="list-style-type: none"> 1. An employee has experienced an accidental needlestick injury while providing care to a patient. All of the following lab tests would be appropriate for the source patient except: <ol style="list-style-type: none"> a. Human immunodeficiency virus (HIV) b. Hepatitis B antibody c. Hepatitis B surface antigen d. Hepatitis C surface antigen 2. A measles exposure from a patient in a clinic was identified and an exposure workup was initiated. A staff exposure was defined as “nonimmune HCP with more than 5 minutes of same-room contact or face-to-face contact with the index patient.” Forty-eight HCP were identified as possible exposures. Of these, 44 had documented immunity to measles. Of the remaining HCP, three did not have the same room or face-to-face contact. How many HCP were at risk of developing measles because of this exposure? <ol style="list-style-type: none"> a. 4 b. 45 c. 1 d. 48 3. A patient with suspected active tuberculosis has been admitted to an acute care facility. To date, two sputum samples have been tested for acid-fast bacilli (AFB) and both were negative. What type of isolation precautions are now indicated for the patient? <ol style="list-style-type: none"> a. Standard precautions b. Contact precautions c. Airborne precautions d. Droplet precautions 4. Which of the following is not an infection prevention objective of an occupational health program? 	<p>CIC Certification Study Guide, 5th Edition, 2014. Association for Professionals in Infection Control and Epidemiology, Inc.</p> <p>Current edition available: APIC Certification Study Guide, 6th edition (apic.org)</p>

<ul style="list-style-type: none"> a. Contain costs by preventing infectious diseases that result in absenteeism and disability b. Provide care to personnel for work-related illnesses or exposures c. Educate patients about the principles of infection prevention d. Collaborate with the infection prevention department in monitoring and investigating potentially harmful infectious exposures and outbreaks <p>5. What action is indicated when the IP is asked to help determine if a worker has experienced occupational acquisition of an infectious agent or disease in order to receive workers' compensation benefits?</p> <ul style="list-style-type: none"> a. Provide enough information to prove or disprove the employee's claim b. Notify the facility's attorney immediately c. Review the workers' compensation system in place d. Perform a root cause analysis to investigate 	
<p>Answer Key: 1. B, 2. C, 3. C, 4. C, 5. C</p>	

IPC Operations & Quality Improvement: Week 11 Public Health and Emergency Management

Estimated completion time = 1 week

<p style="text-align: center;">Curriculum</p> <p style="text-align: center;"><i>Outbreak Detection and Management, Emerging Technologies, Risk assessment/reduction (QI)</i></p>	<p style="text-align: center;">Resource</p>
<p>Review APIC’s competency model domains <i>IPC Operations</i> and <i>Quality Improvement</i> and subdomains <i>Outbreak Detection and Management, Emerging Technologies and Risk Assessment and Risk Reduction</i> and consider how they relate to the content for the week</p>	<p style="text-align: center;">https://apic.org/professional-practice/infection-preventionist-ip-competency-model/</p>
<p>APIC Text Readings:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Chapter 120: Public Health <input type="checkbox"/> Chapter 121: Travel Health <input type="checkbox"/> Chapter 122: Emergency Management <input type="checkbox"/> Chapter 123: Infectious disease disasters: Bioterrorism, Emerging Infections and Pandemics <input type="checkbox"/> Chapter 124: Animal Research and Diagnostics <input type="checkbox"/> Chapter 125: Animals Visiting in Healthcare Facilities 	<p style="text-align: center;">APIC Text of Infection Control and Epidemiology 4th Edition</p>
<p>Associated Readings:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Rodriguez-Garcia, R. The Health-Development Link: Travel as a Public Health Issue. <i>Journal of Community Health</i> 26, 93–112 (2001). <input type="checkbox"/> TIME magazine article: The World Is Not Ready for the Next Pandemic 	<p style="text-align: center;">https://doi.org/10.1023/A:1005225129295</p> <p style="text-align: center;">https://time.com/magazine/us/4766607/may-15th-2017-vol-189-no-18-u-s/</p>
<p>Application Activities:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Check out CDC’s Traveler’s Health Page <input type="checkbox"/> Meet the National Special Pathogen Training and Education Center (NETEC) <input type="checkbox"/> Meet the Health and Human Services (HHS) Office of the Assistant Secretary of Preparedness and Response (ASPR) <input type="checkbox"/> For fun: watch “Pandemic – how to prevent an outbreak” on Netflix 	<p style="text-align: center;">https://wwwnc.cdc.gov/travel/</p> <p style="text-align: center;">https://netec.org/about/</p> <p style="text-align: center;">https://www.phe.gov/about/aspr/Pages/default.aspx</p> <p style="text-align: center;">Good article about “Pandemic” - https://medtruth.com/articles/health-features/netflix-pandemic-series-predicted-covid-19/</p>

