



c|h|a

Colorado Hospital Association

Infection Prevention Resources . . .

All links valid as of 2.20.18

Latest updates 5.31.18

Toni Foos, RN, BSN, CIC
Infection Prevention Manager
toni.foos@cha.com

Contents (in alphabetical order)

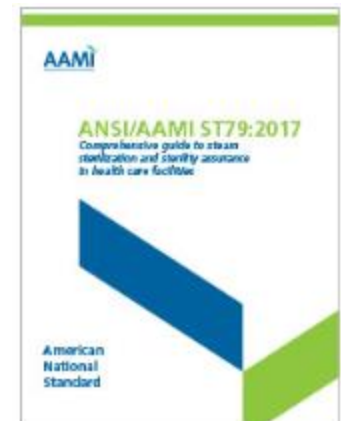
- [AAMI \(Association for the Advancement of Medical Instrumentation\)](#)
- [AHRQ \(Agency for Healthcare Research and Quality\)](#)
- [Ambulatory Care \(outpatient settings\)](#)
- [Ambulatory Surgery Centers](#)
- [Animal Visitation](#)
- [Antimicrobial Stewardship \(AMS\)](#)
- [Antimicrobial Stewardship Training](#)
- [Antiseptics – FDA Final Rule](#)
- [APIC \(Association for Professionals in Infection Control and Epidemiology\)](#)
- [ASHRAE \(American Society of Heating, Refrigerating and Air-Conditioning Engineers\)](#)
- [Cardboard Boxes and Shipping Containers](#)
- [CAUTI \(catheter-associated urinary tract infection\)](#)
- [CDC \(Centers for Disease Control and Prevention\)](#)
- [C diff \(Clostridium difficile, CDI\)](#)
- [Certification \(CIC®\)](#)
- [CDPHE \(Colorado Department of Public Health and Environment\)](#)
- [Continuing Education Courses](#)
- [CJD \(Creutzfeldt-Jakob disease\)](#)
- [CLABSI \(central line-associated blood stream infection\)](#)
- [CMS \(Centers for Medicare and Medicaid Services\)](#)
- [Construction](#)
- [Contact Precautions – Duration](#)
- [CRE \(carbapenem-resistant *Enterobacteriaceae*\)](#)
- [Critical Access Hospitals](#)
- [Cystic Fibrosis & Isolation](#)
- [Disinfection & Sterilization](#)
- [DNV](#)
- [Duodenoscope Protocols](#)

Contents (in alphabetical order)

- [Education – Patient & Family](#)
- [Endotracheal Tubes](#)
- [Environmental Services](#)
- [Hand Hygiene](#)
- [Injection Safety](#)
- [Institute for Healthcare Improvement \(IHI\)](#)
- [Isolation Guidelines](#)
- [Joint Commission, The \(TJC\)](#)
- [Laryngoscope Blades and Handles](#)
- [Linen/Laundry](#)
- [Medical Waste \(waste management\)](#)
- [NIOSH \(National Institute for Occupational Safety and Health\)](#)
- [NHSN \(National Healthcare Safety Network\)](#)
- [Novice Infection Preventionist](#)
- [Occupational Health](#)
- [Operating Room Attire](#)
- [OSHA \(Occupational Health and Safety Administration\)](#)
- [Outbreak Response Guidance](#)
- [Pediatric Infection Control](#)
- [Preop Antibiotic Guidelines](#)
- [Printed Resources](#)
- [Quality Improvement](#)
- [Research Resources](#)
- [Ryan White Notification Law](#)
- [Sepsis](#)
- [SHEA \(The Society for Healthcare Epidemiology of America\)](#)
- [SSIs \(surgical site infections\)](#)
- [Statistics](#)
- [Telligen \(QIN-QIO\)](#)
- [Tuberculosis \(TB\) Resources](#)
- [VAE \(ventilator-associated events\)](#)
- [Videos](#)
- [Waste Management \(see Medical Waste\)](#)
- [Water Management](#)
- [WHO \(World Health Organization\)](#)

AAMI (Association for the Advancement of Medical Instrumentation)

- Professional association for sterile processing (and others in the medical device industry)
- The AAMI standards program consists of over 100 technical committees and working groups that produce Standards, Recommended Practices, and Technical Information Reports for medical devices.
- ST79 is the go-to reference for steam sterilization and sterility
- ST91 – flexible and semi-rigid endoscope processing
- ST58 – coming soon – low-temperature sterilization and high-level disinfection
- AAMI.org



AHRQ (Agency for Healthcare Research and Quality)

- **CUSP** - The Comprehensive Unit-based Safety Program (CUSP) combines techniques to improve safety culture, teamwork, and communications, together with a checklist of proven practices. The [Core CUSP Toolkit](#) was developed based on the experiences of more than 1000 ICUs that reduced central line-associated blood stream infections by 41 percent.
- [Toolkit for Reducing CLABSI in Hospitals](#) These tools were specifically developed to apply the CUSP method to prevent CLABSIs.
- [Toolkit for Reducing CAUTI in Hospitals](#) This toolkit helps hospital units teach team members how to adopt and sustain best practices to improve safety culture and reduce CAUTI.
- [Toolkit To Improve Safety For Mechanically Ventilated Patients](#) This toolkit helps hospitals make care safer for mechanically ventilated patients in intensive care units.
- [Toolkit To Promote Safe Surgery](#) This toolkit helps surgical units improve safety culture and reduce surgical site infections and other complications.
- [Toolkit To Improve Safety in Ambulatory Surgery Centers](#) This toolkit helps ambulatory surgery centers reduce surgical site infections and other complications.

Ambulatory Care (outpatient, clinic, etc.)

- CDC: [Guide](#) to Infection Prevention for Outpatient Settings: Minimum Expectations for Safe Care
 - Associated [checklist](#)
- CDC: Infection Prevention and Control Assessment Tool for Outpatient Settings
 - <https://www.cdc.gov/infectioncontrol/pdf/icar/outpatient.pdf>
- Telligen – CDC Adult Antibiotic Prescribing Guidelines
 - <https://cha.com/wp-content/uploads/2018/04/Telligen-Version-CDC-Outpatient-Antibiotic-Treatment-Guidelines.pdf>
- William Rutala – IC for Ambulatory Care Checklist
 - <https://disinfectionandsterilization.org/resources-list/>
- AHRQ Guide to Improving Patient Safety in Primary Care Settings by Engaging Patients and Families (no IP-specific information)
 - https://www.ahrq.gov/professionals/quality-patient-safety/patient-family-engagement/pfeprimarycare/index.html?utm_source=ahrq&utm_medium=dpils1&utm_term=&utm_content=2&utm_campaign=ahrq_gtipsipc_2018

Ambulatory Surgery Centers

- [CDC Infection Prevention Checklist for Outpatient Settings: Minimum Expectations for Safe Care](#)
- [CDC Guidelines for the Prevention of Surgical Site Infections 2017](#)
- [NHSN for Ambulatory Surgery Centers](#)
- [AHRQ Toolkit to Improve Safety in Ambulatory Surgery Centers](#)

Animal Visitation

- Colorado House Bill [16-1426](#) - *Concerning Intentional Misrepresentation of Entitlement to an Assistance Animal*
- SHEA Expert Guidance – [Animals](#) in Healthcare Facilities: *Recommendations to Minimize Potential Risks*

Antimicrobial Stewardship (AMS)

- [CDC Core Elements of Hospital Antibiotic Stewardship Programs](#)
- [CDC Core Elements of Hospital Antibiotic Stewardship Programs Checklist](#)
- [CDC Core Elements for Small and Critical Access Hospitals](#)
- [National Quality Partners Playbook: Antibiotic Stewardship in Acute Care](#)
- [Joint Commission Antimicrobial Stewardship Standard](#) (MM.309.01.01)
- [CDC Clinician Guide for Collecting Cultures](#)
- [2017 Antibiotic Use in the United States](#)
- [CDC Outpatient Adult Treatment Recommendations](#)
 - [CDC Adult Antibiotic Prescribing Guidelines \(Telligon 1-page version\)](#)

Antimicrobial Stewardship (AMS) Training

Society of Infectious Diseases Pharmacists AMS Certificate

- Three phases: self-study online, live webinars, skills component
- \$750/pharmacist



CDC Web-Based Antibiotic Stewardship Training – Four-Part Series (Free)

- 1st section (3 modules) is available now; remainder to be released later in 2018
- Geared toward prescribing clinicians
- <https://www.train.org/cdctrain/course/1075730/compilation>



MAD-ID Offers Two Antimicrobial Stewardship Training Programs

- Basic (\$500); Advanced (\$225) associated with annual conference (additional expense)
- Basic components: internet learning module, live online teleconferences w/faculty and practical component
- <https://mad-id.org/antimicrobial-stewardship-programs/>



Antiseptics – FDA Final Rule Dec. 20, 2017

- <https://www.gpo.gov/fdsys/pkg/FR-2017-12-20/pdf/2017-27317.pdf>
- FDA reclassified 24 ingredients as not generally recognized as safe and effective (GRASE) and can no longer be used
 - Of these ingredients, only triclosan is currently used in health care antiseptics
- FDA deferred action for one year on six additional ingredients to allow manufacturers more time to provide data:
 - Ethanol, isopropyl alcohol, povidone-iodine, benzalkonium chloride, benzethonium chloride, chloroxylenol
- FDA rule does not impact CDC or WHO hand hygiene guidelines.

Association for Professionals in Infection Control and Epidemiology (APIC)

APIC.org

- [Membership](#) dues - \$200 annually (don't forget your local chapter dues; see below)
- **American Journal of Infection Control (AJIC)** (APIC's scientific journal – is a recognized source for peer-reviewed articles on infection prevention, epidemiology, infectious diseases, quality management, occupational health, and disease prevention)
- **Prevention Strategist** (quarterly publication provides members with evidence-based strategies and practical guidance from leading experts to help prevent infection)
- **APIC eNews** (weekly electronic newsletter that delivers the latest need-to-know infection prevention information to APIC members' email inboxes each Wednesday)
- **Webinars** (free monthly hour-long webinars on a range of topics, from infection prevention innovations to leadership to disease outbreaks; webinars are also archived and available in the [on-demand webinar library](#))
- **Annual 3-day Conference** (additional cost)
- **APIC Text Online** - \$169 for members; \$219 for non-members (1 year subscription; also available in print) <http://text.apic.org/>
- **Mile High APIC Chapter**
 - Meets on the 3rd Friday of the month (except June and December)
 - Presbyterian St. Luke's Rocky Mountain Hospital for Children in Denver
 - Lunch is at 12:00 p.m. and the educational program starts at 12:30, followed by chapter business meeting
 - Applicable Membership dues - \$20
 - Opportunity for educational grants to the APIC Conference, EPI 101/201, and more

APIC Online Courses (no membership required)

- Basics of Infection Prevention
- Basic Statistics for Infection Preventionists
- Effectively Using Data



Infection Prevention Certification Review Course

Cleaning, Disinfection and Sterilization in the Surgical Setting

- Microbiology 101 for Infection Preventionists
- Infection Prevention Knowledge Review and Assessment
- Continuing the Care: Infection Prevention in the Long-Term Care Setting
- Tech Tools Series - Course Bundle
- Tech Tools: Basics of Microsoft Excel
- Tech Tools: Basics of Microsoft PowerPoint
- Tech Tools: Basics of Social Media
- Infection Prevention in Hemodialysis Settings
- [APIC's EPI Education \(EPI 101 and 201\)](#) *New*
- <http://www.apic.org/Education-and-Events/Course-Catalog/CourseCategory?id=536cdeda-ca72-4480-976b-2470a57835e2> (prices vary, but are generally around \$175-\$255 for non-members)

APIC.org Free Resources (no membership required)

Implementation Guides (Provide practical, evidence-based strategies for surveillance and the elimination of infection. Each guide includes online tools and resources.) Access <http://www.apic.org/Professional-Practice/Implementation-guides> for all guides.

