



# Long-Term Care Infection Prevention & Control Toolkit

May 16, 2022

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\*Available in Additional Resources section

## Background

In response to the SARS-CoV-2 pandemic, Hennepin County Public Health (HCPH) received funding from the National Association of County and City Health Officials to explore infection prevention and control (IPC) capacity-building strategies for county staff and long-term care facilities (LTCF).

HCPH compiled a selection of resources intended to contribute to LTCF IPC program development and ultimately help inform the IPC risk assessment. Resources can serve as an index of IPC concepts and will be revised as new resources become available.

## Acknowledgements

This work was made possible by the many community and facility partners who contributed their time and expertise to HCPH's IPC capacity building endeavor. This document incorporates many ideas, tools and processes shared by our LTCF partners, who include:

- The twelve Hennepin County LTCF who collaborated to complete on-site and virtual IPC assessments
- Minnesota Department of Health (MDH) Infection Control Assessment & Response (ICAR) Team
- Minnesota chapter of the Association for Professionals in Infection Control and Epidemiology (APIC-MN)  
\*Special thanks to Candi Shearen, educator for the Basics in Infection Prevention course-LTC breakout session
- Stratis Health
- City of St. Louis Park Community Health Initiative and Care Resource Connections
- Hennepin County Human Services Nursing Facility Liaisons
- Care Providers of Minnesota
- LeadingAge of Minnesota
- Dr. Roberta Meyers, Hennepin Healthcare

Long-Term Care Infection Prevention Coalition members are leading efforts to revise this toolkit & maximize its utility.

## Disclaimer Statement

This toolkit was created in a good faith effort to provide IPC resources for LTCF and their partners. Please consult original sources of all links and references to capture their full context and to ensure decision making is based on the most current guidance. Toolkit content is neither a comprehensive list of resources nor is it intended to be a substitute for clinical judgment, professional medical diagnosis or treatment. Ideas and interpretations are included but do not replace guidance, recommendations or requirements of government public health agencies, professional IPC organizations or applicable regulatory, accreditation or certification agencies, etc. Facilities are responsible for ensuring that the facility's practices align with current guidance and regulatory requirements.

## For Questions and Consultation

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## Infection Prevention & Control Program Bundle for Long-Term Care Leadership & Local Public Health: Establishing a Culture of Quality & Safety in Long-Term Care Facilities

The Institute for Healthcare Improvement (IHI) describes a healthcare bundle as “a structured way of improving the processes of care and patient outcomes: a small, straightforward set of evidence-based practices- generally three to five- that, when performed collectively and reliably, have been proven to improve patient outcomes.”<sup>1</sup> HCPH applied a public health lens to the traditional healthcare bundle and proposes an IPC program bundle intended to guide long-term care leadership and local public health agencies’ efforts to establish an organizational culture focused on quality and safety. In the graphic below, the outer circle of hexagons represents the program bundle elements; the infrastructure upon which the IPC activities at the center are built. IPC program bundle elements are iterative, interdependent and may occur simultaneously.

Infection Prevention & Control Program Bundle for Long-Term Care Leadership & Local Public Health: Establishing a Culture of Quality & Safety in Long-Term Care Facilities



The tables that follow propose capacity building goals, actions and measures that broadly fall into two main categories that align with the conceptual model: 1) IPC program infrastructure elements, represented by the outer ring of hexagons, and 2) direct interventions that affect IPC practices, represented by the central hexagon.

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<sup>1</sup> IHI [website](#), accessed 6/7/21

## Infrastructure: Infection Prevention and Control (IPC) Program Bundle Elements



### Engage Internal & External Partners ●

Have facility leaders provided the necessary resources & infrastructure to support the IPC program?

**GOAL:** Leadership provides dedicated time, resources & personnel for the IPC program<sup>2</sup>.

**ACTIONS:**

1. Initiate or renew infection preventionist's (IP) membership in the Association for Professionals in Infection Control & Epidemiology (APIC) Minnesota chapter; consider enrollment in the Basics of Infection Prevention course and the Center for Disease Control & Prevention's Nursing Home Training.
2. Leadership reviews and ensures IP has access to the APIC *Infection Prevention Guide to Long-Term Care*.
3. Assign one or more individuals with IPC training to provide on-site management of the IPC Program

**MEASURE:**

1. Infection Preventionist (IP) staff time allocated for IPC activities aligns with the facility risk assessment, [CDC](#)<sup>3</sup> and [APIC](#)<sup>4</sup> recommendations.
2. IP has access to foundational IPC resources, including the APIC *Infection Prevention Guide to Long-Term Care*

**RESOURCES:** **Capacity building for IPs – a good place for IPs to begin reviewing to understand the scope of IPC.**

1. IP orientation manual, checklist, courses and IPC mentoring program toolkit
2. IP professional practice standards

"To be successful, infection prevention programs require visible and tangible support from all levels of the healthcare facility's leadership." [Centers for Disease Control and Prevention \(CDC\)](#)

**GOAL:** Facility culture promotes IPC as [everyone's job](#)<sup>5</sup>.

**ACTION:** Consult multidisciplinary stakeholders in program planning and for ongoing program support; include those who impact & are impacted by IPC program processes & outcomes (i.e., a representative IPC Committee).

**MEASURE:** IP and at least one facility leader meet to identify [internal IPC program stakeholders](#); consider engaging: 1) Resident Council; 2) Multidisciplinary [frontline workers](#); 3) [IPC champions](#); 4) Leadership (e.g., environmental services, nursing, medical, laboratory, pharmacy & administrative leadership)

**RESOURCES:**

1. Building a safety culture
2. Effective communication
3. Literature on necessary infrastructure of IPC programs

**GOAL:** Engage external stakeholders with diverse skill sets & similar missions<sup>6</sup>.

**ACTIONS:**

1. Network with IPs from local hospitals and long-term care facilities by becoming an [APIC member](#).
2. Reach out to public & community health [partners](#), LTCF member [organizations](#), [Quality Innovation Network-Quality Improvement Organization](#) and Emergency Preparedness [partners](#).

**MEASURE:** Facility provides IP with a membership to [APIC-Minnesota Chapter](#).

<sup>2</sup> World Health Organization (WHO) [Improving Infection Prevention and Control at the Health Facility. Interim Practical Manual Supporting Implementation of the WHO Guidelines on Core Components of Infection Prevention and Control Programmes](#)

<sup>3</sup> CDC [Interim Infection Prevention and Control Recommendations to Prevent SARS-CoV-2 Spread in Nursing Homes \(accessed 7/30/21\)](#)

<sup>4</sup> APIC Infection Prevention Guide to Long-Term Care 2<sup>nd</sup> Edition

<sup>5</sup> AHRQ A Unit Guide To Infection Prevention for Long-Term Care Staff- [Engaging Everyone in Infection Prevention and Control](#)

<sup>6</sup> WHO [Improving Infection Prevention and Control at the Health Facility. Interim Practical Manual Supporting Implementation of the WHO Guidelines on Core Components of Infection Prevention and Control Programmes](#)

GOAL: Use standardized templates for [interfacility communication](#)<sup>7</sup>.

ACTION: Train all staff who communicate about the health status of residents being admitted, transferred or discharged (A/T/D) on the consistent use of an interfacility transfer form (ITF).

MEASURE: Proportion of A/T/D residents with completed ITF divided by the total number of A/T/D residents for the same period.

#### RESOURCES



### Assess Risks & Strengths

Have facility leaders evaluated which IPC practices pose the greatest risk for resident & employee safety?

GOAL: Inventory potential infection risks; assess current strengths, opportunities for improvement & areas where additional data are needed (consult [CMS](#) for regulatory requirements).

ACTIONS: Complete an IPC assessment from [CDC](#)<sup>8</sup> or [MDH](#)<sup>9</sup>.

1. Consider collaborating with public health [partners](#) (i.e., [Hennepin County Public Health](#) & [MDH ICAR Team](#)).

MEASURE: Policies, educational content, performance improvement activities, surveillance strategies, etc. are updated based on assessment findings and reviewed for relevance at least annually.

GOAL: Review & revise IPC risk assessment; use surveillance data to inform current IPC risk assessment & evaluate progress since the previous risk assessment<sup>10</sup> (consult [CMS](#) for regulatory requirements).

ACTIONS:

1. Calculate risk levels for each assessment item (IPC practice or infection risk opportunity) by scoring its potential for harm; see CDC's<sup>11</sup> or the Statewide Program for Infection Control and Epidemiology's (SPICE)<sup>12</sup> risk assessment templates for [questions to help stratify risk](#).
2. Contextualize the risk stratification by incorporating [data](#)<sup>13</sup> on population demographics, historical trends, community infections and updated literature.

MEASURE: Assessment is reviewed and updated as necessary and at least annually.

#### RESOURCES



### Develop an Action Plan

Has the facility used the IPC risk assessment to prioritize IPC focus areas?

GOAL: Use risk assessment to prioritize IPC goals, actions and measures<sup>14</sup>

ACTIONS: Develop/revise IPC action plan. (Suggestions below adapted from the [Model for Improvement](#).)

1. Review infection risks identified in risk assessment; use scores to prioritize focus areas.
2. Address each risk by developing a [SMART](#) goal that states what you are aiming to achieve.