Sample CIC Study Questions:

1. Which of the following is an example of the principle of emergency management called “mitigation”?
 - a. Implementation of the hospital’s emergency management plan during a hurricane
 - b. Recovery efforts after a major flood has subsided
 - c. A facility-wide bioterrorism disaster drill
 - d. Funding a program that will provide ring vaccination of exposed people against smallpox during an outbreak
2. The CDC has categorized bioterrorism agents according to priority. A disease that meets the criteria listed under category B is:
 - a. Anthrax
 - b. Typhus
 - c. Hantavirus
 - d. Measles
3. Which of the following bioterrorism agents has the highest fatality rate?
 - a. Q fever
 - b. Ricin
 - c. Smallpox
 - d. Severe acute respiratory syndrome (SARS)
4. The director of the IPC department has just received information about a bioterrorist threat in their county with an agent spread primarily by contaminated food/water. Which of the following agents should be included in the facility’s emergency response plan?
 - a. Tularemia
 - b. *Vibrio cholerae*
 - c. Q fever
 - d. Brucellosis
5. A patient is admitted with skin and soft tissue injury from a cat bite. The most likely organism involved in the infection would be:
 - a. *Pasturella spp.*
 - b. *Pseudomonas spp.*
 - c. *E. coli*
 - d. Mycobacterium

CIC Certification Study Guide, 5th Edition, 2014. Association for Professionals in Infection Control and Epidemiology, Inc.

Current edition available: [APIC Certification Study Guide, 6th edition \(apic.org\)](http://apic.org)

Answer Key: 1. D, 2. B, 3. B, 4. B, 5. A

IPC Operations: Week 12 Construction and Maintenance

Estimated completion time = 1 week

<p style="text-align: center;">Curriculum <i>Outbreak Detection and Management, IPC rounding</i></p>	<p style="text-align: center;">Resource</p>
<p>Review APIC's competency model domain <i>IPC Operations</i> and subdomains <i>Outbreak Detection and Management</i> and <i>IPC Rounding</i> and consider how they relate to the content for the week</p>	<p style="text-align: center;">https://apic.org/professional-practice/infection-preventionist-ip-competency-model/</p>
<p>APIC Text Readings:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Chapter 115: Maintenance and Engineering <input type="checkbox"/> Chapter 116: Waste Management <input type="checkbox"/> Chapter 117: Heating Ventilation and Air Conditioning <input type="checkbox"/> Chapter 118: Water systems issues and prevention of waterborne infectious diseases in healthcare facilities <input type="checkbox"/> Chapter 119: Construction and Renovation <input type="checkbox"/> Chapter 114: Healthcare Textile Services 	<p style="text-align: center;">APIC Text of Infection Control and Epidemiology 4th Edition</p>
<p>Associated Readings:</p> <p>Infection Prevention Manual for Construction and Renovation <i>No specific chapters to read, review content in reference to be able to refer to when needed</i></p> <ul style="list-style-type: none"> <input type="checkbox"/> Hajime Kanamori, David J. Weber, William A. Rutala, Healthcare Outbreaks Associated with a Water Reservoir and Infection Prevention Strategies, <i>Clinical Infectious Diseases</i>, Volume 62, Issue 11, 1 June 2016, Pages 1423–1435 <input type="checkbox"/> Hajime Kanamori, William A. Rutala, Emily E. Sickbert-Bennett, David J. Weber, Review of Fungal Outbreaks and Infection Prevention in Healthcare Settings During Construction and Renovation, <i>Clinical Infectious Diseases</i>, Volume 61, Issue 3, 1 August 2015, Pages 433–444 	<p style="text-align: center;">Site must purchase - \$79 for digital PDF</p> <p style="text-align: center;">https://doi.org/10.1093/cid/ciw122</p> <p style="text-align: center;">https://doi.org/10.1093/cid/civ297</p>
<p>Application Activities:</p> <ul style="list-style-type: none"> <input type="checkbox"/> APIC webinar: Construction and Renovation in Healthcare Facilities <input type="checkbox"/> APIC ICRA template <input type="checkbox"/> Meet the Facilities Guidelines Institute (FGI) 	<p style="text-align: center;">http://apic.org/Resource/_TinyMceFileManager/Education/EPI_Intensive/Resource_Documents/ICRA_Matrix.pdf</p> <p style="text-align: center;">https://fqiguideelines.org/about-fqi/</p> <p style="text-align: center;">https://www.epa.gov/environmental-topics</p>