New

- Infection Preventionist's Guide to the OR (2018)
- Guide to Preventing Central-Line Associated Bloodstream Infections (2015)
- Guide to Hand Hygiene Programs for Infection Prevention (2015)
- Guide to Preventing Clostridium difficile Infections (2013)
- Guide to Infection Prevention in Emergency Medical Services (2013)
- Guide to the Elimination of Infections in Hemodialysis (2010)
- Guide to the Elimination of MRSA Transmission in Hospital Settings, 2nd Edition (2010)

Click to add text.

Guide to Preventing Catheter-Associated Urinary Tract Infections (2014)

Sample Table of Contents

Section 1: Epidemiology and Pathogenesis of Catheter-Associated Urinary Tract Infections	7
Section 2: National CAUTI Prevention Initiatives	12
Section 3: CAUTI Risk Assessment	25
Section 4: Definitions, Surveillance, and Reporting	29
Foley Catheter Prevalence Sheet	39
Section 5: Patient Safety, CUSP, and Other Behavioral Models	43
Section 6: Prevention	53
Section 7: Preventing Catheter-Associated Urinary Tract Infections in Children	69
Section 8: Special Populations	76
Appendix: Recommendations for Spinal Cord Injured Patients	83

APIC: Roadmap for the Novice Infection Preventionists

Requires APIC membership

<http://www.apic.org/For-Media/Announcements/Article?id=e74a091b-d633-4408-b156-70e0eb059bd1>

Table of Contents

What is the Novice Roadmap?.....	4
Acknowledgements.....	5
Roadmap Tasks.....	6
Professional Development	8
Identification of Infectious Disease Processes	10
Surveillance and Epidemiologic Investigation.....	11
Preventing/Controlling the Transmission of Infectious Agents	15
Employee/Occupational Health.....	22
Management and Communication (Leadership).....	24
Education and Research	27
Environment of Care.....	29
Cleaning, Sterilization, Disinfection, Asepsis	31
Roadmap Tasks.....	32
Stage 1: Days 1 - 60.....	34
Stage 2: Days 61 - 120	40
Stage 3: Days 121 - End of Year 1	47
Stage 4: Beginning of Year 2 - Passing the CIC Exam.....	52

The Novice Roadmap provides a general structure for your time on the job, from day 1 until you pass the CIC exam. It provides a list of job-specific knowledge, skills, and professional development goals, and even helps you create your personal library of infection prevention-related resources. However, the way you prioritize proceeding through the roadmap will vary from facility to facility and program to program. It will also depend on your background, level of experience, and resources available to you within your infection prevention program.





Now available [online!](https://apic.org/Education-and-Events/EPI-education-series)

APIC EPI® Education Series

EPI® 101: The Fundamentals of Infection Surveillance, Prevention and Control

Competency Level: Novice

*Attendees can earn a maximum of 20 CE credit hours**

<https://apic.org/Education-and-Events/EPI-education-series>

If you have less than one year of experience or need an infection prevention basics refresher, this three-day course is designed for you. You'll be introduced to the various roles and responsibilities of the infection preventionist and gain essential clinical and program management knowledge needed to develop an effective infection prevention program.

Key course content includes: Basic epidemiology of infectious diseases, Precautions and exposures to healthcare-associated infections, Introduction to microbiology, Designing a surveillance plan, Using and reporting data, Regulations and reporting, Applying NHSN surveillance definitions, Conducting a facility risk assessment.

EPI® 102: The Fundamentals of Infection Surveillance, Prevention and Control

Competency Level: Novice - EPI®101 prerequisite recommended, but not required

*Attendees can earn a maximum of 18 CE credit hours**

If you have at least one year of infection prevention experience, have already taken EPI® 101 and are ready to move to the next level, this three-day course is for you. Content builds on the concepts and principles introduced in EPI® 101, with an emphasis on evidence-based interventions to prevent or reduce risk.

Key course content includes: The infection preventionist as program manager, Building coalitions and stakeholders, Performance improvement, Infection prevention in surgical settings, Outbreaks: investigation, prevention and control, Preventing device-associated infections, Disinfection and sterilization of instruments, The IP's role in construction and renovation, Emergency preparedness

APIC EPI® Education Series (cont'd.)

<https://apic.org/Education-and-Events/EPI-Intensive>

EPI® Intensive

Competency Level: Novice

This novice level course, designed for infection preventionists with 3 years or less of experience, provides intensive fundamental infection prevention training for healthcare professionals working in different practice settings. Over the course of four days, you will learn how to develop an effective infection prevention program to protect patients and comply with accrediting and regulatory requirements through evidenced-based best practices that reduce risk.

The course introduces the various roles and responsibilities of the infection preventionist. Areas of emphasis include how to prepare surveillance and risk assessment plans, regulatory compliance, and preventing transmission of infectious diseases. Experienced faculty deliver lectures of complex concepts taught in everyday language, facilitate smaller group activities, and lead question/answer sessions along with the sharing of experiences at the individual level.

Course Content:

- Roles of the IP
- Basic epidemiology of infectious diseases
- Introduction to microbiology
- Regulations and requirements
- Risk assessment
- Surveillance definitions: CAUTI, CLABSI, BSI, SIR, SSI, VAE
- Disinfection and sterilization
- Infection prevention in surgical settings
- Program management
- Outbreaks and investigations
- Device-related infections
- Data calculations and reporting
- Construction



APIC Membership

Spreading knowledge. Preventing infection.*

Make the most of your APIC membership experience by tapping into your network, benefits, and resources that address your on-the-job challenges, help improve your practice, and gear you for professional growth.

Learn: APIC provides you with face-to-face and online training, including free [live and on-demand webinars](#) on clinical information, regulations, and best practices. [Explore APIC Education](#).

Network: You're connected to more than 15,000 healthcare professionals through [MyAPIC](#) online communities, local [chapters](#), and the [APIC Annual Conference](#).

Advance: APIC helps you take your career to the next level with a variety of resources including [APIC Career Center](#), [practice guidance](#) resources (including implementation guides), live and online [educational courses](#), and tools that prepare you for the [Certification in Infection Prevention and Control \(CIC®\)](#) exam.


Lead: As an APIC member you have the chance to be a leader in your professional society, as well as your field.

Consider [committee](#) and [chapter](#) volunteerism, as well as [taking action](#) on issues that impact you. These are just a few of your member benefits. Get more information by [visiting the APIC website](#) or contacting an APIC staff member via phone at 202-789-1890 or via [email](#).

APIC: Not getting your emails and mail?

Make sure you keep your contact information updated on APIC website.

Follow these steps:

- Sign in to APIC website (click on [My Account](#))
 - Select *demographic*
 - Click on  to edit email address, work phone or address
-
- This works for APIC and Mile High APIC updates

- American Society of Heating, Refrigerating and Air-Conditioning Engineers

ASHRAE, founding in 1984, is a global society advancing human well-being through sustainable technology for the build environment. The Society and its members focus on building systems, energy efficiency, indoor air quality, refrigeration and sustainability within the industry.

Through research, standards writing, publishing and continuing education, ASHRAE shapes tomorrow's built environment.



ANSI/ASHRAE/ASHE Standard 170-2013
(Supersedes ANSI/ASHRAE/ASHE Standard 170-2008)
Includes ANSI/ASHRAE/ASHE addenda listed in Appendix C

Ventilation of Health Care Facilities

See Appendix C for approval dates by the ASHRAE Standards Committee, the ASHRAE Board of Directors, and the American National Standards Institute.

This standard is under continuous maintenance by a Standing Standard Project Committee (SSPC) for which the Standards Committee has established a documented program for regular publication of addenda or revisions, including procedures for timely, documented, consensus action on requests for change to any part of the standard. The change submittal form, instructions, and deadlines may be obtained in electronic form from the ASHRAE Web site (www.ashrae.org) or in paper form from the Manager of Standards. The latest edition of an ASHRAE Standard may be purchased from the ASHRAE Web site (www.ashrae.org) or from ASHRAE Customer Service, 1791 Tullie Circle, NE, Atlanta, GA 30329-2305. E-mail: orders@ashrae.org. Fax: 678-539-2129. Telephone: 404-636-8400 (worldwide), or toll free 1-800-527-4753 (for orders in US and Canada). For reprint permission, go to www.ashrae.org/permissions.

© 2013 ASHRAE

ISSN 1041-2336



Cardboard Boxes and Shipping Containers

- Joint Commission [FAQ](#): What is TJC's position on managing cardboard or corrugated boxes and shipping containers? (includes infection prevention and control and fire safety guidance)
- AAMI Standard ANSI/AAMI ST79:2006

"5.1 -- Sterility assurance 'begins at the loading dock,' i.e., at the point at which the health care facility assumes responsibility for incoming medical equipment, devices, and supplies. Therefore, sterility assurance measures should be used from the time that items are received into the health care facility until they are used. "

"5.2.1 -- ... Clean or sterile items to be transported to central processing and storage areas within the facility should be removed from their external shipping containers before they enter the storage areas of the department."

"*Rationale*: External shipping containers have been exposed to unknown and potentially high microbial contamination. Also, shipping cartons, especially those made of corrugated material, serve as generators of and reservoirs for dust."



CAUTI (catheter-associated urinary tract infection)

- AHRQ Toolkit for Reducing CAUTIs
<https://www.ahrq.gov/professionals/quality-patient-safety/hais/tools/cauti-hospitals/index.html>
- AHRQ Toolkit to Reduce CAUTI and Other HAIs in Long-Term Care Facilities
<https://www.ahrq.gov/professionals/quality-patient-safety/quality-resources/tools/cauti-ltc/index.html>
- APIC Guide to Preventing Catheter-Associated Urinary Tract Infections
<https://apic.org/Professional-Practice/Implementation-guides>
- CatheterOut.org
<http://www.catheterout.org/>
- CDC Guideline for Prevention of Catheter-Associated Urinary Tract Infections
<https://www.cdc.gov/infectioncontrol/guidelines/cauti/index.html>
- CDC Targeted Assessment for Prevention (TAP) CAUTI Toolkit
<https://www.cdc.gov/hai/prevent/tap/resources.html>
- CMS CAUTI Reporting: Operational Guidance for Fulfilling Hospital Inpatient IQR Requirements
https://www.cdc.gov/nhsn/pdfs/cms/Final-ACH-CAUTI-Guidance_2015.pdf
- SHEA Patient Education Guide – CAUTI
<http://www.shea-online.org/index.php/practice-resources/patients>
- SHEA Strategies to Prevent CAUTI in Acute Care Settings
<http://www.shea-online.org/index.php/practice-resources/priority-topics/compendium-of-strategies-to-prevent-hais>

CAUTI (cont'd.)

- Emergency Nurses Association: [CAUTI Prevention in the ED](#)
 - [Instructions on how to register](#)
- HRET-HINN: [Facing the Facts about CAUTI: Focus on the Emergency Department](#)

CDC Guidelines (Centers for Disease Control and Prevention)

- <https://www.cdc.gov/infectioncontrol/guidelines/index.html>
 - Basic Infection Prevention and Control
 - Guidelines for Disinfection and Sterilization in Healthcare Facilities (2008)
 - [2007 Guidelines for Isolation Precautions: Preventing Transmission of Infectious Agents in Healthcare Settings \(2007\)](#)
 - Guidelines for Environmental Infection Control in Healthcare Facilities (2003)
 - Guidelines for Hand Hygiene in Healthcare Settings (2002)
 - Antibiotic Resistance
 - Management of Multidrug-Resistant Organisms in Healthcare Settings (2006)
 - Device-associated Infection Prevention Guidelines
 - Guidelines for the Prevention of Intravascular Catheter-Related Infections (CAUTI) (2011)
 - Guideline for the Prevention of Catheter-associated Urinary Tract Infections (CLABSI) (2009)
 - Procedure-associated Infection Prevention Guidelines
 - Guidelines for the Prevention of Surgical Site Infections (2017)
 - Guideline for Reducing HIV, HBV, HCV Transmission Through Organ Transplantation
 - Other guidelines available include: Norovirus, Pneumonia, Ebola, Influenza, MERS-CoV, tuberculosis, and healthcare worker guidelines
- Infection Control Assessment Tool for Acute Care Hospitals
 - <https://www.cdc.gov/infectioncontrol/pdf/icar/hospital.pdf>

CDC Targeted Assessment for Prevention (TAP) Strategy

Catheter-Associated Urinary Tract Infection (CAUTI) Implementation Guide

Links to Example Resources <https://www.cdc.gov/hai/prevent/tap/resources.html>

Multitude of resources under the following categories:

- General Infrastructure, Capacity, and Processes
- Staff Training and Competency Assessment
- Appropriate Indications for Indwelling Urinary Catheter
- Proper Indwelling Urinary Catheter Maintenance
- Timely Removal of Indwelling Urinary Catheter
- Appropriate Urine Culturing Practices

The [Targeted Assessment for Prevention \(TAP\) Strategy](#) is a framework for quality improvement developed by the Centers for Disease Control and Prevention (CDC) to use data for action to prevent healthcare-associated infections (HAIs). The TAP Strategy consists of three components: 1) Running TAP Reports in the National Healthcare Safety Network (NHSN) to target healthcare facilities and specific units with an excess burden of HAIs. 2) Administering TAP Facility Assessment Tools to identify gaps in infection prevention in the targeted locations. 3) Accessing infection prevention resources within the TAP Implementation Guides to address those gaps.