<sup>7</sup> CDC [Inter-Facility Infection Control Transfer Form for States Establishing HAI Prevention Collaboratives](#)

<sup>8</sup> CDC [Infection Prevention and Control Assessment Tool for Long-term Care Facilities](#)

<sup>9</sup> Minnesota Department of Health (MDH) [COVID-19 Action Plan for Congregate Settings](#)

<sup>10</sup> APIC Infection Prevention Guide to Long-term Care 2<sup>nd</sup> Edition

<sup>11</sup> CDC website. LTCF Infection Prevention Training: [Infection Prevention and Control Resources](#) (accessed 8/22/21)

<sup>12</sup> Statewide Program for Infection Control and Epidemiology (SPICE) [Infection Control Risk Assessment Template for Long-term Care](#)

<sup>13</sup> APIC Infection Prevention Guide to Long-Term Care 2<sup>nd</sup> Edition

<sup>14</sup> WHO [Improving Infection Prevention and Control at the Health Facility: Interim Practical Manual Supporting Implementation of the WHO Guidelines on Core Components of Infection Prevention and Control Programmes](#)

- a. [Joint Commission Resources](#)<sup>15</sup> has additional recommendations for addressing IPC goals.
3. Describe the action steps you will take to achieve your goals.
4. Develop measures that will help you evaluate your progress. At times, the first step may be initiating measurement of a practice to establish a baseline.

**MEASURES:** IPC plan is reviewed at least annually & as needed based on risk assessment & changing circumstances requiring re-prioritization. Document IPC plan iterations to track intervention implementation.

**RESOURCES**

1. Infection control plan samples & templates
2. Literature



## Communicate Expectations & Empower Employees ●

Do staff understand and have easy access to policies & protocols, receive education that incorporates adult learning principles & see leadership promoting staff wellness?

**GOAL:** Current, new & updated IPC policies & protocols are written in plain language & communicated to staff<sup>16</sup>.

**ACTIONS:** Develop/revise [policies & protocols](#) “using the most current scientific evidence or, when such evidence is lacking, from best-practice guidelines and expert consensus documents.”<sup>17</sup> (see CMS & other applicable regulatory agencies for context, details & additional considerations)<sup>18</sup>

**MEASURES:**

1. Content is reviewed at least annually and as needed based on changing circumstances.
  - a. Consider designating a month of the Infection Control Committee meeting where specific policies & protocols are standing agenda items for review every year.
2. Documentation of the review and communication distribution processes are up to date.

**RESOURCES:** (See topic-specific templates in the [Infection Prevention & Control Activities](#) section)

1. Policy/procedure topics

**GOAL:** Communicate, demonstrate & reinforce IPC expectations via staff education & skills competencies that incorporate [CDC-promoted adult learning principles](#)<sup>19</sup>.

**ACTIONS:**

1. Provide education and complete HCW competency evaluations on topics 1) identified in the risk assessment and 2) covered in policies & protocols (see above).
2. Provide resident & visitor education on pertinent policies & protocols.
3. Reinforce positive HCW behaviors & provide immediate feedback when corrective action is needed.
4. Provide IP with opportunities to increase IPC knowledge and skills.

**MEASURES:**

1. Assess learners’ knowledge before & after education is delivered & via return demonstration; ensure learners’ knowledge & skills have advanced following education and if not, implement instruction modifications.
2. Documentation on completed education & HCW competency evaluations are up to date.

<sup>15</sup> Joint Commission Resources [Using the Risk Assessment to Set Goals and Develop the Infection Prevention and Control Plan](#)

<sup>16</sup> CDC [Core Infection Prevention and Control Practices for Safe Healthcare Delivery in All Settings – Recommendations of the HICPAC](#)

<sup>17</sup> APIC Infection Prevention Guide to Long-Term Care 2<sup>nd</sup> Edition

<sup>18</sup> CMS [State Operations Manual Appendix PP - Guidance to Surveyors for Long Term Care Facilities](#) (accessed 7/30/21)

<sup>19</sup> CDC [Core Infection Prevention and Control Practices for Safe Healthcare Delivery in All Settings – Recommendations of the HICPAC](#)

## RESOURCES

1. Trainings/ IPC capacity building for HCW
2. Pledge for staff to sign to commit to core IPC practices
3. Posters/ visual reminders

GOAL: Promote staff mental health & wellness to help improve focus and reduce stress & burnout<sup>20</sup>.

## ACTIONS:

1. Review & share health and wellness<sup>21 22 23 24</sup> resources with staff.
2. Create a [Wishing Wellness](#) display<sup>25</sup>.

MEASURES: Evaluate employees' experiences engaging in Wishing Wellness through face-to-face conversations; assess employees' perceptions of wellness to ensure wellness promotion is creating the intended effect.

## RESOURCES

1. Psychological PPE



## Conduct Surveillance & Provide Feedback

Does the facility collect & use IPC surveillance data to drive decision making?

GOAL: A surveillance process is in place to detect, respond to, report & document infectious diseases (individual cases and clusters/outbreaks), potentially infectious syndromes and IPC practices<sup>26</sup>.

## ACTIONS:

Develop a [surveillance plan](#)<sup>27</sup>.

1. Select [process indicators](#)<sup>28</sup> to measure<sup>29</sup>; prioritize based on the risk assessment & action plan.
  - a. Conduct walking rounds (i.e., observe & document HCW IPC practices, offer positive reinforcements & just-in-time education, etc.).
  - b. Promote shared ownership of IPC practices by engaging facility leaders, unit/department managers & unit/department staff in data collection.
2. Select [outcome indicators](#) (e.g., [healthcare-associated infections](#)) to measure; prioritize based on the risk assessment & action plan.
3. Determine cues that will prompt a [chart review](#) for potential infection(s) of interest; consider the following:
  - a. Antibiotic starts (explore automatic notifications through electronic health record system).
  - b. Lab tests that indicate the presence of organisms (e.g., microbiology report). (Explore a notification system with the laboratory to prevent delays in IPC interventions and to assist with surveillance).
  - c. Orders for imaging (e.g., chest x-ray).

<sup>20</sup> CDC [Mental Health- Public Health & Health Professionals: Stress & Coping](#)

<sup>21</sup> WellnessMN [website](#)

<sup>22</sup> MDH [Mental Health and Well-being](#)

<sup>23</sup> CDC Emergency Preparedness & Response [Coping with a Disaster or Traumatic Event](#)

<sup>24</sup> Metro Health and Medical Preparedness Coalition [Staff Wellness Resources](#)

<sup>25</sup> Wishing Wellness [concept description](#) from [wellnessmn.org](#)

<sup>26</sup> APIC Infection Prevention Guide to Long-Term Care 2<sup>nd</sup> Edition

<sup>27</sup> Lee, TB, Montgomery OG, Marx, J, Olmsted, RN, Scheckler, WE. [Recommended practices for surveillance: Association for Professionals in Infection Control and Epidemiology \(APIC\), Inc.](#) *Am J Infect Control* 2007;35:427-40.

<sup>28</sup> Lee, TB, Montgomery OG, Marx, J, Olmsted, RN, Scheckler, WE. [Recommended practices for surveillance: Association for Professionals in Infection Control and Epidemiology \(APIC\), Inc.](#) *Am J Infect Control* 2007;35:427-40.

<sup>29</sup> CMS [State Operations Manual Appendix PP- Guidance for Surveyors for Long Term Care Facilities](#)

- d. Resident experiencing a change in baseline status (e.g., new symptom onset).
  - i. [Integrate data](#)<sup>30</sup> from the multiple sources informing IPC decision making (e.g., 24-hour report, nursing notes, wound log, provider notes, nursing assistant reports, provider notification log, etc.)
- 4. Use [standardized surveillance definitions](#)<sup>31</sup> to track infection trends.
- 5. Collect [denominator data](#).
- 6. Share regularly updated data with leadership & frontline HCW (e.g., via unit [dashboards](#)<sup>32</sup>).
  - a. [Display](#)<sup>33</sup> data to demonstrate progress (e.g., <sup>34</sup># of days without an infection, month to month trends).
- 7. Connect processes to outcomes; measure & graph performance indicators to identify trends & refine ongoing improvement activities (e.g., are catheter-associated urinary tract infections decreasing after initiating catheter insertion audits? Is a unit's hand hygiene adherence associated with its infection rate?).

**MEASURES:**

- 1. Perform at least 30 different unannounced observations of process measures per month<sup>35</sup>.
- 2. Calculate healthcare-associated [infection rates](#).

**RESOURCES**

- 1. Process indicators & assessment tools/checklists
- 2. Observational audit processes
- 3. Educational literature and slides



**Brainstorm & Pilot Change Ideas** ●

Does the facility have a continuous improvement plan?

**GOAL:** Foster a culture of continuous improvement and learning<sup>36</sup>.

**ACTIONS:**

- 1. Use IPC risk assessment & action plan to identify opportunities for change.
  - a. Provide HCW with a clear rationale for change by adapting CDC's [adult learning principles](#)<sup>37</sup>:
    - i. Explain how the change will benefit them.
    - ii. Help them envision the change by providing an example scenario.
    - iii. Ask them to share their perspectives.
- 2. Complete a plan-do-check-act (PDCA) cycle: Plan a small scale test of change; test your idea; observe the impact of the test; determine how to adjust the test; repeat the cycle as needed to achieve your change goals.

**MEASURE:** Document PDCA tests of change using tools available in the Hennepin County Center of Innovation & Excellence *Continuous Improvement Coaching Plan: A Strategic Approach to Expert Continuous Improvement Coaching* (see right).

**RESOURCES**

- 1. Sample policies, guidebooks, tools and trainings



<sup>30</sup> Smith, PW, et al. [SHEA/APIC Guideline: Infection Prevention and Control in the Long-Term Care Facility](#). *Infection Control and Hospital Epidemiology*; 2008;29(9).

<sup>31</sup> SHEA/CDC Position Paper. [Surveillance Definitions of Infections in Long-Term Care Facilities: Revisiting the McGeer Criteria](#)

<sup>32</sup> CMS [Process Tool Framework](#) Instructions to Develop a Dashboard.