<ul style="list-style-type: none"> <input type="checkbox"/> Meet the Environmental Protection Agency (EPA) – review Environmental Topics page and recommendations for each, especially air quality, hazardous waste and drinking water/wastewater <input type="checkbox"/> Check out CDC’s page for Waterborne Diseases and Outbreak Surveillance Reporting <input type="checkbox"/> Review CDC Environmental Infection Control Guidelines <input type="checkbox"/> Review American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) Guidelines and Standards used in construction and maintenance of healthcare facilities. ANSI/ASHRAE Standards for Ventilation of Healthcare facilities is a tool used often to determine the standard air exchanges that facilities are built to and maintain. (Standard 170-2013) 	<p style="text-align: center;"> https://www.cdc.gov/healthywater/surveillance/index.html https://www.cdc.gov/infectioncontrol/guidelines/environmental/index.html http://www.ashrae.org </p>
<p>Sample CIC Study Questions:</p> <ol style="list-style-type: none"> 1. All of the following may be indications of a heating, ventilation and air conditioning (HVAC) malfunction except: <ol style="list-style-type: none"> a. An increase in the postoperative surgical site infection (SSI) rates b. A single case of aspergillosis in a severely immunosuppressed patient c. Healthcare-associated varicella infections d. An outbreak of ventilator-associated Acinetobacter infections in the ICU 2. A nurse manager from a Rehabilitation unit is requesting that aerators be installed on the sinks in the patient rooms on their unit. The IP should explain that: <ol style="list-style-type: none"> a. Aerators should be placed on all sinks in the ICU only b. Aerators are more effective when combined with an ultraviolet water disinfection method c. Aerators increase the risk of HAIs d. Low-flow aerators are suitable for use with this population 3. A healthcare facility is undergoing extensive renovation. Surveillance for which of the following organisms would be particularly important during any construction or renovation project in a healthcare facility? <ol style="list-style-type: none"> a. MRSA, VRE and other MDROs b. <i>Legionella</i> and <i>Aspergillus spp.</i> c. Gram-negative bacilli d. <i>Mycobacterium abscessus</i> 4. A hospital is beginning a major construction project. The IP has been asked to join the planning team to assist with the development of the Infection Control Risk Assessment (ICRA) for the project. What is the purpose of the ICRA? 	<p style="text-align: center;"> CIC Certification Study Guide, 5th Edition, 2014. Association for Professionals in Infection Control and Epidemiology, Inc. Current edition available: APIC Certification Study Guide, 6th edition (apic.org) </p>