CDC Targeted Assessment for Prevention (TAP) Strategy

Clostridium difficile (CDI) Implementation Guide

Links to Example Resources <https://www.cdc.gov/hai/prevent/tap/cdiff.html>

Multitude of resources under the following categories:

- General Infrastructure, Capacity, and Processes
- Antibiotic Stewardship
- Early Detection and Isolation, Appropriate Testing
- Contact Precautions/Hand Hygiene
- Environmental Cleaning
- Laboratory Practices

The [Targeted Assessment for Prevention \(TAP\) Strategy](#) is a framework for quality improvement developed by the Centers for Disease Control and Prevention (CDC) to use data for action to prevent healthcare-associated infections (HAIs). The TAP Strategy consists of three components: 1) Running TAP Reports in the National Healthcare Safety Network (NHSN) to target healthcare facilities and specific units with an excess burden of HAIs. 2) Administering TAP Facility Assessment Tools to identify gaps in infection prevention in the targeted locations. 3) Accessing infection prevention resources within the TAP Implementation Guides to address those gaps.

CDC Targeted Assessment for Prevention (TAP) Strategy

Central line-associated BSI (CLABSI) Implementation Guide

Links to Example Resources <https://www.cdc.gov/hai/prevent/tap/clabsi.html>

Multitude of resources under the following categories:

- General Infrastructure, Capacity, and Processes
- Appropriate Use of Central Venous Catheters
- Proper Insertion Practices for Central Venous Catheters
- Proper Maintenance Practices for Central Venous Catheters
- Supplemental Strategies

The [Targeted Assessment for Prevention \(TAP\) Strategy](#) is a framework for quality improvement developed by the Centers for Disease Control and Prevention (CDC) to use data for action to prevent healthcare-associated infections (HAIs). The TAP Strategy consists of three components: 1) Running TAP Reports in the National Healthcare Safety Network (NHSN) to target healthcare facilities and specific units with an excess burden of HAIs. 2) Administering TAP Facility Assessment Tools to identify gaps in infection prevention in the targeted locations. 3) Accessing infection prevention resources within the TAP Implementation Guides to address those gaps.

C diff (*Clostridium difficile*, CDI)

- AHRQ Toolkit for Reduction of *C diff* through Antimicrobial Stewardship
<https://www.ahrq.gov/professionals/quality-patient-safety/patient-safety-resources/resources/cdifftoolkit/index.html>
- APIC Guide to Preventing *C diff* Infections
<https://apic.org/Professional-Practice/Implementation-guides>
- APIC Chapter on *C diff* (email Toni.Foos@cha.com)
- CDC Targeted Assessment for Prevention (TAP) of *C diff*
<https://www.cdc.gov/hai/prevent/tap/cdiff.html>
- CMS *C diff* Reporting: Operational Guidance for Fulfilling Hospital Inpatient IQR Requirements
<https://www.cdc.gov/nhsn/acute-care-hospital/cdiff-mrsa/index.html>
- IDSA/SHEA Clinical Practice Guidelines for *C diff* Infection in Adults and Children
<https://academic.oup.com/cid/advance-article/doi/10.1093/cid/cix1085/4855916>
- IDSA/SHEA *Clostridium difficile* Pocket Guide
<https://mailchi.mp/bb970212ce66/new-idsa-shea-guidelines-pocket-guides-and-apps-1644121>
- SHEA Patient Education Guide – *C diff*
<http://www.shea-online.org/index.php/practice-resources/patients>
- SHEA Strategies to Prevent *C diff* in Acute Care Settings
<http://www.shea-online.org/index.php/practice-resources/priority-topics/compendium-of-strategies-to-prevent-hais>

C diff (*Clostridium difficile*, CDI)

- Reducing C. difficile Infections Toolkit – GNYHA/UHF C. diff Collaborative
 - http://apic.org/Resource/TinyMceFileManager/Practice_Guidance/cdiff/C.Diff_Digital_Toolkit_GNYHA.pdf

See also Antimicrobial Stewardship (AMS)

Certification (CIC)



- CBIC – Certification Board of Infection Control and Epidemiology
 - <http://www.cbic.org/> [for complete certification requirements]
 - Cost \$375
 - “There is no specific time requirement that defines ‘sufficient experience’ . . . However, this certification exam is geared toward the infection prevention and control professional who has had a least 2 years of full-time experience in infection prevention and control.”

- Exam Content:

Content Domain	Items
Identification of Infectious Disease Processes	22
Surveillance and Epidemiologic Investigation	24
Preventing/Controlling the Transmission of Infectious Agents	25
Employee/Occupational Health	11
Management and Communications	13
Education and Research	11
Environment of Care	14
Cleaning, Sterilization, Disinfection, Asepsis	15






- Sign up to receive sample test questions each week. Contact toni.foos@cha.com

CDPHE (Colorado Department of Public Health & Environment)

- Disease Control and Environmental Epidemiology Division Topics
<https://www.colorado.gov/pacific/cdphe/dceed>
 - Communicable Diseases
 - **Diseases A-Z**
 - Foodborne Illness
 - Healthcare-associated Infections
 - STI/HIV/viral hepatitis
- Hospital Regulations (i.e. Standards for Hospitals and Health Facilities):
 - <http://www.sos.state.co.us/CCR/GenerateRulePdf.do?ruleVersionId=5857&fileName=6%20CCR%201011-1%20Chap%2004>
- Hot Topics in Infectious Disease
 - Weekly email report
 - To be put on the distribution, contact heather.Dryden@state.co.us
- HAN Alert – Health Alert Network Broadcast
 - Alert situations
 - To be put on the distribution, contact cdphe_epr_sit@state.co.us

CDPHE (cont'd.)

- NHSN Conditions Reportable to CDPHE (and CMS) - 2018
 - <https://cha.com/wp-content/uploads/2018/03/Colorado-HAI-NHSN-Reportable-Conditions-March012018.pdf>
- CDPHE: Medical and Pharmaceutical Waste
 - <https://www.colorado.gov/pacific/cdphe/medicalwaste>
- HAIs: Resources for Professionals - Excellent resources – See sample →
 - <https://www.colorado.gov/pacific/cdphe/hai-resources>



Environmental Cleaning 60 Second Check

- An Environmental Protection Agency (EPA)-registered hospital disinfectant should be used for environmental disinfection.
 - Manufacturer recommendations should be followed for concentration & contact time.
 - For a list of EPA approved products visit:
<https://www.epa.gov/pesticide-registration/selected-epa-registered-disinfectants>
- Personal protective equipment (PPE) should be worn when cleaning surfaces or equipment currently and/or previously used by another person.
- On a daily basis, frequently touched surfaces should be cleaned and disinfected, such as:
 - Bed tables and bed rails
 - Doorknobs
 - Countertops
 - Sinks
- Used cleaning solutions should be discarded, and housekeeping equipment should be rinsed and allowed to dry prior to reuse.
- Replace dirty cloths and mop heads with clean items each time a bucket of disinfectant is emptied and replaced with fresh, clean solution.
- Soiled linen should be handled as little as possible to prevent contamination and aerosolization of pathogens. Standard precautions should be followed when handling soiled linens.
- When a patient has been discharged, all surfaces (horizontal and vertical) should be cleaned and disinfected.
- Surfaces and objects should be cleaned in order from least contaminated to most contaminated (e.g., sinks and counters before toilets).

To view the entire guidance document visit:
www.cdc.gov/hai/pdfs/eic_in_hcf_03.pdf

2017 Long-term Care Resources

Alana Cilwick, MPH
Injection Safety Coordinator
303-692-2727 Alana.Cilwick@state.co.us

CDPHE (cont'd.)

- CDHPE Annual HAI Report <https://www.colorado.gov/pacific/cdphe/health-care-facility-infection-data>
 - Easy example of how you can pull out your hospital's data to provide to your leadership team

Procedure Type	August 2012 - July 2013					August 2013 - July 2014				
	Procedure Count	Infection Count	SIR*	National Comparison	CO Aggregate SIR	Procedure Count	Infection Count	SIR*	National Comparison	CO Aggregate SIR
Breast										
Colon										
CABG										
Hips										
Knees										
Ab Hyst										

	August 2012 - July 2013				August 2013 - July 2014			
	Line Days	Infection Count	SIR***	National Comparison	Line Days	Infection Count	SIR***	National Comparison
CLABSI - MICU								
CLABSI - MS ICU								
CLABSI - NS ICU								
CLABSI - CICU								
CLABSI - TS ICU								
CO Aggregate: CLABSI - All ICUs								
CLABSI - Rehab								

	Jan - July 2013 - 7 months only				August 2013 - July 2014			
	Patient Days	Infection Count	SIR	National Comparison	Patient Days	Infection Count	SIR	National Comparison
C diff								

* standardized infection ratio (SIR) is the ratio of observed to expected infections, and is adjusted for procedure risk factors

***This SIR is calculated manually by CDPHE using comparison data of January - December 2012, as opposed to automatically calculated NHSN SIR data which benchmarks to 2006-2008.



How to Report an Outbreak in a Healthcare Facility to Public Health

CDPHE Resources

- Reportable Diseases

(includes outbreaks)

- <https://drive.google.com/file/d/0B0tmPQ67k3NVcUZBdmxILTJZSDA/view>

- Reporting of most diseases above can be done through the CDPHE Colorado Electronic Disease Reporting System (CEDRS) web-based program.

- <https://www.colorado.gov/pacific/cdphe/report-a-disease>

Which outbreaks are reportable?

In Colorado, outbreaks of any kind are immediately reportable to public health. If you know or suspect your healthcare facility may be experiencing an outbreak, it must be reported to public health per the Colorado Rules and Regulations Pertaining to Epidemic and Communicable Disease Control (6 CCR 1009-9). This reporting is in addition to routine notifiable disease reporting of single cases.

Colorado Rules and Regulations Pertaining to Epidemic and Communicable Disease Control (6 CCR 1009-9)

"The Colorado Board of Health requires the reporting of any unusual illness, or outbreak, or epidemic of illnesses, which may be of public concern, whether or not known to be, or suspected of being communicable. Such illnesses, outbreaks, or epidemics include, but are not limited to: 1) those which may be a risk to the public and may affect large numbers of persons, such as illness transmitted through food, water, or from person to person; 2) cases of a newly recognized entity, including novel influenza; 3) those related to a health care setting or contaminated medical devices or products; and 4) those related to environmental contamination by any infectious agent or toxic product of such an agent."

The full document is available here: <https://www.colorado.gov/pacific/cdphe/disease-control-regulations>

Definition of an outbreak

Outbreaks in healthcare settings are defined as an increase in the number of cases above the baseline in your facility, or above what is expected.

How to report an outbreak

You can report outbreaks to the Colorado Department of Public Health and Environment or your local public health agency.