<sup>33</sup> Lee, TB, Montgomery OG, Marx, J, Olmsted, RN, Scheckler, WE. [Recommended practices for surveillance: Association for Professionals in Infection Control and Epidemiology \(APIC\), Inc.](#) *Am J Infect Control* 2007;35:427-40.

<sup>34</sup> Lee, TB, Montgomery OG, Marx, J, Olmsted, RN, Scheckler, WE. [Recommended practices for surveillance: Association for Professionals in Infection Control and Epidemiology \(APIC\), Inc.](#) *Am J Infect Control* 2007;35:427-40.

<sup>35</sup> CDC National Healthcare Safety Network [Prevention Process Measures Surveillance Protocol for LTCE](#)

<sup>36</sup> NACCHO [Roadmap to a Culture of Quality Improvement: A Guide to Leadership and Success in Local Health Departments](#)

<sup>37</sup> CDC [How to Captivate and Motivate Adult Learners: A Guide for Instructors Providing In-Person Public Health Training](#)



## Infection Prevention & Control Activities



### General

Can the facility begin to apply the IPC program bundle (i.e., infrastructure) elements to the IPC activities?

**GOAL:** Apply IPC program bundle elements (above) to IPC activities (below).

**ACTIONS:**

1. Engage partners
2. Assess risks and strengths
3. Develop an action plan
4. Communicate expectations and empower employees
5. Conduct surveillance and provide feedback
6. Brainstorm and pilot change ideas

**MEASURES:** (See individual IPC Activity sections for measurement ideas).

**RESOURCES** – a good place for IPs to begin reviewing to understand core IPC practices.

1. Guidance/publications
2. Tools, toolkits, roadmap, implementation guides
3. COVID-19 response updates



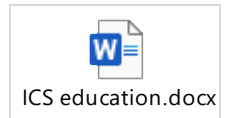
### Emergency Preparedness & Response

Is the facility prepared to respond to an emergency using the Incident Command System?

**GOAL:** Facility develops an [emergency preparedness \(EP\) plan](#) based on infection-, weather- and other hazard-related events that may impact a facility's ability to provide services.

**ACTIONS:**

1. Complete basic Incident Command System (ICS) educational courses to learn how to operate within an ICS, including communicating via a standardized language.
2. Use the MDH [Long-Term Care Preparedness Toolkit](#) to develop a binder of EP plan documents.
  - a. Identify and document County [EP](#) and County [Emergency Management \(EM\)](#) contacts.



**MEASURES:**

1. Three staff members have been designated for each ICS role (i.e., three-deep staffing).
  - a. Each designee has completed FEMA ICS courses & earned certificates.
2. Facility EP binder is updated annually with EP & EM contacts.

**RESOURCES**

1. Key concepts & terms
2. EP trainings
3. Metro Health & Medical Preparedness Coalition
4. APIC publication



### Hand Hygiene & Standard and Transmission-Based Precautions

#### Hand Hygiene

Do HCW understand the CDC's recommendations on when, why and how to perform hand hygiene?

**GOAL:** [Reduce barriers](#)<sup>38</sup> to performing hand hygiene.

**ACTIONS:**

<sup>38</sup> APIC Implementation Guide: [Guide to Hand Hygiene Programs for Infection Prevention](#)

1. Ensure alcohol-based hand sanitizer (ABHS) dispensers are accessible in locations throughout HCW workflow where hand hygiene frequently needs to be performed (consider bedside accessibility as appropriate).
2. Reinforce ABHS as the preferred method for cleaning HCW hands in most clinical situations<sup>39</sup>.
  - a. Use soap & water when hands are visibly dirty, before eating, after using the restroom, after caring for a resident with known or suspected infectious diarrhea.
  - b. "Healthcare personnel should use an alcohol-based hand rub or wash with soap and water for the following clinical indications:
    - i. Immediately before touching a patient
    - ii. Before performing an aseptic task (e.g., placing an indwelling device) or handling invasive medical devices
    - iii. Before moving from work on a soiled body site to a clean body site on the same patient
    - iv. After touching a patient or the patient's immediate environment
    - v. After contact with blood, body fluids, or contaminated surfaces
    - vi. Immediately after glove removal"<sup>40</sup>
  - c. If hand hygiene does not meet expectations, ask unit staff to develop & trial potential solutions.



Image from [CDC](#)

**MEASURES:** Observe HCW practices to [determine the proportion](#)<sup>41</sup> of hand hygiene opportunities that are completed per facility expectations. Pay attention to potential hand hygiene barriers.

#### RESOURCES

1. Guidelines/recommendations
2. Policy, protocol & competency templates
3. Toolkit
4. Auditing tool
5. Educational videos, infographics, training modules



#### *Personal Protective Equipment (PPE)*

How does the facility reduce HCW barriers to appropriate PPE selection & use?

**GOAL:** Reduce barriers to appropriate PPE selection & use<sup>42</sup>.

#### **ACTIONS:**

1. Ensure PPE is accessible for use in all resident rooms as part of [Standard Precautions](#).
  - a. Review & implement core components of a [Respiratory Protection Program](#).
  - b. Access respirator fit testing [resources](#) as needed.
2. Ensure PPE is accessible for use in rooms for residents on [Transmission-Based Precautions](#).

"Standard Precautions... are based on the principle that all blood, body fluids, secretions, excretions except sweat, nonintact skin, and mucous membranes may contain transmissible infectious agents. Standard Precautions include a group of infection prevention practices that apply to all patients, regardless of suspected or confirmed infection status, in any setting in which healthcare is delivered." (CDC [Guideline for Isolation Precautions](#))

<sup>39</sup> CDC [Hand Hygiene in Healthcare Settings](#)

<sup>40</sup> CDC Hand Hygiene in Healthcare Settings: [Hand Hygiene Guidance](#)

<sup>41</sup> IHI [How-To Guide: Improving Hand Hygiene](#)

<sup>42</sup> CDC [Core Infection Prevention and Control Practices for Safe Healthcare Delivery in All Settings –Recommendations of the HICPAC](#)

- a. Consider appropriate indications<sup>43 44 45</sup> for and [duration](#) of Transmission-Based Precautions.
- b. Define [‘room entry’](#) in facility policies.
- c. Promote [pathogen containment](#)<sup>46</sup>.
- d. Develop a checklist with images of [isolation cart supplies](#).

MEASURES: [Calculate](#) the proportion of PPE use opportunities that are completed per facility expectations.

#### RESOURCES

1. Guidelines/recommendations
2. Templates, tools and competency validation
3. Signs/posters
4. Isolation cart supplies for consideration



#### *Safe Injection Practices*

Is the facility implementing its bloodborne pathogen Exposure Control Plan?

GOAL: Prevent bloodborne pathogen (BBP) exposures<sup>47</sup>.

#### ACTIONS:

1. Reduce barriers to [safe injection practices](#) and [sharps safety](#).
  - a. Sharps disposal containers are accessible at the point of use; used sharps are below the bin’s ‘full’ line.
  - b. Use [safety-engineered devices](#)<sup>48</sup>: needles & other sharps designed to reduce injury/exposure risk<sup>49</sup>.
  - c. Provide HCW education about [injection safety basics](#) & BBP exposure prevention.
2. Collect data on sharps injuries, near misses & blood and body fluid splashes & sprays; use data trends to inform practice improvements.
3. Include observations for [safe injection practices](#) & [glucometer cleaning and disinfection](#)<sup>50</sup> during rounds.
4. Develop/ revise an exposure control plan (see OSHA [Exposure Control Plan Template](#)).
5. Establish a [committee](#) or incorporate sharps safety into an existing committee’s regular agenda.



#### MEASURES:

1. Exposure control plan is reviewed & updated “at least annually and whenever necessary to reflect new or modified tasks and procedures which affect occupational exposure and to reflect new or revised employee positions with occupational exposure.”<sup>51</sup>
2. Blood and body fluid exposure trends are summarized by device type (including whether a device with safety features was used), activity during exposure, location, staff type, shift, PPE used, etc.).

#### RESOURCES

1. Education
2. Tools, templates and competency validation

<sup>43</sup> CDC [Core Infection Prevention and Control Practices for Safe Healthcare Delivery in All Settings –Recommendations of the HICPAC](#)

<sup>44</sup> MDH [Guideline for the Management of Antimicrobial Resistant Microorganisms in Minnesota Long-Term Care Facilities](#)

<sup>45</sup> CDC [Implementation of PPE in Nursing Homes to Prevent Spread of Novel or Targeted MDROs](#)

<sup>46</sup> CDC Infection Control: [Transmission-Based Precautions](#)

<sup>47</sup> CDC [Injection Safety: Information for Providers](#)

<sup>48</sup> The National Institute for Occupational Safety & Health (NIOSH) [Bloodborne Infectious Diseases: Engineering Controls & PPE](#)

<sup>49</sup> OSHA [Bloodborne Pathogen Standard](#)

<sup>50</sup> CDC [Injection Safety: Frequently Asked Questions regarding Assisted Blood Glucose Monitoring and Insulin Administration](#)

<sup>51</sup> OSHA [Bloodborne Pathogen Standard](#)



## Antibiotic Stewardship

Does the facility have an antibiotic stewardship policy?

**GOAL:** "...Maintain an Antibiotic Stewardship Program (ASP) with the mission of promoting the appropriate use of antibiotics to treat infections and reduce possible adverse events associated with antibiotic use..."<sup>52</sup>

**ACTIONS:** Modify & adopt the [Minnesota Sample Antibiotic Stewardship Policy for Long-Term Care Facilities](#) (Sample Policy)

1. Begin collecting data on at least one measure, as outlined in Appendix (Apx) E. Expand as capacity allows.
  - a. Work with other stakeholders, including nurse managers, to assist with data collection.