<ul style="list-style-type: none"> a. Develop and oversee the construction project schedule b. Minimize infectious hazards for patients and healthcare personnel c. Provide direction for level three and four projects only d. Coordinate systems start-ups <p>5. The following federal agencies have published regulations pertaining to infection and medical or regulated waste except:</p> <ul style="list-style-type: none"> a. U.S. Environmental Protection Agency (EPA) b. U.S. Occupational Safety and Health Administration (OSHA) c. U. S. Food and Drug Administration (FDA) d. U. S. Department of Transportation (DOT) 	
<p>Answer Key: 1. D, 2. C, 3. B, 4. B, 5. C</p>	

Research: Week 13

Estimated completion time = 1 week

<p style="text-align: center;">Curriculum</p> <p style="text-align: center;"><i>Evaluation of Research, Comparative Effective Research, Implementation and Dissemination Science, Conduct/Participate in Evidence-Based Practice</i></p>	<p style="text-align: center;">Resource</p>
<p>Review APIC's competency model domain Research and subdomains <i>Evaluation of Research, Comparative Effective Research, Implementation and Dissemination Science, Conduct/Participate in Evidence-Based Practice</i> and consider how they relate to the content for the week</p>	<p style="text-align: center;">https://apic.org/professional-practice/infection-preventionist-ip-competency-model/</p>
<p>APIC Text Readings:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Chapter 19: Qualitative Research Methods <input type="checkbox"/> Chapter 20: Research Study Design 	<p style="text-align: center;">APIC Text of Infection Control and Epidemiology 4th Edition</p>
<p>Associated Readings:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Jack, S. M. (2006). Utility of qualitative research findings in evidence-based public health practice. <i>Public Health Nursing</i>, 23(3), 277-283. <input type="checkbox"/> Bauer, M. S., Damschroder, L., Hagedorn, H., Smith, J., & Kilbourne, A. M. (2015). An introduction to implementation science for the non-specialist. <i>BMC psychology</i>, 3(1), 32. 	<p style="text-align: center;">https://doi.org/10.1111/j.1525-1446.2006.230311.x</p> <p style="text-align: center;">https://doi.org/10.1186/s40359-015-0089-9</p>
<p>Application Activities:</p> <ul style="list-style-type: none"> <input type="checkbox"/> How to identify an academic research paper <input type="checkbox"/> Review AHRQ toolkits for HAIs <p>Review IDSA Practice Guidelines</p> <ul style="list-style-type: none"> <input type="checkbox"/> Compendium of strategies to prevent HAIs <input type="checkbox"/> CAUTI and Asymptomatic Bacteriuria <input type="checkbox"/> C. diff 	<p style="text-align: center;">https://journalistsresource.org/tip-sheets/find-academic-research-paper-for-journalists/</p> <p style="text-align: center;">https://www.ahrq.gov/hai/index.html</p> <p style="text-align: center;">https://www.idsociety.org/practice-guideline/practice-guidelines/#/date_na_dt/DESC/0/+/</p>
<p>Sample CIC Study Questions:</p> <ol style="list-style-type: none"> 1. An IP subscribes to several peer-reviewed journals. As they review published articles describing research findings, what question should they ask before incorporating the conclusions/findings of the article into the infection prevention program? 	