1) Colorado Department of Public Health and Environment

Monday - Friday, 8:30 - 5:00: (303)-692-2700
Evenings and weekends: (303)-370-9395

2) Local public health agency

A list of local public health agencies is available through the Colorado Department of Public Health and Environment's website:

<https://www.colorado.gov/pacific/cdphe/find-your-local-public-health-agency>

CJD (Creutzfeldt-Jakob disease)

Creutzfeldt-Jakob disease (CJD) is a rapidly progressive, invariably fatal neurodegenerative disorder believed to be caused by an abnormal isoform of a cellular glycoprotein known as the prion protein. CJD occurs worldwide and the estimated annual incidence in many countries, including the United States, has been reported to be about one case per million population. Classic CJD is a human prion disease. This disease is rapidly progressive and always fatal. Infection with this disease leads to death usually within 1 year of onset of illness.

- APIC Chapter: Creutzfeldt-Jakob disease and other prion diseases
 - <https://cha.com/quality-patient-safety/infection-prevention/>
- Belay, et al. (2013). Management of neurosurgical instruments and patients exposed to Creutzfeldt-Jakob Disease. *Infect Control and Hosp Epidemiol*, 34:12, p. 1272-1280
 - <https://cha.com/wp-content/uploads/2018/04/ICHE-Dec-2013-management-of-neurosurgical-instruments-and-patients-exposed-to-creutzfeldtjakob-disease.pdf>
- Association for the Advancement of Medical Instrumentation (AAMI) & American National Standards Institute (ANSI). (2010). Standards: Processing CJD-contaminated patient care equipment and environmental surfaces, p. 163-167.
 - https://cha.com/wp-content/uploads/2018/05/AAMI-2010-Guidelines-re_CJD.pdf
- CDC: Creutzfeldt-Jakob Disease, Classic
 - <https://www.cdc.gov/prions/cjd/index.html>
- Rutala, W. A. and Weber, D. J. (2010). Guideline for disinfection and sterilization of prion-contaminated medical instruments. *Infect Control and Hosp Epidemiol*, 31:2, 107-117
 - <https://cha.com/wp-content/uploads/2018/04/ICHE-Feb-2010-Rutala-guideline-for-disinfection-and-sterilization-of-prioncontaminated-medical-instruments.pdf>
- WHO: Infection Control Guidelines for Transmissible Spongiform Encephalopathies.
 - http://www.who.int/csr/resources/publications/bse/WHO_CDS_CSRAPH_2000_3/en/

CLABSI (central line-associated blood stream infection)

- AHRQ Toolkit for Reducing CLABSI
<https://www.ahrq.gov/professionals/education/curriculum-tools/clabsitools/index.html>
- APIC Guide to Preventing CLABSI
<https://apic.org/Professional-Practice/Implementation-guides>
- CDC Guideline for Prevention of CLABSI
<https://www.cdc.gov/infectioncontrol/guidelines/bsi/index.html>
- CDC Targeted Assessment for Prevention (TAP) CLABSI Implementation Guide
<https://www.cdc.gov/hai/prevent/tap/clabsi.html>
- CMS CLABSI Reporting: Operational Guidance for Fulfilling Hospital Inpatient IQR Requirements
<https://www.cdc.gov/nhsn/pdfs/cms/Final-ACH-CLABSI-Guidance-2015.pdf>
- Improve PICC (multiple links to various resources and guidelines)
<http://www.improvepicc.com/>
- SHEA Patient Education Guide – CLABSI
<http://www.shea-online.org/index.php/practice-resources/patients>
- SHEA Strategies to Prevent CLABSI in Acute Care Settings
<http://www.shea-online.org/index.php/practice-resources/priority-topics/compendium-of-strategies-to-prevent-hais>

CLABSI (central line-associated blood stream infection)

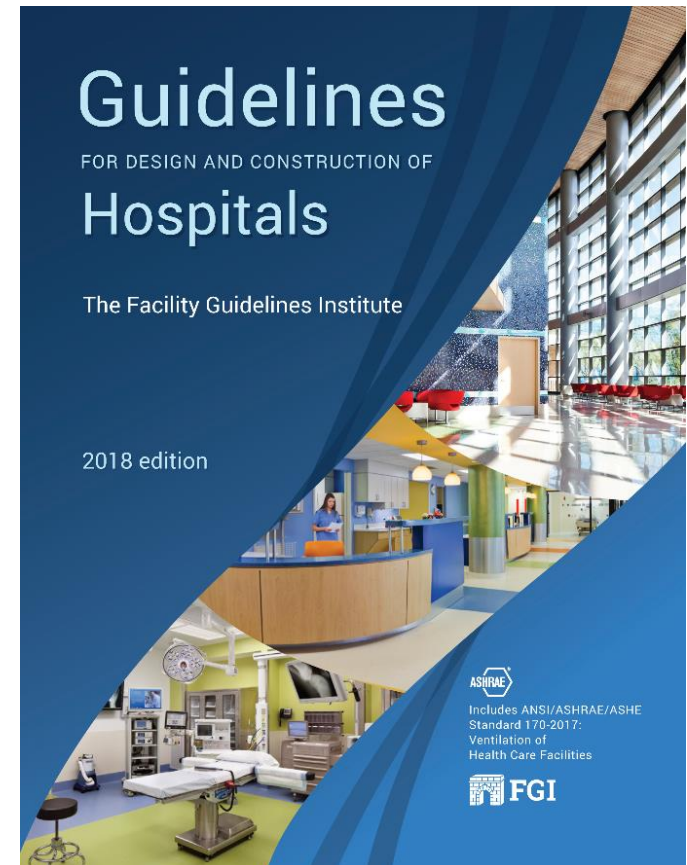
- CLABSI: To use a PICC or not
 - [*The Michigan Appropriateness Guide for Intravenous Catheters \(MAGIC\): Results from a Multispecialty Panel Using the RAND/UCLA Appropriateness Method*](#), Annals of Internal Medicine 2015
 - “For peripherally compatible infusions, PICC use was rated as inappropriate when the proposed duration of use was 5 or fewer days. Midline catheters and ultrasonography-guided peripheral intravenous catheters were preferred to PICCs for use between 6 and 14 days. In critically ill patients, nontunneled central venous catheters were preferred over PICCs when 14 or fewer days of use were likely. In patients with cancer, PICCs were rated as appropriate for irritant or vesicant infusion, regardless of duration.”
- CLABSI: To use a cap or not
 - [*Antiseptic barrier cap effective in reducing central line-associated bloodstream infections: A systematic review and meta-analysis*](#), AJIC 2017.
 - “Conclusions: Use of an antiseptic barrier cap is associated with a lower incidence [of] CLABSI and is an intervention worth adding to central-line maintenance bundles.”
- CLABSI: Have you tried [this](#)?
 - Read an array of ideas to try, when you think you’ve tried everything.
- CLABSI: Chlorhexidine bathing skills [assessment](#) by Agency for Healthcare Research and Quality (AHRQ).

CMS (Centers for Medicare & Medicaid Services)

- Hospital Infection Control Worksheet [document used by surveyors to determine compliance with the Infection Control Condition of Participation]
 - <https://www.cms.gov/medicare/provider-enrollment-and-certification/surveycertificationgeninfo/downloads/survey-and-cert-letter-15-12-attachment-1.pdf>
- State Operations Manual (SOM): Appendix A – Survey Protocol, Regulations and Interpretive Guidelines for Hospitals
 - https://www.cms.gov/Regulations-and-Guidance/Guidance/Manuals/downloads/som107ap_a_hospitals.pdf
- State Operations Manual (SOM): Appendix G - Guidance for Surveyors: Rural Health Clinics
 - https://www.cms.gov/Regulations-and-Guidance/Guidance/Manuals/downloads/som107ap_g_rhc.pdf
- State Operations Manual (SOM): Appendix W – Guidance for Surveyors: Critical Access Hospitals and Swing-Beds in CAHs
 - <https://cha.com/wp-content/uploads/2018/05/CMS-SOM-Appendix-W-CAHs.pdf>
- CAUTI Reporting: Operational Guidance for Fulfilling CMS's IQR Requirements
 - https://www.cdc.gov/nhsn/pdfs/cms/Final-ACH-CAUTI-Guidance_2015.pdf

Construction

- Guidelines for Design and Construction of Hospitals and Outpatient Facilities
 - The Facility Guidelines Institute (FGI)
 - Includes guidelines for air changes per hour, temperature and humidity requirements
 - <https://www.fgiguideines.org/guidelines/2018-fgi-guidelines/>
 - \$200
- ICAP (Nebraska Medicine): *What is an Infection Control Risk Assessment for Construction?*
 - <https://icap.nebraskamed.com/wp-content/uploads/sites/2/2018/03/Practice-Briefs-ICRA-3.19.18.pdf>



Contact Precautions – Duration

- SHEA Expert Guidance: Duration of Contact Precautions for Acute-Care Settings (2017)
 - <https://cha.com/wp-content/uploads/2018/01/ICHE-Dec-2017-duration-of-contact-precautions-for-acute-care-settings.pdf>
- Article: Discontinuing contact precautions for multidrug-resistant organisms: A systematic literature review and meta-analysis (Marra, et al., AJIC, March 2018)
 - <https://cha.com/wp-content/uploads/2018/03/AJIC-Mar-2018-DCing-CP-for-MDROs-A-systematic-literature-review-and-meta-analysis.pdf>
- 2007 Guidelines for Isolation Precautions: Preventing Transmission of Infectious Agents in Healthcare Settings (2007)
 - <https://www.cdc.gov/infectioncontrol/pdf/guidelines/isolation-guidelines.pdf>
- SHEA 2018 Spring Conference: Controversial Presentation
 - [Contact precautions for endemic pathogens: Is there a paradigm shift in the making?](#)

CRE (carbapenem-resistant *Enterobacteriaceae*)

CRE, which stands for carbapenem-resistant *Enterobacteriaceae*, are a family of germs that are difficult to treat because they have high levels of resistance to antibiotics. *Klebsiella* species and *Escherichia coli* (*E. coli*) are examples of *Enterobacteriaceae*, a normal part of the human gut bacteria, that can become carbapenem-resistant. Types of CRE are sometimes known as KPC (*Klebsiella pneumoniae* carbapenemase) and NDM (New Delhi Metallo-beta-lactamase). KPC and NDM are enzymes that break down carbapenems and make them ineffective. Both of these enzymes, as well as the enzyme VIM (Verona Integron-Mediated Metallo- β -lactamase) have also been reported in *Pseudomonas*.

Healthy people usually do not get CRE infections – they usually happen to patients in hospitals, nursing homes, and other healthcare settings. Patients whose care requires devices like ventilators (breathing machines), urinary (bladder) catheters, or intravenous (vein) catheters, and patients who are taking long courses of certain antibiotics are most at risk for CRE infections.

Some CRE bacteria have become resistant to most available antibiotics. Infections with these germs are very difficult to treat, and can be deadly—one report cites they can contribute to death in up to 50% of patients who become infected.