**MEASURES:**

1. Proportion of antibiotics initiated:
  - a. That meet Loeb et al. [Minimum Criteria for the Initiation of Antibiotics in Residents of LTCF](#) (see [Sample Policy](#), Apx A)
  - b. For which SBAR communication is documented in resident's medical record (see [Sample Policy](#), Apx B & C)
  - c. That were followed up by an antibiotic time-out (see [Sample Policy](#), Apx E)
2. Proportion of urine cultures collected that align with Loeb et al. (2005)<sup>53</sup> (see [Sample Policy](#), Apx D).
3. Number of residents with a positive *C. difficile* diagnostic test, and of those:
  - a. Number (#) & percent (%) of residents that had  $\geq 3$  loose stools within 24 hours prior to diagnostic test.
  - b. # and % of residents that received antibiotics in the 30 days before testing (see [Sample Policy](#), Apx E).

**RESOURCES**

1. Toolkits and templates
2. Pledge/commitment posters
3. Guidance and education
4. Literature



## Epidemiologically Important Organisms & Device-Associated Infections

How is the facility reducing risk factors for the development of healthcare-associated infections?

**GOAL:** Prevent unnecessary invasive device use<sup>54</sup>.

**ACTIONS:**

1. Educate staff on [appropriate indications](#),<sup>55</sup> [insertion practices](#) and [maintenance cares](#)<sup>56</sup>.
2. Use the risk assessment to select surveillance priorities (e.g., surveillance population on which you will track IPC processes and/or outcomes; this could be specific unit(s) or facility-wide).
3. Collect [denominator data](#) for the surveillance population (i.e., number of people at risk for device-associated infection – due to the presence of an invasive device – in the surveillance population).
  - a. Example outcome measure: catheter-associated urinary tract infection (CAUTI) [infection rate](#).
4. Collect [numerator data](#) for the surveillance population. Consider using CDC's [NHSN](#) to track infections.

<sup>52</sup> Minnesota [Sample Antibiotic Stewardship Policy for LTCF](#) (accessed 7/28/21)

<sup>53</sup> Loeb et al. *Effect of a multifaceted intervention on number of antimicrobial prescriptions for suspected urinary tract infections in residents of nursing homes: cluster randomised controlled trial*. British Medical Journal 2005. doi:10.1136/bmj.38602.586343.55

<sup>54</sup> CDC [Types of Healthcare-Associated Infections](#)

<sup>55</sup> CDC [HICPAC Guideline for Prevention of Catheter-Associated Urinary Tract Infections 2009](#) Table 2, p. 11

<sup>56</sup> AHRQ [Educational Bundles](#)

a. Continuing with the CAUTI example, this will be the number of CAUTIs in the [infection rate](#) calculation.

#### MEASURES:

1. [Infection rate](#)
2. Rate of adherence to process measures.
  - a. Process measures for consideration are provided in the [Resources](#) section.

#### RESOURCES (includes CAUTI, central line-associated bloodstream infection prevention & dialysis safety resources)

1. Guidelines/recommendations
2. Tools and templates
3. Education and training
4. Process measures for consideration

GOAL: Prevent *C. difficile* infection & transmission<sup>57</sup>.

#### ACTIONS:

1. Educate staff on *C. difficile* Infection (CDI) [prevention measures](#)<sup>58</sup>.
2. Develop an antibiotic stewardship policy (see Minnesota [sample policy](#) for LTCF).
3. Conduct [surveillance](#)<sup>59</sup>: apply CDC/SHEA surveillance definitions (i.e., [Revised McGeer Criteria](#)).
  - a. Consider using CDC's [NHSN](#) to track infections.

MEASURES: Number of residents with a positive *C. difficile* diagnostic test; and of those:

1. Number and percent of residents positive for *C. difficile* that had  $\geq 3$  loose stools within 24 hours prior to test.
2. Number and percent of residents positive for *C. difficile* that received antibiotics in the 30 days before testing<sup>60</sup>.

#### RESOURCES

1. Guidelines, recommendations & FAQs
2. Tools and toolkits
3. Education and training
4. Cleaning and disinfecting products

GOAL: Prevent Multidrug Resistant Organism (MDRO) infection & transmission<sup>61</sup>.

#### ACTIONS:

1. Use the "Five C's" to assess risks of colonized or infected residents participating in social/common area activities
  - a. "Continent: Is the resident continent, or is the incontinence able to be contained?"
  - b. Contained: Are the resident's wounds contained (clean, dry dressing)?"
  - c. Cognizant: Is the resident aware of their MDRO status and how to prevent transmission to others?"
  - d. Compliant: Is the resident compliant with recommendations to prevent transmission (such as hand hygiene)?"
  - e. Clean: Is the resident clean (bathed, with clean clothing)?"<sup>62</sup>
2. Implement or expand an [Antibiotic Stewardship Program](#).



*C. difficile*

Image credit: [CDC 2019 AR Threats Report](#)

<sup>57</sup> CDC [C. diff \(Clostridioides difficile\) Information for Healthcare Professionals about C. diff](#)

<sup>58</sup> MDH [C. diff Toolkit for Long-Term Care Facilities](#)

<sup>59</sup> MDH *C. diff* Toolkit for Long-Term Care Facilities: [Detect](#)

<sup>60</sup> [Minnesota Sample Antibiotic Stewardship Policy for Long-Term Care Facilities](#)

<sup>61</sup> CDC MDRO Prevention and Control. Management of Multidrug-Resistant Organisms in Healthcare Settings (2006)- [Control Interventions](#)

<sup>62</sup> North Carolina Surveillance for Healthcare-Associated and Resistant Pathogens Patient Safety (SHARPPS) Program [MDRO Toolkit for Long-Term Care Facilities](#)

3. Develop [processes](#) to facilitate early detection & prompt implementation of IPC measures for MDROs with important IPC implications; consider bacteria & fungi listed in CDC's [2019 Antibiotic Resistance \(AR\) Threats Report](#), including:
  - a. Carbapenem-resistant Enterobacteriales ([CRE](#))<sup>63</sup>
  - b. Methicillin-resistant *Staphylococcus aureus* ([MRSA](#))<sup>64</sup>
  - c. Drug-resistant *Candida auris*<sup>65</sup>
4. Report infections to MDH per the [Reportable Disease Rule](#).
  - a. [Report](#) CRE to the Minnesota Department of Health (MDH) within one working day\*
  - b. Report *Staphylococcus aureus* (MRSA & methicillin-susceptible *S. aureus*) based on MDH reporting rules\* (multiple scenarios based on [infection site, county of residence, resistance type and death or critical illness](#))
  - c. [Report](#) detection (infection or colonization) of either *C. auris* or *Candida* species that may be *C. auris* to MDH within one working day after the test result is finalized\*



\* Review [MDH Reportable Disease Rule](#) for the most current reporting rules.

#### MEASURES:

1. General
  - a. Monitor [adherence to hand hygiene expectations](#).
  - b. Monitor HCW for [appropriate PPE selection and use](#).
  - c. Monitor [adherence to cleaning/ disinfection](#) policies/procedures/protocols.
2. Organism-specific
  - a. Track the number of residents with a positive CRE diagnostic test; and of those:
    - i. Number and percent of CRE positive residents that received antibiotics in the 30 days before testing.
  - b. Calculate [MRSA incidence rate](#) and evaluate data over time to detect trends<sup>66</sup>.
  - c. Track the number of residents with *Candida auris* [infection or colonization](#).

#### RESOURCES

1. General and organism-specific guidelines/recommendations
2. Resident education



## Outbreaks

Do facility outbreak plans outline IPC measures for common infectious diseases?

**GOAL:** Identify outbreaks quickly and limit infection transmission<sup>67</sup>.

#### ACTIONS:

1. Develop case definitions that 1) identify when an outbreak is occurring and 2) trigger implementation of an outbreak action plan or protocol.
  - a. Plan should outline recommended IPC measures specific to the suspected or confirmed pathogen (i.e., considerations regarding hand hygiene, PPE, precautions, dedicated equipment, resident & staff cohorting, activity restrictions, resident transfer, testing, cleaning/disinfection, visitor restrictions, staff exclusion, considerations about pausing new admissions and prophylaxis, if appropriate).
2. Review surveillance data (e.g., illness/ infection log) to determine if case numbers are higher than expected.

<sup>63</sup> MDH [Recommendations for the Management of Carbapenem-resistant Enterobacteriaceae in Long-term Care Facilities](#)

<sup>64</sup> MDH [Guideline for the Management of Antimicrobial Resistant Microorganisms in Minnesota Long-Term Care Facilities](#)

<sup>65</sup> CDC [Candida auris for Laboratorians and Healthcare Professionals](#)

<sup>66</sup> APIC [Guide to the Elimination of Methicillin-Resistant Staphylococcus aureus \(MRSA\) in the Long-Term Care Facility](#) (accessed 7/29/21)

<sup>67</sup> AHRQ A Unit Guide to Infection Prevention for Long-Term Care Staff- [Outbreak Management](#)

- a. Evaluate whether [Enhanced Barrier Precautions](#) are appropriate.
3. Start a [line list](#)<sup>68</sup> to organize illness onset dates and duration, symptoms, location, category of affected person (i.e., resident or staff). Observe for any epidemiological links by person, place or time among cases.
4. Preparations to consider:
  - a. Whether portable hand washing sinks will be necessary and how they would be quickly accessed.
  - b. Signs with instructions about entry restrictions, prevention measures required, and an easel or free-standing kiosk to display signs and offer ABHS, tissues, masks, garbage receptacle, etc.
  - c. Access to cleaning/ disinfecting products that are effective against [common pathogens](#)<sup>69</sup>.