<ul style="list-style-type: none"> a. Was the appropriate study design used and are the conclusions reasonable? b. Is the author well known and well published? c. Does the article state how to contact the author(s) with questions? d. Are the findings described in tables or graphs and easily understandable? <p>2. A major difference between a prospective and a retrospective study is that the prospective study:</p> <ul style="list-style-type: none"> a. Requires a relatively small number of subjects b. Is usually used for testing initial hypotheses c. May require a long follow-up period d. Is usually less costly <p>3. In a published report on the risk of VRE infection in ICUs of a major teaching hospital, the authors report that the relative risk of infection is 1.9 for the Cardiac ICU (CICU) when compared to the SICU, and they conclude that a stay in the CICU is a risk factor for VRE infection. The authors have not controlled for age in their study despite the fact that their CICU patients average 20 years older than their SICU patients, and older age is a risk factor for VRE infection. The IP is concerned about the conclusions of this study because they suspect which of the following?</p> <ul style="list-style-type: none"> a. The study is affected by selection bias b. The study is affected by standard error c. The study is affected by confounding d. The study is affected by causation <p>4. Which of the following is not an advantage of a case-control study?</p> <ul style="list-style-type: none"> a. It takes less time than a cohort study b. It requires fewer subjects c. The data are more accurate because it is prospective d. It is generally considered less expensive <p>5. Which of the following could be a result of a descriptive study on <i>C. difficile</i> in the healthcare setting?</p> <ul style="list-style-type: none"> a. The average age of a patient with <i>C. diff</i> b. The association between proton pump inhibitors and <i>C. diff</i> c. The likelihood of having <i>C. diff</i> and being placed on a specific unit d. The lack of hand hygiene by staff resulting in <i>C. diff</i> acquisition 	<p>CIC Certification Study Guide, 5th Edition, 2014. Association for Professionals in Infection Control and Epidemiology, Inc.</p> <p>Current edition available: APIC Certification Study Guide, 6th edition (apic.org)</p>
<p>Answer Key: 1. A, 2. C, 3. C, 4. C, 5. A</p>	

Professional Stewardship: Week 14

Estimated completion time = 1 week

<p style="text-align: center;">Curriculum</p> <p style="text-align: center;"><i>Accountability, Ethics, Financial Acumen, Population Health, Continuum of Care, Advocacy</i></p>	<p style="text-align: center;">Resource</p>
<p>Review APIC's competency model domain <i>Professional Stewardship</i> and subdomains <i>Accountability, Ethics, Financial Acumen, Population Health, Continuum of Care, Advocacy</i> and consider how they relate to the content for the week</p>	<p style="text-align: center;">https://apic.org/professional-practice/infection-preventionist-ip-competency-model/</p>
<p>APIC Text Readings:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Chapter 5: Infection Prevention and Behavioral Interventions 	<p style="text-align: center;">APIC Text of Infection Control and Epidemiology 4th Edition</p>
<p>Associated Readings:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Bryan, C. S., Call, T. J., & Elliott, K. (2007). The ethics of infection control: philosophical frameworks. <i>Infection Control & Hospital Epidemiology</i>, 28(9), 1077. <input type="checkbox"/> Kindig, D., & Stoddart, G. (2003). What is population health? <i>American journal of public health</i>, 93(3), 380-383. <input type="checkbox"/> Ruthie B. Birger, Timothy B. Hallett, Anushua Sinha, Bryan T. Grenfell, Sally L. Hodder, Modeling the Impact of Interventions Along the HIV Continuum of Care in Newark, New Jersey, <i>Clinical Infectious Diseases</i>, Volume 58, Issue 2, 15 January 2014, Pages 274–284 <input type="checkbox"/> Behavior Modification and Infection Control. infectiousdiseaseadvisor.com 	<p style="text-align: center;">https://scholarcommons.sc.edu/phil_facpub/20/</p> <p style="text-align: center;">https://ajph.aphapublications.org/doi/10.2105/AJPH.93.3.380</p> <p style="text-align: center;">https://doi.org/10.1093/cid/cit687</p> <p style="text-align: center;">https://www.infectiousdiseaseadvisor.com/home/decision-support-in-medicine/hospital-infection-control/behavior-modification-and-infection-control/</p>
<p>Application Activities:</p> <ul style="list-style-type: none"> <input type="checkbox"/> STRIVE module: Creating a Business Case for Infection Prevention – BC101 <input type="checkbox"/> STRIVE module: Tools and Resources to Help Create a Business Case for Infection Prevention – BC102 <input type="checkbox"/> Just Culture – The Movie <input type="checkbox"/> YouTube: New Tricks How to Change Healthcare Worker Behaviour <input type="checkbox"/> YouTube: How to Achieve a 97% Success Rate When Holding Someone Accountable 	<p style="text-align: center;">https://youtu.be/bu9yhdOegm8</p> <p style="text-align: center;">https://youtu.be/zENjx8qwP-w</p> <p style="text-align: center;">https://youtu.be/l5GGUqE4XmA</p>