- CDC: Carbapenem-resistant *Enterobacteriaceae* in Healthcare Settings
 - <https://www.cdc.gov/hai/organisms/cre/index.html>

Critical Access Hospitals

- State Operations Manual (SOM): Appendix W – Guidance for Surveyors: Critical Access Hospitals and Swing-Beds in CAHs
 - <https://cha.com/wp-content/uploads/2018/05/CMS-SOM-Appendix-W-CAHs.pdf>

Cystic Fibrosis and Isolation

SHEA

- [Infection Prevention and Control Guideline for Cystic Fibrosis: 2013 Update](#)

Dialysis Safety

- CDC: [Dialysis Safety – Infection Prevention Tools](#)

Disinfection & Sterilization

- CDC: Guidelines for Disinfection and Sterilization in Healthcare Facilities (2008)
 - <https://www.cdc.gov/infectioncontrol/guidelines/disinfection/index.html>
- William Rutala: Disinfection & Sterilization
 - <https://disinfectionandsterilization.org/>
 - Resources include:
 - [Ambulatory Care – UNC Health Care Policy](#)
 - [High-Level Disinfection and Sterilization Audit Checklist](#)
 - [CDC Guideline for Disinfection and Sterilization in Healthcare Facilities, 2008](#)
 - [FDA-Cleared Sterilants and High Level Disinfectants with General Claims for Processing Reusable Medical and Dental Devices](#)
 - [Selection of the Ideal Disinfectant](#)
 - [FAQ: Contact time for disinfectants used on non-critical items](#)
 - [Disinfection Risk Assessment](#)
 - [EPA-Registered Antimicrobial Products](#)
 - [UNCHC Endoscope Reprocessing Competency Checklist](#)
 - [Endoscope Culture Protocol](#)
 - [IC Inpatient Audit Tool](#)
 - [IC for Ambulatory Care Checklist](#)

Disinfection & Sterilization

- ICAP (Nebraska Medicine):
 - What is the recommendation for cleaning the brushes used when cleaning equipment in the sterile processing department, or when high level disinfecting equipment?
 - What is the recommendation for alcohol purge and forced air drying after endoscope reprocessing?
 - What factors should be considered when developing a protocol or policy for cleaning and disinfection of blood glucose meters used on multiple patients?
 - Is it sufficient to clean shared nail clippers with alcohol?
 - What are the requirements for storing sterile items?
 - Should gait belts be assigned per aide/therapist, and used on several residents, or should they be dedicated to one resident, and only used for that resident?
 - Are there specific resources for reprocessing of flexible endoscopes?

DNV NIAHO Accreditation (similar to Joint Commission)

- NIAHO Accreditation Requirements, Interpretive Guidelines and Surveyor Guidance
 - <https://cha.com/wp-content/uploads/2018/05/2018-DNV-NIAHO-Guidelines.pdf>



NATIONAL INTEGRATED ACCREDITATION FOR HEALTHCARE ORGANIZATIONS (NIAHO®)

Accreditation Requirements,
Interpretive Guidelines and Surveyor Guidance - Revision 18

DNV GL Healthcare
400 Techn Center Drive, Suite 100
Milford, OH 45150
Phone 513-947-8343 • Fax 513-947-1250
© Copyright 2005-2018 DNV GL Healthcare USA, Inc.
All Rights Reserved. No claim to U.S. Government work.

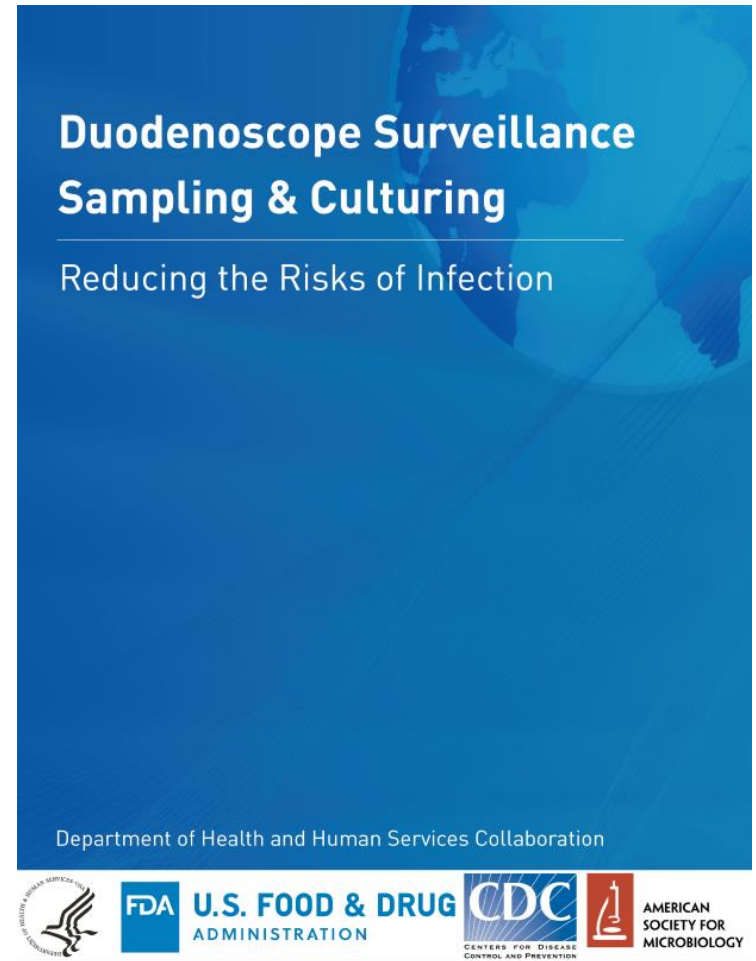
Duodenoscope Protocols

The FDA, along with CDC, representatives from the American Society for Microbiology (ASM) and other endoscope culturing experts, has developed voluntary standardized [protocols](#) for duodenoscope surveillance sampling and culturing.

The protocols outline steps hospitals and healthcare facilities can take to reduce the risk of infection and increase the safety of these medical devices. These steps are in addition to meticulously following manufacturer-reprocessing instructions.

<https://www.fda.gov/downloads/MedicalDevices/ProductsandMedicalPrcedures/ReprocessingofReusableMedicalDevices/UCM597949.pdf>

[FDA issues warning of non-compliance to all three manufacturers – March 2018](#)



Ebola

- CDC: [Ebola \(Ebola Virus Disease\)](#)
- ICAP (Nebraska Medicine): [Should my facility still screen patients for Ebola?](#)

Education: Patient and Family

- [“For Our Patients and Their Visitors: Help Prevent Infections”](#)
(endorsed by SHEA, IDSA, CDC, APIC, AHA, The Joint Commission)
- SHEA Patient Education Guides on HAIs
 - <http://www.shea-online.org/index.php/practice-resources/patients>
 - Surgical Site Infection (SSI)
 - Central Line-Associated Bloodstream Infection (CLABSI)
 - Catheter-Associated Urinary Tract Infection (CAUTI)
 - Ventilator-Associated Pneumonia (VAP)
 - *Clostridium-difficile* (C diff)
 - Methicillin-Resistant *Staphylococcus aureus* (MRAS)
 - Vancomycin-Resistant *Enterococcus* (VRE)

All documents written in plain language.

Endotracheal Tubes

Joint Commission FAQ: How to clean, disinfect and store

- https://www.jointcommission.org/standards_information/jcfaqdetails.aspx?StandardsFAQId=1589&StandardsFAQChapterId=69&ProgramId=5&ChapterId=69&IsFeatured=False&IsNew=False&Keyword=

Environmental Services

- Minnesota Hospital Association: Environmental Services Cleaning Guidebook
 - <https://cha.com/wp-content/uploads/2018/05/Environmental-Services-Cleaning-Guidebook-MHA.pdf>
- ICAP (Nebraska Medicine)
 - [What should NOT be stored under sinks?](#)
 - [Where can I find a list of the cleaning/disinfecting products effective for killing bacteria and viruses?](#)
 - [Is it true that when a facility has patients/residents with *Clostridium difficile* or Norovirus, a special type of disinfectant is required after cleaning?](#)

Hand Hygiene

- CDC Guideline for Hand Hygiene in Healthcare Settings, 2002
 - <https://www.cdc.gov/mmwr/PDF/rr/rr5116.pdf>
- WHO Guidelines on Hand Hygiene in Health Care, 2009
 - Full Guidelines - <http://www.who.int/gpsc/5may/tools/9789241597906/en/>
 - Summary of Guidelines - http://apps.who.int/iris/bitstream/10665/70126/1/WHO_IER_PSP_2009.07_eng.pdf?ua=1
- SHEA: Strategies to Prevent Healthcare-Associated Infections through Hand Hygiene, 2014
 - https://www.cambridge.org/core/services/aop-cambridge-core/content/view/955E4AAEB5DDEAC61281B9ECB5D68E4F/S0899823X00193900a.pdf/strategies_to_prevent_healthcareassociated_infections_through_hand_hygiene.pdf
- Hand Hygiene Resources (compiled by CHA)
 - <https://cha.com/wp-content/uploads/2018/01/Hand-Hygiene-Resources-.pdf>

Hand Hygiene

- ICAP (Nebraska Medicine)
 - Is it safe to have alcohol hand sanitizer dispensers around confused adults?
 - Practice Briefs – Myth vs Fact regarding use of ABHR (Alcohol Based Hand Rub)
 - Are sinks used for equipment decontamination or urine specimen disposal acceptable to wash hands in as well?
 - What is a “splash zone” and what is the guidance associated with it?

Hemodialysis

- ICAP (Nebraska Medicine)
 - How should our dialysis center handle patients who are colonized or infected with resistant organisms?
 - Should our dialysis facility be using a common saline bag to draw up our flushes?
 - Our Dialysis facility does not routinely apply antibiotic ointment or povidone iodine ointment to vascular catheter exit sites. Should we?
 - Do I need to wear gloves when touching the dialysis machine during treatment?
 - Can we begin cleaning the dialysis station while the patient is still in the chair, but is finished with his session?
 - Should audits of practice be done in the dialysis setting?

Injection Safety

- CDC: Injection Safety <https://www.cdc.gov/injectionsafety/>
 - Downloadable materials <https://wwwn.cdc.gov/pubs/CDCInfoOnDemand.aspx?ProgramID=29>
 - FAQs Regarding Safe Practices for Medical Injections (including info on multi-dose vials) https://www.cdc.gov/injectionsafety/providers/provider_faqs_multivials.html
- CDC: Safe Injection Practices to Prevent Transmission of Infections to Patients https://www.cdc.gov/injectionsafety/ip07_standardprecaution.html
- **Joint Commission**: According to Safe Injection Practices Coalition (2010): A multi-dose vial is a bottle of liquid medication (injectable) that contains more than one dose of medication and is approved by the Food and Drug Administration (FDA) for use on multiple persons. A new, sterile needle and syringe should always be used to access the medication in a multi-dose vial. The reuse of needles or syringes to access multi-dose vial medication can result in contamination of the medicine with microbes that can be spread to others when the medicine is used again.

While there is not a specific Joint Commission standard that prohibits the use of multi-dose vials for more than one patient, organizations must comply with the original product manufacturer's intended use. For example:

- Single dose/single patient use
- Multi-dose/single patient use
- Multi-dose/multi-patient use

Injection Safety

- ICAP (Nebraska Medicine)
 - Should I verify the competency of the healthcare workers who are performing assisted blood glucose monitoring?
 - What factors should be considered when developing a protocol or policy for cleaning and disinfection of blood glucose meters used on multiple patients?