MEASURE: Notify MDH 651-201-5414 of unusual or increased case incidence of any suspect infectious illness<sup>70</sup>.

#### RESOURCES

1. Templates
2. Line lists
3. Guidance on norovirus, influenza, scabies, group A *Streptococcus*, respiratory syncytial virus (RSV) & COVID-19
4. Education



## Vaccines

Is there a process in place to ensure residents are up-to-date with recommended adult immunizations?

GOAL: LTCF residents & staff are empowered to make informed and evidence-based decisions regarding vaccinations<sup>71</sup>.

ACTIONS: Review and begin implementing CDC's Occupational Infection Prevention & Control Services (2019) [Immunization Programs recommendations](#) (excerpts below):

1. Indicate all preplacement, annual, & other job-related immunizations that healthcare personnel (HCP) should receive.
2. Specify strategies to offer vaccines to HCP & to achieve high immunization coverage.
3. Specify strategies for gathering & reviewing information on why recommended immunizations are not administered to inform program quality improvement.

MEASURES:

1. Percentage of HCW who are up-to-date with their [COVID-19](#)<sup>72</sup> and [influenza](#)<sup>73</sup> vaccinations. Additional recommended vaccines for healthcare workers available [here](#)<sup>74</sup>.

"On the basis of documented nosocomial transmission, HCP are considered to be at substantial risk for acquiring or transmitting hepatitis B, influenza, measles, mumps, rubella, pertussis, and varicella." (CDC [Immunization of Health-Care Personnel: Recommendations of the Advisory Committee on Immunization Practices \(ACIP\)](#))

<sup>68</sup> CDC [Principles of Epidemiology in Public Health Practice, Third Edition. An Introduction to Applied Epidemiology and Biostatistics. Lesson 2: Summarizing Data.](#)

<sup>69</sup> SHEA/APIC Guideline: Infection prevention and control in the long-term care facility. Smith, PW; Bennett, G; Bradley, S; Drinka, P; Lautenbach, E; et al., *Am J Infect Control* 2008;36:504-35.

<sup>70</sup> [Diseases Reportable to the Minnesota Department of Health](#)

<sup>71</sup> CDC COVID-19 Vaccine- [Empowering Healthcare Personnel](#)

<sup>72</sup> MDH [COVID-19 Vaccine](#)

<sup>73</sup> MDH [Influenza Vaccine Information for Health Professionals](#)

<sup>74</sup> CDC [Recommended Vaccines for Healthcare Workers](#)



- Percentage of residents who are up-to-date with their [COVID-19](#), [influenza](#), [pneumococcal](#)<sup>75</sup>, [shingles](#)<sup>76</sup>, [tetanus/diphtheria/pertussis](#)<sup>77</sup> vaccinations, per current guidance. Additional recommended adult immunizations available [here](#).<sup>78</sup>

#### RESOURCES

- CDC Immunization Schedule
- Recommended vaccines for healthcare personnel
- Toolkits and templates
- Conversation guides
- Vaccine access information
- Print media
- Videos



## Tuberculosis (TB)

What is the facility protocol for minimizing TB transmission risk among suspected and confirmed cases?

**GOAL:** Early identification, isolation and transfer of residents with suspected or confirmed active TB disease<sup>79</sup>.

**ACTIONS:** Review MDH [Facility Tuberculosis \(TB\) Risk Assessment Instructions and Worksheet for Health Care Settings Licensed by MDH](#) and MDH [Regulations for TB Control in Minnesota Health Care Settings](#) for requirements including but not limited to TB risk assessment, HCW and resident TB screening, incorporating TB-specific procedures into the facility infection control plan and HCW TB training.

#### MEASURES:

- TB facility risk assessment is performed on an annual basis<sup>80</sup>.
- Pulmonary or extrapulmonary sites of TB (*Mycobacterium tuberculosis* complex), including laboratory confirmed or clinically diagnosed TB disease, are [reported](#) to MDH within one working day\*.

\* Review [MDH Reportable Disease Rule](#) for the most current reporting rules.

#### RESOURCES

- Recommendations
- Information for healthcare professionals



*Mycobacterium tuberculosis*  
Image credit:  
CDC 2019 AR Threats Report

<sup>75</sup> MDH [Pneumococcal Information for Health Professionals](#)

<sup>76</sup> CDC [Shingles \(Herpes Zoster\) Vaccination](#)

<sup>77</sup> CDC [Diphtheria, Tetanus, and Pertussis Vaccine Recommendations](#)

<sup>78</sup> CDC [Table 1. Recommended Adult Immunization Schedule for ages 19 years or older, United States, 2021.](#)

<sup>79</sup> MDH [Facility Tuberculosis \(TB\) Risk Assessment Instructions and Worksheet for Health Care Settings Licensed by MDH](#) (accessed 7/29/21)

<sup>80</sup> MDH [Facility Tuberculosis \(TB\) Risk Assessment Worksheet and Instructions for Health Care Settings Licensed by the MDH](#) (linked to MDH [Regulations for TB Control in Minnesota Health Care Settings](#))





## Environment of Care

Are cleaning & disinfection processes standardized- including roles & responsibilities?

**GOAL:** Standardize cleaning & disinfection processes for reusable medical equipment & environmental surfaces<sup>81</sup>.

### **ACTIONS:**

1. Engage a multidisciplinary team to define roles & responsibilities for all HCW involved in cleaning & disinfecting.
  - a. Develop a grid that identifies 1) reusable medical equipment (RME) & environmental surfaces that require cleaning & disinfection (consider including images of items & surfaces); 2) HCW role responsible for cleaning & disinfecting each item & surface; 3) when cleaning & disinfecting should occur; and 4) which cleaning & disinfection product should be used<sup>82</sup>.
    - i. "Equipment used in LTC facilities must be cleaned and disinfected according to the Spaulding Classification<sup>83</sup> system, which classifies medical devices as critical, semi-critical, or noncritical, based on the use of the device."<sup>84</sup>
2. Review & maintain access to IFUs for each piece of RME & the products HCW use to clean & disinfect RME.
  - a. Ensure HCW performing daily & terminal room cleanings and HCW cleaning & disinfecting RME have been trained on how to clean & disinfect surfaces & items based on product & equipment IFUs.
3. Consider placing laminated (wipeable) cleaning & disinfecting instructions on RME; include product name & image, amount of time surfaces need to remain wet & practical steps for ensuring adherence.
4. Consider keeping cleaning & disinfecting wipes on RME so that wipes are available at the point of use.
5. Develop a process for determining whether RME is clean or dirty to ensure that only RME that has been cleaned & disinfected is used for resident care.
6. Store RME that has been cleaned & disinfected in a manner that prevents re-contamination prior to use on another resident.
  - a. Monitor adherence to facility expectations regarding cleaning & disinfection (see CDC [Options for Evaluating Environmental Cleaning](#) and MDH [C. difficile Cleaning Audit Tool for IPC](#)).
7. "Policies should be based on regulatory requirements and guidelines as well as the manufacturer's recommendations and should cover computers and other electronic equipment."<sup>85</sup>

"Immediately clean/disinfect all equipment with the facility-approved EPA-registered hospital-grade disinfectant when visibly soiled or after use."

APIC Infection Prevention Guide to Long-Term Care 2<sup>nd</sup> Edition, p. 148

**MEASURE:** [Calculate](#)<sup>86</sup> HCW adherence to [recommended practices](#) & facility expectations.

### **RESOURCES**

1. Educational tips, courses, videos and guidebook
2. Guidelines/recommendations
3. Templates and tools

<sup>81</sup> APIC Infection Prevention Guide to Long-Term Care 2<sup>nd</sup> Edition

<sup>82</sup> APIC Forms & Checklists for Infection Prevention Volume 2 [preview](#) (accessed 7/26/21).

<sup>83</sup> CDC [A Rational Approach to Disinfection and Sterilization. Guideline for Disinfection and Sterilization in Healthcare Facilities \(2008\)](#)

<sup>84</sup> APIC Infection Prevention Guide to Long-Term Care 2<sup>nd</sup> Edition, p. 146

<sup>85</sup> APIC Infection Prevention Guide to Long-Term Care 2<sup>nd</sup> Edition, p. 145

<sup>86</sup> IHI How to Improve. [Science of Improvement: Establishing Measures](#)

FIGURE: CDC Healthcare Environmental Infection Prevention: Reduce Risk from Surfaces<sup>87</sup>

## Core Components of Environmental Cleaning and Disinfection

1. **Integrate** environmental services into the hospital's safety culture.
2. **Educate and train** all HCP responsible for cleaning and disinfecting patient care areas.
3. **Select** appropriate cleaning and disinfection technologies and products.
4. **Standardize** setting-specific cleaning and disinfection protocols.
5. **Monitor** effectiveness and adherence to cleaning and disinfection protocols.
6. **Provide feedback** on adequacy and effectiveness of cleaning and disinfection to staff and stakeholders.



Images and content citation: <https://www.cdc.gov/hai/prevent/environment/surfaces.html>

**GOAL:** Use the right cleaner/disinfectant at the right time (i.e., prior to use on another patient and when soiled)<sup>88</sup>.