Sample CIC Study Questions:

1. The manufacturer of a wound dressing product has notified the hospital's purchasing department of possible contamination of one lot of dressings. The dressings were recently approved by the product standardization committee and are used in all patient care areas. Which of the following actions should the IP take?
 - a. Instruct the purchasing department to remove all the manufacturer's dressings and like products from the hospital
 - b. Notify discharged patients who were using the product while in the hospital to be alert for signs of infection and notify their physician and the IPC department
 - c. Identify where the dressings are in the hospital, check the lot number and return them to the manufacturer, and assess the patients who used the product for signs of infection
 - d. Notify the health department of the recall and provide the names of the patients who used the products
2. The director of IPC at a 600-bed acute care facility is notified of plans to add 150 beds to the ICU in an expansion. There is one other full-time IP in the department, and the director would like to hire one more to have a total of three full-time IPs in the department. Which of the following is the best justification to make to administration for hiring one more IP?
 - a. The CDC requires that there is one full-time IP for every 250 occupied beds
 - b. TJC requires that there is one full-time IP for every 100 beds
 - c. Adding one more IP will free some of the Director's time to allow her to focus on research projects
 - d. A cost-benefit analysis shows that adding one more IP will result in a reduction in HAIs that will offset 200 percent of the new IP's salary
3. Examples of efforts to improve patient safety in the healthcare setting include all of the following except:
 - a. Encouraging patients to ask their healthcare providers if they have washed their hands
 - b. Medication safety programs that report medication errors and inform staff of efforts to prevent repeated errors
 - c. Encouraging patients to ask questions about their treatments and medications

CIC Certification Study Guide, 5th Edition, 2014. Association for Professionals in Infection Control and Epidemiology, Inc.

Current edition available: [APIC Certification Study Guide, 6th edition \(apic.org\)](http://apic.org)

<p>d. Emphasizing punitive reactions to mistakes</p> <p>4. An IP is invited to become a member of the product evaluation committee. The IP's role on this committee does not include:</p> <ul style="list-style-type: none"> a. Use an objective process that considers cost, desired outcomes, patient safety, and infection rates b. Take an active role in the postimplementation evaluation of products c. Perform a literature search and dictate approval or disapproval of a product d. Endure that products are selected using evidence-based, national guidelines or expert consensus <p>5. In preparing for the first meeting of the year for the Infection Prevention and Control committee, the IP develops an annual report to include HAI trends. Of the choices below, this report should also address:</p> <ul style="list-style-type: none"> a. A summary of injuries and risk factors for injuries in personnel during the previous year b. Staffing needs of the department to optimize efficiency c. An evaluation of the surveillance program providing an assessment of its usefulness to the healthcare facility in preventing and controlling infections d. A line list of all HAIs for the previous year and risk-reduction strategies 	
<p>Answer Key: 1. C, 2. D, 3. D, 4. C, 5. C</p>	