Institute for Healthcare Improvement (IHI)



- How-to Guide: Prevent Ventilator-Associated Pneumonia (includes vent bundle)
 - <https://cha.com/wp-content/uploads/2018/03/IHI-HowtoGuidePreventVAP-with-bundle.pdf>

Isolation Guidelines

- CDC 2007 Guidelines for Isolation Precautions: Preventing Transmission of Infectious Agents in Healthcare Settings (2007)
 - <https://www.cdc.gov/infectioncontrol/pdf/guidelines/isolation-guidelines.pdf>
- SHEA Expert Guidance: Duration of Contact Precautions for Acute-Care Settings
 - https://cha.com/wp-content/uploads/2018/01/ICHE-Dec-2017-duration_of_contact_precautions_for_acutecare_settings.pdf

See also *Contact Precautions - Duration*

(The) Joint Commission (TJC)

- 2018 TJC Infection Prevention and Control Standards
 - <https://cha.com/wp-content/uploads/2018/03/2018-Joint-Commission-IP-Standards.pdf>
- 2018 National Patient Safety Goal (NPSG) #7 – Hand Hygiene
 - https://cha.com/wp-content/uploads/2018/03/2018-Joint-Commission-NPSG_Infection-Prevention.pdf
- 2018 Antimicrobial Stewardship Standard – MM.09.01.01
 - <https://cha.com/wp-content/uploads/2018/03/JC-MM309.01.01-AMS-Standard.pdf>

Helpful places on their website (no membership required):

- Main TJC Page <https://www.jointcommission.org/>
- Infection Prevention and HAI Portal <https://www.jointcommission.org/hai.aspx>
- Standards Interpretation FAQs – <https://www.jointcommission.org/> (you can also sign up for alerts on new FAQs)
 - If your question is not found in the FAQs, ask TJC a question [here](#).
 - Search by chapter (e.g. Infection Prevention and Control (IC) and Medication Management (MM – antimicrobial stewardship)

Laryngoscope Blades and Handles

- Joint Commission FAQ: How to clean, disinfect and store
 - https://www.jointcommission.org/standards_information/jcfaqdetails.aspx?StandardsFAQId=1201&StandardsFAQChapterId=69&ProgramId=5&ChapterId=69&IsFeatured=False&IsNew=False&Keyword=

Linen/Laundry Resources

- The Healthcare Laundry Accreditation Council (HLAC) - <http://www.hlacnet.org/standards-documents>
 - Accreditation Standards for Professing Reusable Textiles
 - http://docs.wixstatic.com/ugd/076879_31ffa2b81d9448fcbac86d9666300034.pdf
 - Note: you can send a question to HLAC off the main page
- Association for Linen Management
 - <http://www.almnet.org/page/ResourceLibrary>
- Facility Guidelines Institute (FGI): Guidelines for Design and Construction of Hospitals and Outpatient Facilities – Linen Services, 2014
 - <https://cha.com/wp-content/uploads/2018/04/FGI-Guidelines-Linen-Services-2014.pdf>
- Joint Commission FAQ: Does the JC require employers to commercially launder surgical scrubs and other surgical attire?
 - https://www.jointcommission.org/standards_information/jcfaqdetails.aspx?StandardsFAQId=1294&StandardsFAQChapterId=69&ProgramId=5&ChapterId=69&IsFeatured=False&IsNew=False&Keyword=
- ICAP (Nebraska Medicine): *I have been cited for having linen stored inappropriately. What is the recommendation for storing linen?*
 - <https://icap.nebraskamed.com/wp-content/uploads/sites/2/2018/03/Practice-Briefs-linen-storage.pdf>

See also APIC Text Chapter 111 – Healthcare Textile Services

Linen/Laundry Resources (cont'd.)

Joint Commission – [Standards FAQs](#)

Infection Prevention and Control (IC) (Hospital and Hospital Clinics / Hospitals)

[Linen Management - Developing Requirements for Covering, Storage and Transport](#)

Does The Joint Commission have specific requirements that address linen management, such as covering, storage and transport?

No, requirements for managing linen are not defined within The Joint Commission standards. Organizations are expected to develop their linen cleaning, storage and management requirements in accordance with evidence-based sources (see IC.01.05.01 EP 1) such as the CDC, the National Association of Institutional Linen Management and/or the local or state authority having jurisdiction.

For example, the CDC's guidelines state, "Clean linen should be transported and stored by methods that will ensure its cleanliness." According to the NAILM, (National Association of Institutional Linen Management) the carts or hampers that deliver laundered linens must be cleaned prior to accepting processed linens. A clean liner within the cart is acceptable, and the linens should be covered. The guidelines state: "Carts that are going to be used to store linens on patient-care areas (hallways) must have covers on them during transportation and storage time. The covers shall protect the linens at all time during storage. They cannot be removed or adjusted in a manner that will expose linens to common traffic. Open carts that are going to be used just to dispense linens on patient-care areas need not be covered for this purpose. They cannot be used to store linens on the floors."

If an organization is unsure whether their linen management processes are compliant with such guidelines, conducting a risk assessment is a helpful way of identifying risks associated with various options being considered by the organization. A proactive risk assessment examines a process in detail including sequencing of events, actual and potential risks, and failure or points of vulnerability and that prioritizes, through a logical process, areas for improvement based on the actual or potential impact (that is, criticality) of care, treatment, or services provided.

The introductory section of the Leadership (LD) chapter provides an example of a pro-active risk assessment model that an organization may use. However, this specific approach is not mandated as there are other risk assessment tools available that may better meet the needs of the organization.

Medical Waste (waste management)

- CDPHE: Medical and Pharmaceutical Waste
 - <https://www.colorado.gov/pacific/cdphe/medicalwaste>
- OSHA: Hazardous Waste
 - <https://www.osha.gov/SLTC/hazardouswaste/index.html>
- Stericycle (medical waste management company): Knowledge Center
 - <https://www.stericycle.com/knowledge-center>

Medication Preparation

- ICAP (Nebraska Medicine)
 - What is a “splash zone” and what is the guidance associated with it?

NIOSH (National Institute for Occupational Safety and Health)

Filtering out Confusion:

FAQs about Respiratory Protection

- [Fit Testing](#)
- [User Seal Check](#)
- [Respirator Reuse and Extended Use](#)

May 2018

The FDA and the CDC National Institute for Occupational Safety and Health (NIOSH) signed a Memorandum of Understanding (MOU) to simplify regulation of N95 respirators used in healthcare settings. Federal law requires regulation of respiratory protective devices by both FDA and NIOSH. Under the MOU, NIOSH will evaluate respirators first, and if the devices meet the NIOSH threshold standards they will be exempt from FDA premarket approval requirements. Read the [FDA notice](#) and the [MOU](#).

Filtering out Confusion: Frequently Asked Questions about Respiratory Protection

Fit Testing

Over 3 million United States employees, in approximately 1.3 million workplaces, are required to wear respiratory protection. The Occupational Safety and Health Administration (OSHA) (29 CFR 1910.134) requires an annual respirator fit test to confirm the fit of any respirator that forms a tight seal on the wearer's face before it is used in the workplace. This ensures that users are receiving the expected level of protection by minimizing any contaminant leakage into the facepiece. The following are some frequently asked questions about respiratory protection and fit testing.



What is a Respirator Fit Test?



A fit test is conducted to verify that a respirator is both comfortable and correctly fits the user. Fit test methods are classified as either qualitative or quantitative. A qualitative fit test is a pass/fail test that relies on the individual's sensory detection of a test agent, such as taste, smell, or involuntary cough (a reaction to irritant smoke*). A quantitative fit test uses an instrument to numerically measure the effectiveness of the respirator.

The benefits of a fit test include better protection for the employee and verification that the employee is wearing a correctly-fitting model and size of respirator.¹ Higher than expected levels of exposure to a contaminant may occur if the respirator has a poor face seal against the user's skin, which can result in leakage.

How Often Must Fit Testing Be Conducted?

In addition to fit testing upon initially selecting a model of respirator, OSHA requires that fit testing be conducted annually, and repeated "whenever an employee reports, or the employer or the physician or other licensed health care professional makes visual observations of changes in the employee's physical condition that could affect respirator fit (e.g., facial scarring, dental changes, cosmetic surgery, or an obvious change in body weight)."²

The appropriate length of time between respirator fit tests has been a point of debate and discussion for many years due to its use of workplace time and resources, especially in reference to the commonly-used filtering facepiece respirator (FFR).³ In response to these concerns, NIOSH completed a study that confirmed the necessity of the current OSHA respirator fit testing requirement, both annually and when physical changes have occurred.⁴



Centers for Disease Control
and Prevention
National Institute for Occupational
Safety and Health

NHSN

- Main website: <https://www.cdc.gov/nhsn/>
 - 2018 NHSN Patient Safety Component Manual (definitions for all HAIs reported into NHSN) https://www.cdc.gov/nhsn/pdfs/pscmanual/pcsmanual_current.pdf
- Acute Care Hospitals: <https://www.cdc.gov/nhsn/acute-care-hospital/index.html>
 - Sections for each of the following:
 - BSI – Surveillance for bloodstream infections
 - UTI – Surveillance for urinary tract infections
 - MDRO/C diff – Surveillance for C. difficile, MRSA, and other Drug-resistant Infections
 - SSI – Surveillance for Surgical Site Infection Events
 - VAE – Surveillance for Ventilator-associated Events
 - Surveillance for Healthcare Personnel Vaccination
- Newsletters: <https://www.cdc.gov/nhsn/newsletters/index.html>
- NHSN Basic Training webinars available through CHA. Contact toni.foos@cha.com for more information.

NHSN

- [Guide to the SIR](#)

Table of Contents

Overview of the Standardized Infection Ratio (SIR)	4
Calculating the Number of Predicted Infections	5
Logistic Regression Model (Example: SSI)	5
Negative Binomial Regression Model (Example: LabID Event)	8
Finding and Interpreting SIRs in NHSN	11
How do I Interpret the SIRs?	12
SIR Guide Supplement: Risk Adjustment Factors Included in the SIR, 2015 Baseline	14
Introduction to the SIR Guide Supplement	14
CLABSI – Central Line-Associated Bloodstream Infection	15
MBI-LCBI - Mucosal Barrier Injury Laboratory-Confirmed Bloodstream Infection	19
CAUTI – Catheter-Associated Urinary Tract Infection	20
VAE – Ventilator-Associated Events	24
a) Total VAE	24
b) Infection-Related Ventilator-Associated Complication (IVAC) Plus	25
SSI- Surgical Site Infections	26
MRSA Bacteremia Laboratory-Identified Events	36
<i>Clostridium difficile</i> (CDI) Laboratory-Identified Events	38
Using an Intercept-Only Model to Calculate the Number of Predicted Events	41
Additional Resources	42

Novice Infection Preventionist

- APIC: [Roadmap for the Novice Infection Preventionists](#) (requires membership)
- APIC Prevention Strategist: [Onboarding a Novice IP](#)

Occupational Health

- Organizations
 - American Association of Occupational Health Nurses (AAOHN)
 - <http://aaohn.org/>
 - Association of Occupational Health Professionals in Healthcare (AOHP)
 - <http://aohp.org/aohp/default.aspx>
- OSHA
 - Health care main page, including s Culture of Safety, Infectious Diseases, Safe Patient Handling, Workplace Violence and other Hazards
 - <https://www.osha.gov/SLTC/healthcarefacilities/>
 - Respiratory Protection (29 CFR 1910.134)
 - https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=12716
 - Personal Protection Standard (PPE) (29 CFR 1910.132)
 - https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=9777

Occupational Health

- Vaccinations
 - CDC Recommended Vaccines for Healthcare Workers
 - <https://www.cdc.gov/vaccines/adults/rec-vac/hcw.html>
 - Immunization of Healthcare Personnel: Recommendations of the Advisory Committee on Immunization Practices (ACIP)
 - <https://www.cdc.gov/mmwr/preview/mmwrhtml/rr6007a1.htm>
- National Institute for Occupational Safety and Health (NIOSH)
 - Specific workplace safety information for health care workers
 - <https://www.cdc.gov/niosh/topics/healthcare/>
 - Chemical Hazards - Includes link to NIOSH list of antineoplastic and other hazardous drugs in healthcare settings, 2016
 - <https://www.cdc.gov/niosh/topics/healthcare/chemical.html>
 - Respiratory Protection FAQs (see NIOSH Resources slide)

Filtering out Confusion: Frequently Asked Questions about Respiratory Protection

Fit Testing

Over 3 million United States employees, in approximately 1.3 million workplaces, are required to wear respiratory protection. The Occupational Safety and Health Administration (OSHA) (29 CFR 1910.134) requires an annual respirator fit test to confirm the fit of any respirator that forms a tight seal on the wearer's face before it is used in the workplace. This ensures that users are receiving the expected level of protection by minimizing any contaminant leakage into the facepiece. The following are some frequently asked questions about respiratory protection and fit testing.



Operating Room Attire (ear and hair coverage)

April 26, 2018

A Statement from the Meeting of ACS, AORN, ASA, APIC, AST, and TJC

The American College of Surgeons (ACS), the American Society of Anesthesiologists (ASA), the Association of peri-Operative Registered Nurses (AORN), the Association for Professionals in Infection Control and Epidemiology (APIC), the Association of Surgical Technologists (AST), the Council on Surgical and Perioperative Safety (CSPS); and The Joint Commission (TJC) met on February 27, 2018, to review and discuss the literature related to recommendations for operating room (OR) attire, specifically ear and hair covering.