### ACTIONS:

1. First clean (remove soiling), then disinfect, as "organic matter such as blood and body fluids will inactivate disinfectants"<sup>89</sup>.
2. Determine whether disinfectants contain a cleaning agent (one-step process) or if a separate cleaning product is needed prior to disinfecting surfaces (two-step process).
3. Review manufacturer's IFUs for each cleaning and disinfecting product used by HCW.
  - a. Ensure HCW know how long a product needs to remain wet on the surface to be effective.
4. Ensure products used by the facility are Environmental Protection Agency (EPA)-registered hospital-grade disinfectants.<sup>90 91</sup> (see [Antimicrobial Products Registered with EPA for Claims Against Common Pathogens](#))
  - a. Find the "EPA reg" number on the product label. Go to <http://iaspub.epa.gov/apex/pesticides/f?p=PPLS:1> and enter the number into the "EPA Regulation #" field. Click on the most updated report for product specifications.
  - b. Consider products with activity against a broad range of pathogens for routine cleaning & disinfection<sup>92</sup> (e.g., SARS-CoV-2, bloodborne pathogens, norovirus, *C. difficile*, multidrug-resistant organisms).
  - c. Consider using a product effective against common diarrheal pathogens (including *C. difficile* and norovirus) for residents with diarrheal illnesses.

**MEASURES:** During rounds, ask staff to describe the cleaning/disinfection process, including the contact time. See UNC SPICE for an example of an [Environmental Assessment Checklist for Long-Term Care Setting](#).

<sup>87</sup> CDC [Healthcare Environmental Infection Prevention: Reduce Risk from Surfaces](#)

<sup>88</sup> CDC [Core Infection Prevention and Control Practices for Safe Healthcare Delivery in All Settings –Recommendations of the HICPAC](#)

<sup>89</sup> APIC Infection Prevention Guide to Long-Term Care 2<sup>nd</sup> Edition, p. 133

<sup>90</sup> APIC Infection Prevention Guide to Long-Term Care 2<sup>nd</sup> Edition, p. 133

<sup>91</sup> CDC [Properties of an ideal disinfectant](#)

<sup>92</sup> APIC Infection Prevention Guide to Long-Term Care 2<sup>nd</sup> Edition, p. 133

**GOAL:** Separate clean supplies from dirty supplies to prevent cross-contamination<sup>93</sup>.

**ACTIONS:**

1. "To ensure maximum cleanliness during storage, remove the shipping container prior to placing the supplies in the clean storage room. The boxes or soft packaging of the products inside are considered clean; the outer shipping container is not."<sup>94</sup>
  - a. "Only clean and sterile equipment should be stored in a clean utility room, and the area should be designed to protect items from contamination and damage."<sup>95</sup>
2. Ensure ABHS dispenser is available in the clean utility room.<sup>96</sup>
3. Ensure products are stored on designated shelving, carts or cabinets<sup>97</sup>
  - a. "Supplies stored on the bottom of a wire, open-shelf cart need a physical barrier between the shelf and the floor for protection against cleaning chemicals."
  - b. "Equipment must not be stored on or around the sink due to the potential for water damage/contamination from splashing."
  - c. "Clean and sterile items must not be stored under any sink due to potential plumbing leaks."

**When terminally cleaning resident rooms:**

"Unused items, such as toilet paper and towels, are considered contaminated and should be discarded if disposable, or cleaned if reusable...All linen in the resident's room, both used and unused, is considered contaminated and must be sent to the laundry..."

(APIC Infection Prevention Guide to Long-Term Care 2<sup>nd</sup> Edition, p. 136)

**MEASURES:** Consider audits to ensure that only clean items are stored in a clean utility room (see UNC SPICE environmental rounding checklist [Environmental Assessment Checklist for Long-Term Care Setting](#)).

**GOAL:** Package, transport, and store clean textiles and fabrics by methods that will ensure their cleanliness and protect them from dust and soil during interfacility loading, transport, and unloading<sup>98</sup>.

**ACTIONS:** Review laundry recommendations in CDC's [Guidelines for Environmental Infection Control in Health-Care Facilities](#).

**MEASURES:** Audit for the following practices:

1. HCW perform hand hygiene prior to handling clean linens.
2. Clean linen is stored separately from dirty linen and other items.
3. Linen storage racks are covered to prevent contamination.
4. HCW "Handle contaminated textiles and fabrics with minimum agitation to avoid contamination of air, surfaces and persons."<sup>99</sup>

**RESOURCES**

<sup>93</sup> CDC [Core Infection Prevention and Control Practices for Safe Healthcare Delivery in All Settings –Recommendations of the HICPAC](#)

<sup>94</sup> APIC Infection Prevention Guide to Long-Term Care 2<sup>nd</sup> Edition, p. 149

<sup>95</sup> APIC Infection Prevention Guide to Long-Term Care 2<sup>nd</sup> Edition, p. 149

<sup>96</sup> APIC Infection Prevention Guide to Long-Term Care 2<sup>nd</sup> Edition, p. 149

<sup>97</sup> APIC Infection Prevention Guide to Long-Term Care 2<sup>nd</sup> Edition, p. 149

<sup>98</sup> CDC [Guidelines for Environmental Infection Control in Health-Care Facilities: G. Recommendations- Laundry and Bedding](#)

<sup>99</sup> CDC [Guidelines for Environmental Infection Control in Health-Care Facilities: G. Recommendations- Laundry and Bedding](#)



## Water Management

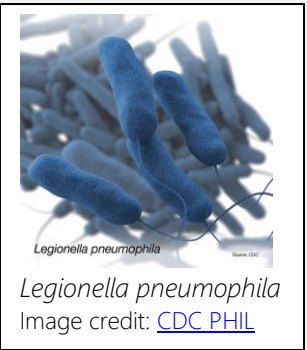
Does your facility need a water management program?

**GOAL:** Reduce opportunities for the growth and spread of waterborne pathogens, including *Legionella*<sup>100</sup>.

### ACTIONS:

1. Complete a CDC [worksheet](#) to determine your building's water management program needs.
2. Attend a CDC [training](#) on the seven steps of a water management program.
3. Review [Guidelines for Environmental Infection Control in Health-Care Facilities: Recommendations of CDC and the HICPAC](#), Recommendations on Water.

**MEASURES:** Develop a water management program (see CDC Toolkit: [Developing a Water Management Program to Reduce Legionella Growth and Spread in Buildings](#)).



## Construction & Renovation

Is an infection control risk assessment performed prior to construction/renovation activity?

**GOAL:** Reduce infection opportunities due to exposure to fungal spores from dust generation & moisture intrusion during construction and renovation projects<sup>101</sup>.

### ACTIONS:

1. "Form a multidisciplinary, collaborative team to identify and proactively mitigate the effects of demolition, construction, and renovation activities on air quality, water, and HVAC systems, environmental cleanliness, and traffic flow."<sup>102</sup>
2. Complete a construction- & renovation- focused infection control risk assessment (ICRA) "before initiating repairs, demolition, construction, or renovation activities [that] can identify potential exposures of susceptible patients to dust and moisture and determine the need for dust and moisture containment measures."<sup>103</sup>
3. Provide education about infection prevention recommendations to HCW and construction workers.
4. Review [Guidelines for Environmental Infection Control in Health-Care Facilities: Recommendations of CDC and the HICPAC](#), Recommendations on Air.

**MEASURES:** Monitor & document adherence to IPC measures & compliance with recommended corrective actions.

### RESOURCES

1. Basic ICRA with matrix
2. Guidelines
3. State-of-the-Art Report
4. Education and training

<sup>100</sup> CDC [Guidelines for Environmental Infection Control in Health-Care Facilities](#)

<sup>101</sup> CDC [Guidelines for Environmental Infection Control in Health-Care Facilities](#)

<sup>102</sup> The APIC/JCR Infection Prevention and Control Workbook, 4<sup>th</sup> Edition (2021), p. 179. Edited by Grota, P.G. and Rupp, A.H. Published by Joint Commission Resources Oak Brook, Illinois 60523 USA <https://www.jcrinc.com>

<sup>103</sup> CDC [Guidelines for Environmental Infection Control in Health-Care Facilities \(2003\)](#), p. 40

## Glossary of Terms

|        |   |
|--------|---|
| ABHS   | Alcohol-Based Hand Sanitizer  |
| AHA    | American Hospital Association   |
| AHE    | Association for the Health Care Environment   |
| AHRQ   | Agency for Healthcare Research and Quality  |
| APIC   | Association for Professionals in Infection Control and Epidemiology   |
| Bundle | A structured way of improving the processes of care and patient outcomes: a small, straightforward set of evidence-based practices- generally three to five- that, when performed collectively and reliably, have been proven to improve patient outcomes |
| CAUTI  | Catheter-Associated Urinary Tract Infection   |
| CDC    | Centers for Disease Control and Prevention  |
| CDI    | <i>Clostridioides difficile</i> Infection (formerly <i>Clostridium difficile</i> Infection)   |
| CLABSI | Central Line Associated Bloodstream Infection   |
| CMS    | Centers for Medicare and Medicaid   |
| CRE    | Carbapenem-Resistant Enterobacteriaceae   |
| DHHS   | Department of Health & Human Services   |
| EM     | Emergency Management  |
| EP     | Emergency Preparedness  |
| EPA    | Environmental Protection Agency   |
| EVS    | Environmental Services  |
| FEMA   | Federal Emergency Management Agency   |
| FTE    | Full-Time Equivalent  |
| HAI    | Healthcare-Associated Infection   |
| HCPH   | Hennepin County Public Health   |
| HCW    | Healthcare worker   |

|        |   |
|--------|---|
| HICPAC | Healthcare Infection Control Practices Advisory Committee |
| ICAR   | Infection Control Assessment and Response                 |
| ICS    | Incident Command System                                   |
| IDSA   | Infectious Diseases Society of America                    |
| IFU    | Instructions for Use                                      |
| IHI    | Institute for Healthcare Improvement                      |
| IP     | Infection Preventionist                                   |
| IPC    | Infection Prevention and Control                          |
| LTC    | Long-Term Care  |
| LTCF   | Long-Term Care Facility/Facilities                        |
| MDH    | Minnesota Department of Health                            |
| MDRO   | Multidrug-Resistant Organism                              |
| MN     | Minnesota   |
| MRSA   | Methicillin-Resistant <i>Staphylococcus aureus</i>        |
| NACCHO | National Association of County and Health Officials       |
| NHSN   | National Healthcare Safety Network                        |
| OSHA   | Occupational Safety and Health Administration             |
| PPE    | Personal Protective Equipment                             |
| RME    | Reusable Medical Equipment                                |
| SHEA   | Society for Healthcare Epidemiology of America            |
| SNF    | Skilled Nursing Facility                                  |
| SPICE  | Statewide Program for Infection Control and Epidemiology  |
| STRIVE | States Targeting Reduction in Infections via Engagement   |
| TB     | Tuberculosis  |
| TBP    | Transmission-Based Precautions                            |
| UNC    | University of North Carolina                              |