Leadership: Week 15

Estimated completion time = 1 week

<p style="text-align: center;">Curriculum</p> <p style="text-align: center;"><i>Communication, Critical Thinking, Collaboration, Behavioral Science, Program Management, Mentorship</i></p>	<p style="text-align: center;">Resource</p>
<p>Review APIC's competency model domain <i>Leadership</i> and subdomains <i>Communication, Critical Thinking, Collaboration, Behavioral Science, Program Management, Mentorship</i> and consider how they relate to the content for the week</p>	<p style="text-align: center;">https://apic.org/professional-practice/infection-preventionist-ip-competency-model/</p>
<p>Associated Readings:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Nurse Leader blog – Building a Courageous Culture <input type="checkbox"/> Download and read The Silent Treatment 	<p style="text-align: center;">https://www.emergingrnleader.com/building-a-courageous-culture/</p> <p style="text-align: center;">https://www.vitalsmarts.com/resource/silent-treatment/</p>
<p>Application Activities:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Take the Clifton Top 5 Strengths Assessment and ppt <input type="checkbox"/> Emotional Intelligence YouTube Video – Dr. Daniel Goleman <input type="checkbox"/> Brené Brown Podcast – Day 2 <input type="checkbox"/> 7 Habits of Highly Effective People – YouTube video <input type="checkbox"/> Download the time management guide – 7 tips for doing what matters most by Franklin Covey <input type="checkbox"/> Mastering the Art of Crucial Conversations – Joseph Grenny <input type="checkbox"/> Change Behavior – Change the World – Ted Talk by Joseph Grenny 	<p style="text-align: center;">https://store.gallup.com/p/en-us/10108/top-5-cliftonstrengths</p> <p style="text-align: center;">https://youtu.be/pt74vK9pgIA</p> <p style="text-align: center;">https://brenebrown.com/podcast/brene-on-day-2/</p> <p style="text-align: center;">https://youtu.be/WFc08j9eorQ</p> <p style="text-align: center;">https://www.franklincovey.be/browse-by-solution/the-7-habits-of-highly-effective-people/how-to-manage-your-time-7-tips-for-doing-what-matters-most/</p> <p style="text-align: center;">https://youtu.be/uc3ARpccRwQ</p> <p style="text-align: center;">https://youtu.be/6T9TYz5UxI0</p>
<p>Sample CIC study questions:</p> <ol style="list-style-type: none"> 1. When providing educational activities for the adult learner, what type of feedback will facilitate translation of new skills or knowledge to the work setting? <ol style="list-style-type: none"> a. Knowledgeable critiques to ensure proficiency b. Coaching to ensure confidence of knowledge and skills learned c. Confidential review of test results to ensure mastery of content d. Documentation of completion of mandatory requirements 	

<p>2. Which statement about organizational conflict is correct?</p> <ul style="list-style-type: none"> a. Conflict resolution should focus on people, not issues b. Openness and transparency by management leads to conflict c. Conflict is a natural process within systems and fosters a search for alternatives d. Conflict is an immediate sign of dysfunctional work teams <p>3. The IP manager observes increasing fatigue and burnout among the IP team. What should the manager do first?</p> <ul style="list-style-type: none"> a. Contact human resources for assistance b. Gather the team to identify issues and share concerns c. Initiate a corrective action plan for the group d. Recommend incentives to increase job satisfaction <p>4. The manager notices that a novice IP has misapplied the CDC definitions at least five times when conducting catheter-associated urinary tract infection surveillance recently. How should the manager respond?</p> <ul style="list-style-type: none"> a. Schedule the IP for additional training and competency-based testing b. Speak with the IP to obtain additional information about the situation c. Use the organization's disciplinary action process to correct poor performance d. Refer the IP to the employee assistance program for personal counseling <p>5. Obstacles for building a culture of patient safety in healthcare include all of the following except:</p> <ul style="list-style-type: none"> a. Assignment of blame on healthcare providers b. High staff turnover rates c. Lack of resources for needed change d. Placement of accountability on healthcare systems 	<p>CIC Certification Study Guide, 5th Edition, 2014. Association for Professionals in Infection Control and Epidemiology, Inc.</p> <p>Current edition available: APIC Certification Study Guide, 6th edition (apic.org)</p>
<p>Answer Key: 1. B, 2. C, 3. B, 4. B, 5. D</p>	



Acknowledgements

Thank you to the Association for Professionals in Infection Control and Epidemiology, Inc. for allowing us to use CIC study questions from your published study reference materials (5th edition study guide)!

A special thanks to Maggie Reavis, MPH, BSN, RN, CIC, CPHQ for all of her hard work in creation of this tool in collaboration with the KDHE HAI/AR Program team!

Healthcare-Associated Infections
& Antimicrobial Resistance Program

A decorative graphic consisting of a grey EKG (heart rate) line that spans the width of the text above it.