Over the past two years, as recommendations were implemented, it became increasingly apparent that in practice, covering the ears is not practical for surgeons and anesthesiologists and in many cases counterproductive to their ability to perform optimally in the OR. Furthermore, in reassessing the strength of the evidence for this narrowly defined recommendation, the group concluded the following:

- Evidence-based recommendations on surgical attire developed for perioperative policies and procedures are best created collaboratively, with a multi-disciplinary team representing surgery, anesthesia, nursing, and infection prevention.
- The requirement for ear coverage is not supported by sufficient evidence.
- At present, available scientific evidence does not demonstrate any association between the type of hat or extent of hair coverage and SSI rates. One recent study¹ on head coverings (disposable bouffant or skullcap, cloth cap), identified that the commonly available disposable bouffant hat is the least effective barrier to transmission of particles.
- Other issues regarding areas of surgical attire need further evaluation.

1. Markel TA, Gormley T, Greeley D, Ostojic J, Wise A, Rajala J, Bharadwaj R, Wagner J. Hats Off: A Study of Different Operating Room Headgear Assessed by Environmental Quality Indicators. JACS, 225(5): 573-581, 2017.

OSHA (Occupational Safety and Health Administration)

Bloodborne Pathogens Standard

- Bloodborne pathogens. - 1910.1030 | Occupational Safety and Health Standards
 - https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=standards&p_id=10051
- Standard Interpretations
 - https://www.osha.gov/pls/oshaweb/owasrch.search_form?p_doc_type=INTERPRETATIONS&p_toc_level=3&p_keyvalue=1910.1030&p_status=CURRENT

Tuberculosis

- Field Operations (provides policies and procedures for inspectors while they conduct inspections and issue citations related to occupational exposure to TB)
 - https://www.osha.gov/OshDoc/Directive_pdf/CPL_02-02-078.pdf
- Tuberculosis Standards (overview)
 - <https://www.osha.gov/SLTC/tuberculosis/standards.html>
- OSHA: Healthcare Wide Hazards – Tuberculosis (excellent, easy to use resource)
 - <https://www.osha.gov/SLTC/etools/hospital/hazards/tb/tb.html>

Safety and Health Topics https://www.osha.gov/SLTC/text_index.html

Outbreak Response Guidance

- [SHEA Expert Guidance: Outbreak Response and Incident Management: SHEA Guidance and Resources for Healthcare Epidemiologists in United States Acute-Care Hospitals](#)
 - This expert guidance document was developed as a resource to provide healthcare epidemiologists working in acute-care hospitals with a high-level overview of incident management for infectious diseases outbreaks and to prepare them to work within an emergency response framework.
- [SHEA Outbreak Response Training Program](#) (four free tool kits)
 - Incident Management
 - Communication, Negotiation, Implementation
 - Horizontal Strategies
 - Emerging Pathogens

Pediatric Infection Control

- American Academy of Pediatrics – *Statement on Infection Prevention and Control in Pediatric Ambulatory Settings - 2017*
 - <http://pediatrics.aappublications.org/content/early/2017/10/19/peds.2017-2857>

Policy Samples

- ICAP (Nebraska Medicine)
 - [Safe Injection Policy Template](#)
 - [Hand Hygiene sample policy \(Access fillable file by opening in Google Chrome\)](#)
 - [ICAP Standard Precautions Acute Care sample policy](#)
 - [Standard Precautions LTC Sample Policy](#)
 - [ICAP Transmission-based Precautions Acute Care Sample Policy](#)
 - [ICAP Transmission-based Precautions LTC Sample Policy](#)
 - [Under Sink Storage Sample Policy](#)
 - [Virginia Dept of Health UTI Incontinence Assessment Policy \(fall 2011\)](#)
 - [Virginia Dept of Health Perineal Care for Incontinent Residents Policy \(fall 2011\)](#)
 - [Virginia Dept of Health Prevention of UTIs and CAUTIs Policy \(fall 2011\)](#)

Protocol Samples

- ICAP (Nebraska Medicine)
 - [Glucometer Cleaning Protocol Template](#)

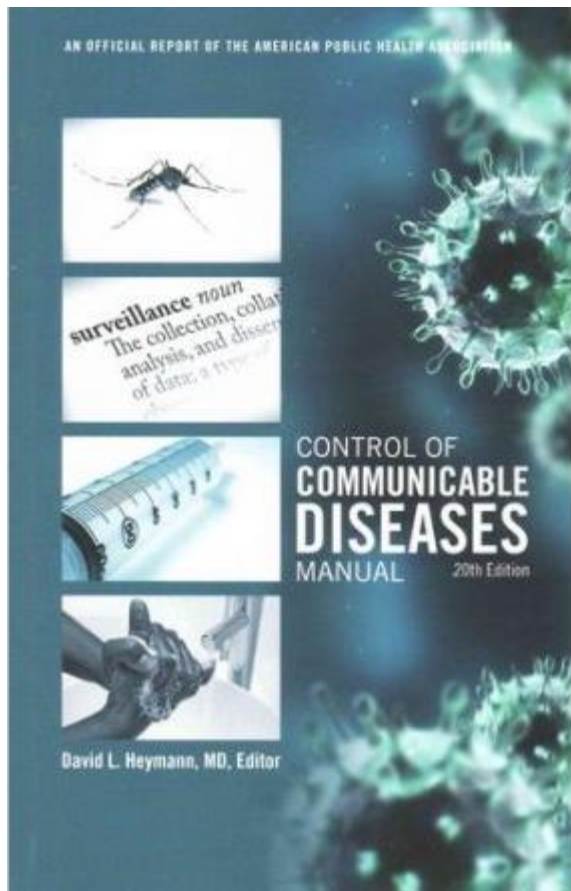
Policy Review

- ICAP (Nebraska Medicine)
 - [How do I go about reviewing infection control policies and bringing them up to date?](#)

PreOp Antibiotic Guidelines

- Clinical practice guidelines for antimicrobial prophylaxis in surgery
 - Developed jointly by the American Society of Health-System Pharmacists (ASHP), the Infectious Diseases Society of America (IDSA), the Surgical Infection Society (SIS), and the Society for Healthcare Epidemiology of America (SHEA).
 - [http://www.idsociety.org/uploadedFiles/IDSA/Guidelines-Patient_Care/PDF_Library/2013%20Surgical%20Prophylaxis%20ASHP,%20IDSA,%20SHEA,%20SIS\(1\).pdf](http://www.idsociety.org/uploadedFiles/IDSA/Guidelines-Patient_Care/PDF_Library/2013%20Surgical%20Prophylaxis%20ASHP,%20IDSA,%20SHEA,%20SIS(1).pdf)

Printed Resources



Control of Communicable Diseases Manual, 20th Edition Every chapter updated, and most benefitting from parallel updated by international experts, at both, CDC and WHO, priority has been given to ensuring global relevance. New disease variants have been included and some chapters have been fundamentally reworked. The 20th edition is a timely update to a milestone reference work that ensures the relevance and usefulness to every public health professional around the world.

"Since 2008 we have seen an explosion in infectious diseases of international concern. In 2009 we had the H1N1 pandemic. In 2012 a new, highly fatal coronavirus named Middle East Respiratory Syndrome (MERS) was first reported out of Saudi Arabia. And as we go to press, an old foe Ebola is creating the largest epidemic of Ebola virus disease (EVD) in human history. All 3 of these cases reinforce the need for health practitioners to have an expert guide in the use of sound infection control practices. This new version of *Control of Communicable Diseases Manual* (CCDM), the 20th revision of this 96-year-old favorite of the health community, is now available to address these important concerns." From the Forward - Georges C. Benjamin, MD, Executive Director, American Public Health Association

Quality Improvement

- Institute for Healthcare Improvement – IHI's [Quality Improvement Essentials Toolkit](#) includes the tools and templates you need to launch and manage a successful improvement project. Each of the ten tools in the toolkit includes a short description, instructions, an example and a blank template.

Refrigerators

- ICAP (Nebraska Medicine)
 - What type of thermometer should I use when monitoring our facility medication refrigerator temperatures? What do I document, and how often?
 - Can I store vaccines in the door of our medication refrigerator?

Research Resources

Research Resources (APIC's Industry Perspectives)

Below is a list of resources to assist IPs and other healthcare professionals in writing, reviewing and evaluating research:

- [Reading, Writing and Research for Infection Prevention: Essential Tools for Today's IP](#)
- [An infection preventionists guide to evaluating research studies](#)
- [What do infection preventionists want to know: Queries of *IP Talk* and APIC.org](#)
- [Writing scientific abstracts](#)
- [Let's publish!! Advancing your abstract to a manuscript](#)
- [Journal Club: A venue to advance evidence-based infection prevention practice](#)
- [The APIC research agenda: Results from a national survey](#)
- [Moving evidence from the literature to the bedside: Report from the APIC Research Task Force](#)

Research Resources

- [APIC's Research Webinar Series](#) – Free benefit for members
 - Where Do I Start?
 - Designing a Study
 - Data, Data and More Data
 - How to Take Results and Inform Others
 - Implementation Science

Ryan White Notification Law

- Ryan White Comprehensive AIDS Resource Emergency (CARE) Act
 - Establishes a process for medical facilities to notify emergency responders (e.g., firefighters, paramedics, EMTs, law enforcement officers and EMS volunteers), through designated officers, that they may have been exposed to certain infectious diseases.
 - <https://hab.hrsa.gov/about-ryan-white-hiv-aids-program/ryan-white-hiv-aids-program-legislation>


Sepsis

- WHO: [How to prevent sepsis](#) infographic
- [CHA Sepsis](#)

SHEA Resources (The Society for Healthcare Epidemiology of America)

- Patient Education Guides on HAIs
 - <http://www.shea-online.org/index.php/practice-resources/patients>
 - Surgical Site Infection (SSI)
 - Central Line-Associated Bloodstream Infection (CLABSI)
 - Catheter-Associated Urinary Tract Infection (CAUTI)
 - Ventilator-Associated Pneumonia (VAP)
 - *Clostridium-difficile* (C diff)
 - Methicillin-Resistant *Staphylococcus aureus* (MRAS)
 - Vancomycin-Resistant *Enterococcus* (VRE)
 - HAI Guide for Patients and Visitors

All documents written in plain language.



FAQs
(frequently asked questions)

about
"Catheter-Associated Urinary Tract Infection"

What is "catheter-associated urinary tract infection"?
A urinary tract infection (also called "UTI") is an infection in the urinary system, which includes the bladder (which stores the urine) and the kidneys (which filter the blood to make urine). Germs (for example, bacteria or yeasts) do not normally live in these areas; but if germs are introduced, an infection can occur.
If you have a urinary catheter, germs can travel along the catheter and cause an infection in your bladder or your kidney; in that case it is called a catheter-associated urinary tract infection (or "CA-UTI").

What is a urinary catheter?
A urinary catheter is a thin tube placed in the bladder to drain urine. Urine drains through the tube into a bag that collects the urine. A urinary catheter may be used:
• If you are not able to urinate on your own
• To measure the amount of urine that you make, for example, during intensive care
• During and after some types of surgery
• During some tests of the kidneys and bladder
People with urinary catheters have a much higher chance of getting a urinary tract infection than people who don't have a catheter.

Catheter insertion
• Catheters are put in only when necessary and they are removed as soon as possible.
• Only properly trained persons insert catheters using sterile ("clean") technique.
• The skin in the area where the catheter will be inserted is cleaned before inserting the catheter.
• Other methods to drain the urine are sometimes used, such as external catheters in men (these look like condoms and are placed over the penis rather than into the penis)
• Putting a temporary catheter in to drain the urine and removing it right away. This is called intermittent urethral catheterization.

Catheter care
• Healthcare providers clean their hands by washing them with soap and water or using an alcohol-based hand rub before and after touching your catheter.
If you do not see your providers clean their hands, please ask them to do so.
• Avoid disconnecting the catheter and drain tube. This helps to prevent germs from setting into the catheter tube.

SHEA Resources (cont'd.)