# Resources

## Infrastructure

### Engage Internal & External Partners

1. Trainings/ capacity building for infection preventionists
  - a. CDC/CMS: [Nursing Home Infection Preventionist Training course](#).
  - b. UNC SPICE [Long-Term Care Infection Preventionist Orientation](#)
  - c. APIC [Roadmap for the Novice Infection Preventionist](#) & [Professional and practice standards](#)
  - d. Health Quality Innovation Network/Quality Improvement Organizations [Infection Preventionist Orientation Checklist](#)
  - e. Wyoming Department of Health [Infection Prevention Orientation Manual](#)
  - f. California Department of Public Health [IP Training for Skilled Nursing Facilities Online Course](#) & [Resources for Infection Preventionists in Skilled Nursing Facilities](#)
  - g. CDC/ STRIVE [Competency-Based Training, Audits & Feedback](#)
  - h. Nebraska Infection Control Assessment & Promotion Program [IPC Mentoring Program Toolkit](#)
2. The Joint Commission [Applying High Reliability Principles to Infection Prevention & Control in Long-Term Care](#)
3. AHRQ [TeamSTEPPS](#) & [Nursing Home Survey on Patient Safety Culture](#)
4. IHI [Leading a Culture of Safety: A Blueprint for Success](#)
5. American Hospital Association (AHA) [Project Firstline- A Strong Team Approach](#).
6. Bryant, K., Harris, A., Gould, C., Humphreys, E., Lundstrom, T., et al. (2016). [Necessary Infrastructure of Infection Prevention and Healthcare Epidemiology Programs: A Review](#). *Infection Control & Hospital Epidemiology*, 37(4), 371-380. doi:10.1017/ice.2015.333
7. CDC [Framework for Program Evaluation in Public Health](#).
8. [ENGAGE! Infection prevention is everyone's job](#).
9. California Department of Public Health [Communication in Skilled Nursing Facilities](#) (SNF) slide deck

### Assess Risks & Strengths

1. Joint Commission Resources [Using the Risk Assessment to Set Goals & Develop the IPC Plan](#)
2. CDC [Infection Prevention and Control Assessment Tool for Nursing Homes Preparing for COVID-19](#)
3. CMS [Revised COVID-19 Focused Infection Control Survey Tool for Acute & Continuing Care](#)

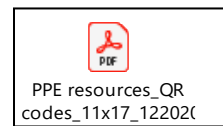
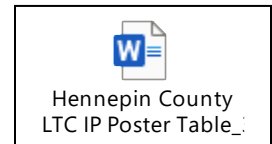
### Develop an Action Plan

1. UNC Medical Center [Infection Control Plan Sample](#) & UNC SPICE [LTCF Infection Control Program/Policy Sample](#)
2. Wyoming Department of Health [Infection Prevention Plan Template](#)
3. APIC [Infection Prevention Guide to Long-Term Care, 2<sup>nd</sup> Edition](#)
4. SHEA/APIC Guideline: [Infection Prevention and Control in the Long-Term Care Facility](#)

### Communicate Expectations & Empower Employees

1. Policy/procedure topics include – but are not limited to – the following (see CMS & other applicable regulatory agencies for context, details & additional considerations):
  - a. Establishment & maintenance of an IPC program
  - b. Development & implementation of a surveillance system to identify infections or communicable diseases before they spread
  - c. When & to whom possible incidents of communicable diseases should be reported
  - d. Which communicable diseases are reportable to local/state public health authorities

- e. Antibiotic stewardship program
  - f. When, why & how to use [Standard Precautions](#) and [Transmission-Based Precautions](#)
  - g. Blood & body fluid exposure prevention (including bloodborne pathogen transmission)
  - h. Prohibiting staff with a communicable disease or infected skin lesions from direct contact with residents or their food if direct contact will transmit disease.
  - i. Safe device & equipment use (e.g., blood glucose monitor, respiratory equipment, tubes/lines/drains)
  - j. Resident care activities (indwelling device insertion & maintenance, dialysis, wound & skin care, finger sticks & point-of-care testing, medication preparation, administration and care)
  - k. Environmental hygiene, including cleaning & disinfecting surfaces & reusable items
  - l. Staff handling, storing, processing & transporting laundry to prevent infection spread
  - m. Occupational health (e.g., work restrictions, tuberculosis prevention, influenza prevention, food safety)
  - n. Education & competency assessments
  - o. System of recording IPC incidents & taking appropriate corrective actions
2. Trainings/ capacity building for healthcare workers (HCW)
- a. CDC: [Project Firstline. IPC resources for frontline HCW](#), Inside Infection Control [Videos](#) & [Training Toolkits](#)
  - b. Oregon Patient Safety Commission [Infection Prevention Education Videos](#)
  - c. US DHHS [Partnering to Heal: Teaming Up Against Healthcare-Associated Infections](#) (scenario-based training)
  - d. Superior Health Quality Alliance [Front Line Forces: A Nursing Assistant Education and Collaboration Series](#)
  - e. APIC [Infection Prevention Training & Education](#)
  - f. CMS [Quality, Safety & Education Portal \(QSEP\)](#)
3. Visual reminders
- a. Encourage all staff to sign a [pledge](#) to practice all infection prevention skills.
  - b. Display posters that reinforce facility expectations (see examples at right)
4. Staff mental health and wellness
- a. Metro Health and Medical Preparedness Coalition [Staff Wellness Resources](#)
  - b. IHI [Psychological PPE](#) & [A Guide to Promoting Health Care Workforce Well-Being During & After the COVID-19 Pandemic](#)



## Conduct Surveillance & Provide Feedback

1. Process indicators
- a. HCW hand hygiene compliance
  - b. HCW selection & use of PPE (example: p.12 [CDC Infection Control Assessment Tool for LTCF](#))
  - c. Appropriate use of Transmission-Based Precautions
  - d. IPC practices during resident care (example: pp.13 - 15 [CDC Infection Control Assessment Tool for LTCF](#))
  - e. Injection safety & point-of-care testing (example: p.11 [CDC Infection Control Assessment Tool for LTCF](#))
  - f. Bloodborne pathogen exposure management (examples: [CDC Injection Safety Checklist](#), p. 112 [CDC Workbook for Designing, Implementing & Evaluating a Sharps Injury Prevention Program](#))
  - g. Antibiotic use per antibiotic stewardship protocol (e.g., [MDH 72-Hour Antibiotic Time-Out Sample Template](#))
  - h. Adherence to environmental cleaning & disinfection policies
    - i. Correct use of Environmental Protection Agency (EPA)-registered products
    - ii. Resident rooms & common area surfaces
    - iii. Reusable medical equipment
  - i. Laundry & linen practices
2. Observational audit processes



- a. CDC/STRIVE [Competency-Based Training, Audits and Feedback](#)
- b. AHRQ [Observational Audits: A Pathway to Improving Infection Prevention & Preventing the Spread of COVID-19](#)
- c. CDC [IPC Assessment Tool for Long-term Care Facilities- Section 3: Direct Observation of Facility Practices](#)
3. MDH [Infection & Antibiotic Use Tracking Tool](#) (available in the [MN Antimicrobial Stewardship Program Toolkit for LTCF](#))
4. Recommendations for metrics for MDROs in healthcare settings: [SHEA/HICPAC Position paper](#)
5. California Department of Public Health [Infection Surveillance in Skilled Nursing Facilities slide deck](#)
6. MDH [Reportable Disease Poster](#)

## Brainstorm & Pilot Change Ideas

1. MDH [About OI and Performance Management](#) (contains sample policies, guidebooks, tools and trainings)
2. Superior Health Quality Alliance: [Nursing Home Quality Improvement Collaborative](#)
3. IHI [How to Improve](#) & [Quality Improvement and Patient Safety Tools](#)

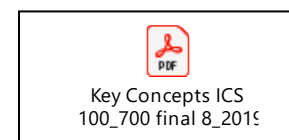
## Infection Prevention & Control Activities