- Compendium of Strategies to Prevent Healthcare-Associated Infections in Acute Care Hospitals
 - <http://www.shea-online.org/index.php/practice-resources/priority-topics/compendium-of-strategies-to-prevent-hais>
 - Strategies to Prevent Catheter-Associated Urinary Tract Infections in Acute Care Hospitals: 2014 Update
 - Strategies to Prevent Surgical Site Infections in Acute Care Hospitals: 2014 Update
 - Strategies to Prevent Clostridium difficile Infections in Acute Care Hospitals: 2014 Update
 - Strategies to Prevent Methicillin-Resistant Staphylococcus aureus Infections in Acute Care Hospitals: 2014 Update
 - Strategies to Prevent Central Line-Associated Bloodstream Infections in Acute Care Hospitals: 2014 Update
 - Commentary: Approaches for Preventing Healthcare-Associated Infections: Go Long or Go Wide?
 - Strategies to Prevent Ventilator-Associated Pneumonia in Acute Care Hospitals: 2014 Update
 - Strategies to Prevent Healthcare-Associated Infections through Hand Hygiene
 - A View from The Joint Commission Perspective: Updated Compendium Will Continue to Help Reduce Healthcare-Associated Infections
 - An Infection Preventionist's View of the Compendium of Strategies to Prevent Healthcare-Associated Infections: Structure, Process, and Outcome

SHEA Resources (cont'd.)

- SHEA Guidelines and Expert Guidance Documents
 - <http://www.shea-online.org/index.php/practice-resources>
 - [SHEA Expert Guidance: Duration of Contact Precautions for Acute-Care Settings](#)
 - [SHEA Expert Guidance: Outbreak Response and Incident Management: SHEA Guidance and Resources for Healthcare Epidemiologists in United States Acute-Care Hospitals](#)
 - [Implementing an Antibiotic Stewardship Program: Guidelines by the Infectious Diseases Society of America and the Society of Healthcare Epidemiology of America](#)
 - [Expert Guidance: Isolation Precautions for Visitors](#)
 - [Expert Guidance: Animals in Healthcare Facilities: Recommendations to Minimize Potential Risks](#)
 - [Infection Prevention and Control Guideline for Cystic Fibrosis: 2013 Update](#)
 - [Healthcare Personnel Attire in Non-Operating-Room Settings](#)
 - [Infection Prevention and Control in Residential Facilities for Pediatric Patients and Their Families](#)
 - [Clinical Practice Guidelines for Antimicrobial Prophylaxis in Surgery](#)
 - [Guideline for Disinfection and Sterilization of Prion-Contaminated Medical Instruments](#)

SSIs (surgical site infections)

- AHRQ Toolkit to Promote Safe Surgery
<https://www.ahrq.gov/professionals/quality-patient-safety/hais/tools/surgery/index.html>
- AHRQ Toolkit to Improve Safety in Ambulatory Surgery Centers
<https://www.ahrq.gov/professionals/quality-patient-safety/hais/tools/ambulatory-surgery/index.html>
- APIC Guide to Elimination of Orthopedic and Mediastinitis SSIs
<https://apic.org/Professional-Practice/Implementation-guides>
- CDC Guideline for Prevention of SSIs
<https://jamanetwork.com/journals/jamasurgery/fullarticle/2623725>
- CMS SSI Reporting: Operational Guidance for Fulfilling Hospital Inpatient IQR Requirements
<https://www.cdc.gov/nhsn/pdfs/cms/ssi/Final-ACH-SSI-Guidance.pdf>
- SHEA Patient Education Guide – SSI
<http://www.shea-online.org/index.php/practice-resources/patients>
- SHEA Strategies to Prevent SSIs in Acute Care Settings
<http://www.shea-online.org/index.php/practice-resources/priority-topics/compendium-of-strategies-to-prevent-hais>
- 7S Bundle for Reducing SSIs
<http://www.7sbundle.com/>

SSIs (surgical site infections)

- Air Contamination and SSI Risk – Resources from presentation by Maureen Spencer, 2018
 - <https://cha.com/wp-content/uploads/2018/03/Air-Contamination-SSI-Risk-MileHigh-APIC-Presentation-Maureen-Spencer.pptx>

(basic) Statistics Resources

- p Value, Type I and Type II Errors - https://www.statsdirect.com/help/basics/p_values.htm
- Standard Deviation, Normal Distribution - https://en.wikipedia.org/wiki/Standard_deviation
- Correlation - <https://www.mathsisfun.com/data/correlation.html>

Quality Innovation Network – Quality Improvement Organization (QIN-QIO)

What is Telligen: Telligen is the Quality Innovation Network-Quality Improvement Organization (QIN-QIO) for Colorado, Illinois, and Iowa. The QIN-QIO program helps the [Centers for Medicare & Medicaid Services \(CMS\)](#) implement key elements of the Department of Health and Human Services' [National Quality Strategy](#) and federal healthcare reform efforts. They partner with healthcare providers, community stakeholders and people with Medicare and their families to spread best practices and evidence-based healthcare. Key focus areas include: antibiotic stewardship, cardiac health, care coordination, diabetes care, immunizations, medication safety, nursing homes care, quality payment program and transforming clinical practice initiative.

Antibiotic Stewardship in Outpatient Settings

- [Antibiotics Aren't Always the Answer](#)
- [CDC Core Elements of Outpatient Antibiotic Stewardship](#)
- [CDC Adult Antibiotic Prescribing Guidelines](#)
- [Outpatient Antibiotic Stewardship Starter Kit](#)
- [Outpatient Antibiotic Stewardship Playbook](#)
- [Implementing Outpatient Antibiotic Stewardship into your Outpatient Practice](#)
- [Outpatient Antibiotic Stewardship Sample Policies](#)

Nursing Home Care

- [Antibiotic Stewardship in Nursing Homes Toolkit](#)
- [Antibiotic Stewardship Nursing Home Training](#)
- [Clostridium difficile Prevention for Nursing Homes Toolkit](#)
- [NHSN for Long-term Care Facilities](#)

Tools and Forms

ICAP (Nebraska Medicine)

CDC Infection Control Self-Assessment Tools

[CDC Hospital IC Worksheet 2016](#)

[CDC Long Term Care IC Worksheet 2016](#)

[CDC Dialysis IC Worksheet 2017](#)

[CDC Outpatient IC Worksheet 2016](#)

CMS Audit Tools

[CMS Audit of Practice Tools](#)

Disinfection/Sterilization

[Cidex OPA Competency Checklist](#)

Environment

[APIC Environmental Rounds Worksheet](#)

[AORN Sample Cleaning Checklist General](#)

[AORN Sample Cleaning Checklist SPD \(Sterile Processing\)](#)

[Annual Blacklight Tracking Workbook \(Access fillable file by opening in Google Chrome\)](#)

[CDC Environmental Cleaning Checklist](#)

Hand Hygiene

[ICAP Hand Hygiene Monitoring in Hospitals](#)

[ICAP Hand Hygiene Monitoring in LTC](#)

[Hand Hygiene Audit Tool Adapted from WHO](#)

[ASC Quality Collaboration on CMS Hand Hygiene](#)

High Level Disinfection of Endoscopes

[Flex Endo Reprocessing-Audit Tool](#)

Infection Surveillance

[Culture Based Surveillance Algorithm](#)

Injection Safety

[ICAP Blood Glucose Monitoring Audit Tool](#)

[Virginia Dept of Health Administrator's Checklist for Safe BGM](#)

[ICAP Injectable Medication Administration checklist](#)

[NC SPICE Injection Safety Competency Tool](#)

Long Term Care Illness Logs and Tracking

[Virginia General Illness Log](#)

[Virginia Monthly Infections Tracking Sheet](#)

Medication Administration

[ASHP Advantage Insulin Pen Storage and Labeling Audit](#)

Personal Protective Equipment

[NC SPICE PPE Competency](#)

[Winnipeg Regional Health Authority PPE Audit Checklist](#)

Refrigerator Temperature Log

[Immunization Action Coalition Vaccine Refrigerator Temperature Log](#)

Risk Assessment for Long-Term Care Facilities

[NC SPICE Risk Assessment Template for LTC](#)

Staff audits

[IP Training Competency Audit Tool LTCF](#)

[IP Training Competency Audit Tool Acute Care](#)

Surveillance

[Culture Based Surveillance Algorithm](#)

Transfer Form

[CDC LTC Transfer Form example](#)

Visitor Screening

[ICAP Pediatric Services Sibling/Visitor Health Screen](#)

Tuberculosis (TB) Resources

- ICAP (Nebraska Medicine)
 - [I have heard that I should have a TB Prevention and Control Plan at my facility. What comprises a TB Prevention and Control Plan?](#)
- CDC Basic TB Facts
 - <https://www.cdc.gov/tb/topic/basics/default.htm>
- CDC/MMWR: Guidelines for Preventing the Transmission of *Mycobacterium tuberculosis* in Health-Care Settings, 2005
 - https://www.cdc.gov/mmwr/preview/mmwrhtml/rr5417a1.htm?s_cid=rr5417a1_e
- OSHA: Field Operations (provides policies and procedures for inspectors while they conduct inspections and issue citations related to occupational exposure to TB)
 - https://www.osha.gov/OshDoc/Directive_pdf/CPL_02-02-078.pdf
- OSHA: Tuberculosis (excellent, easy to use resource)
 - <https://www.osha.gov/SLTC/tuberculosis/standards.html>
- OSHA: Healthcare Wide Hazards – Tuberculosis (another excellent resource)
 - <https://www.osha.gov/SLTC/etools/hospital/hazards/tb/tb.html>

Tuberculosis (TB) Resources (cont'd.)

- National Tuberculosis Controllers Association: Consensus statement on the use of Cepheid Xpert MTB/RIF® assay in making decisions to discontinue airborne infection isolation in healthcare settings
 - https://cha.com/wp-content/uploads/2018/03/NTCA_APHL_GeneXpert_Consensus_Statement_Final.pdf
- CDPHE: TB for Health Care Professionals
 - <https://www.colorado.gov/pacific/cdphe/tb-providers>
- 2017 Update on TB in the U.S.
 - https://www.cdc.gov/mmwr/volumes/67/wr/mm6711a2.htm?s_cid=mm6711a2_e

Ultrasound Gel

- ICAP (Nebraska Medicine)
 - Is it okay to use a bulk container and “top off” ultrasound transmission gel containers?

VAE (ventilator-associated event)

- AHRQ Toolkit to Improve Safety for Mechanically Ventilated Patients
 - <https://www.ahrq.gov/professionals/quality-patient-safety/hais/tools/mvp/index.html>
- AHRQ: Daily Care Processes Guide for Reducing VAEs
 - <https://www.ahrq.gov/sites/default/files/wysiwyg/professionals/quality-patient-safety/hais/tools/mvp/modules/technical/daily-care-processes-guide.pdf>
- ICU Liberation ABCDEF Bundle
 - <http://www.iculiberation.org/Bundles/Pages/default.aspx>
- IHI: How-to Guide: Prevent Ventilator-Associated Pneumonia (includes vent bundle)
 - <https://cha.com/wp-content/uploads/2018/03/IHI-HowtoGuidePreventVAP-with-bundle.pdf>
- SHEA Patient Education Guide – VAE
 - <http://www.shea-online.org/index.php/practice-resources/patients>
- SHEA Strategies to Prevent VAP in Acute Care Settings
 - <http://www.shea-online.org/index.php/practice-resources/priority-topics/compendium-of-strategies-to-prevent-hais>

Videos

- Partnering to Heal – CDC Office of Disease Prevention and Health Promotion
 - <https://health.gov/hcq/training-partnering-to-heal.asp>
 - Excellent video for new hire orientation – can stop it at any point

Water Management

- CMS: [Requirement to Reduce *Legionella* Risk in Healthcare Facility Water Systems to Prevent Cases and Outbreaks of Legionnaires' Disease \(LD\)](#)
- CDPHE Webinar: [Legionella Prevention in Health Care Facilities](#). Presented June 9, 2017.

WHO (World Health Organization)

- WHO Guidelines on Hand Hygiene in Health Care (2009)
 - <http://www.who.int/gpsc/5may/tools/9789241597906/en/>