### General

1. Guidance/publications
  - a. CDC [Core IPC Practices for Safe Healthcare Delivery in All Settings –Recommendations of the HICPAC](#)
  - b. CDC [Standard Precautions for All Patient Care](#)
  - c. MDH: [Guideline for the Management of Antimicrobial Resistant Organisms in MN LTCF \(October 2000\)](#)
  - d. AHRQ: [A Unit Guide to Infection Prevention for LTC Staff](#) & [COVID-19 Resources Catalog for Nursing Homes](#)
  - e. APIC [Infection Prevention Guide to Long-Term Care 2<sup>nd</sup> Edition](#), APIC [Text](#) and [Implementation Guides](#)
  - f. New York City Department of Health & Mental Hygiene: [Best Practices & Good Ideas Handbook for Infection Control in Nursing Homes](#)
  - g. Nebraska Medicine [Infection Control Assessment and Promotion Program resources](#)
  - h. [SHEA/ APIC Guideline: Infection Prevention and Control in the Long-Term Care Facility](#)
  - i. World Health Organization (WHO) [Improving Infection Prevention and Control at the Health Facility. Interim Practical Manual Supporting Implementation of the WHO Guidelines on Core Components of Infection Prevention and Control Programmes](#)
2. Tools/toolkits
  - a. CDC [Long-term Care Facility Infection Prevention Tools](#) & [Prevention Toolkits](#)
  - b. [Statewide Program for Infection Control and Epidemiology \(SPICE\)](#)
  - c. Minnesota Association of Geriatrics Inspired Clinicians [Clinical Practice Alliance Committee and Resources](#)
  - d. Collaborative Healthcare-Associated Infection Network [Roadmap to a Comprehensive HAI Prevention Program 2.0](#)
3. COVID-19 response updates
  - a. CDC [What's New & Updated](#)
  - b. CMS [Current Emergencies](#) and [COVID-19 Data & Updates](#)
  - c. MDH [COVID-19 Weekly Report](#)
  - d. Hennepin County COVID-19 Response [Website](#)

### Emergency Preparedness

1. Hennepin County EP ICS 700 & 100 Key Concepts and Terms (right)
2. MDH [Long-Term Care Emergency Preparedness](#) and [EP Training and Exercises](#)
3. [Metro Health & Medical Preparedness Coalition](#)
  - a. Emily Moilanen, Regional Healthcare Preparedness Coordinator





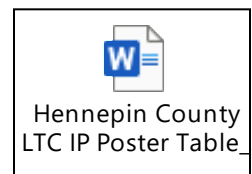
- i. Phone number: 763-286-5839
  - ii. Email: [emily.moilanen@hcmed.org](mailto:emily.moilanen@hcmed.org)
4. APIC [State-of-the-art Report: The role of the infection preventionist in emergency management.](#)

## Hand Hygiene

1. Guidelines/ Recommendations: CDC: [Guideline for Hand Hygiene in Health-Care Settings](#)
2. Policy, Protocol & Competency Templates
  - a. Orange County Nursing Home Infection Prevention Toolkit [Hand Hygiene Protocol](#)
  - b. CDC [hand hygiene policy template](#) (accessed via [Nursing Home Infection Preventionist Training Course](#))
  - c. UNC SPICE [Hand Hygiene Competency Tool](#)
3. Toolkit: Minnesota Hospital Association [CDI Hand Hygiene Toolkit](#)
4. Auditing tool: UNC SPICE [Hand Hygiene/Transmission-Based Precautions Observation Tool](#)
5. Education:
  - a. CDC Clean Hands Count [video](#) and [promotional materials](#)
  - b. CDC Project Firstline [posters & infographics](#), [Inside Infection Control Videos. Episode 21](#)
  - c. IHI How-to Guide: Improving Hand Hygiene
  - d. MDH [handwashing explanation](#) & [germ transmission simulation](#).
  - e. CDC/STRIVE [Hand Hygiene Training Modules](#)

## Personal Protective Equipment (PPE)

1. Guidelines & Recommendations:
  - a. CDC Healthcare Infection Control Practices Advisory Committee (HICPAC): [Guideline for Isolation Precautions: Preventing Transmission of Infectious Agents in Healthcare Settings \(2007\)](#)
  - b. CDC/STRIVE [PPE Training Modules](#)
  - c. CDC [Enhanced Barrier Precautions](#)
  - d. MDH [Respiratory Protection Program](#)
    - i. Contact [Metro Health & Medical Preparedness Coalition](#) for assistance with respirator fit-testing  
[Emily Moilanen](#), Regional Healthcare Preparedness Coordinator. Phone number: 763-286-5839
2. Templates, Tools & Competency Validation
  - a. CDC [Application of TBP policy/procedure template\\*](#)
  - b. CDC [Selection and Use of PPE During Standard Precautions policy/ procedure template\\*](#)
  - c. UNC SPICE [PPE Competency Validation](#)
  - d. CDC [Wound Care policy/procedure template\\*](#)
  - e. UNC SPICE [Wound Care Observation Tool](#)
  - f. Orange County [Nursing Home Infection Prevention Toolkit protocol templates](#)  
\*accessed via [Nursing Home Infection Preventionist Training Course](#)
3. Signs & Posters:
  - a. Vanderbilt University Medical Center: [Isolation Precautions signs](#)
  - b. UNC SPICE: [Isolation Signage](#)
  - c. Public Health Ontario [Signage](#) (LTC-specific options)
  - d. MDH: [Enhanced Respiratory Precautions sign](#)
  - e. Poster collection (right)
4. Isolation cart supplies for consideration
  - a. Laminated isolation signs that outline actions to take prior to entering the resident's room
  - b. Gloves, gowns, masks, eye protection and PPE donning & doffing instructions with images



- c. Stethoscope, thermometer, disposable blood pressure cuff & other vital signs monitoring equipment that will be dedicated for single-resident use
- d. Cleaning & disinfecting wipes
- e. Alcohol-based hand sanitizer
- f. Waste receptacle

## Safe Injection Practices

1. Education:
  - a. CDC Project Firstline [Session Plan: Multi-Dose Vials](#) & [Infographic: Multi-Dose Vials](#)
  - b. CDC & the Safe Injection Practices Coalition [One & Only Campaign](#) & [Sharps Safety for Healthcare Settings](#)
  - c. CDC National Occupational Research Agenda [Stop Sticks Campaign](#)
2. Tools, Templates & Competency Validation
  - a. CDC [Injection Safety policy/procedure template\\*](#) & [Point-of-Care Blood Testing policy/procedure template\\*](#)
  - b. UNC SPICE [Injection Safety Competency Validation](#) & [Point of Care Testing Observation Tool](#)

\*accessed via [Nursing Home Infection Preventionist Training Course](#)

## Antibiotic Stewardship

1. Tools & Toolkits
  - a. MDH [Minnesota Antimicrobial Stewardship Program Toolkit for LTCF](#)
  - b. AHRQ [Nursing Home Antimicrobial Stewardship Guide](#) & Responsible antibiotic use [pledge/commitment posters](#)
  - c. Nebraska Antimicrobial Stewardship Assessment and Promotion Program. [Tools & Templates for LTC](#)
2. Guidance & Education
  - a. CDC [Core Elements of Antibiotic Stewardship for Nursing Homes](#) (accessed 5/28/21)
  - b. Massachusetts Coalition for the Prevention of Medical Errors: [Evaluation & Treatment of UTI in the Elderly](#)
  - c. CDC [Antibiotic Resistance Threats in the United States, 2019](#) (accessed 5/28/21)
3. Literature
  - a. IDSA [Clinical Practice Guideline for the Management of Asymptomatic Bacteriuria: 2019 Update by the Infectious Diseases Society of America](#)
  - b. IDSA [Reliability of nonlocalizing signs & symptoms as indicators of the presence of infection in nursing home residents \(Endorsed\)](#)

## Epidemiologically Important Organisms, Device- & Procedure-Associated Infections

1. CDC [LTCF Clinical Staff Information: Guidelines and Resources for Common Pathogens](#)

## CAUTI Prevention

1. Guidelines & Recommendations
  - a. IHI [How-to Guide: Prevent Catheter-Associated Urinary Tract Infection \(CAUTI\)](#)
  - b. CDC [Guideline for Prevention of Catheter-Associated Urinary Tract Infection \(2009\)](#)
  - c. APIC [Guide to Preventing Catheter-Associated Urinary Tract Infections \(2014\)](#)
  - d. IDSA [Clinical Practice Guideline for the Management of Asymptomatic Bacteriuria: 2019 Update by the Infectious Diseases Society of America](#)
2. Tools & Templates
  - a. CDC [Indwelling Urinary Catheter policy/procedure template](#) accessed via [Nursing Home Infection Preventionist Training Course](#)

- b. Minnesota Hospital Association [Cut CAUTI Bundle](#)
  - c. American Nurses Association [CAUTI Prevention Tool](#)
  - d. CDC [National Healthcare Safety Network denominator collection form](#)
3. Education & Training
    - a. CDC/STRIVE [CAUTI Training Modules](#)
  4. Process measures for consideration:
    - a. [Device utilization ratio](#) (proportion of resident-days for which an invasive device was in place)
    - b. [Proportion of residents with indwelling urethral catheters who have an appropriate indication documented](#)
    - c. Adherence to [device insertion and/or maintenance care practices](#)

## CLABSI Prevention

1. Guidelines & Recommendations
  - a. CDC [Intravascular Catheter-Related Infections \(2011\)](#)
  - b. IHI [How-to Guide: Prevent Central Line-Associated Bloodstream Infection](#) (CLABSI bundle)
  - c. APIC [Guide to Preventing Central Line-Associated Bloodstream Infections](#)
2. Template: CDC [Central Venous Catheter policy/procedure template](#)
3. Education & Training: CDC/STRIVE [CLABSI Training Modules](#)

## Dialysis Safety

1. Guidelines & Recommendations
  - a. CDC [Dialysis Safety landing page](#) & [Hemodialysis Recommendations](#)
  - b. CDC: [Guidelines for Environmental Infection Control in Health-Care Facilities: Recommendations of CDC and the HICPAC](#) Recommendations on Water, including Dialysis Water Quality and Dialysate
  - c. APIC [Guide to the Elimination of Infections in Hemodialysis \(2010\)](#)
2. Education:
  - a. CDC [Clean Hands Count: Dialysis Care Brochure](#)
  - b. Wyoming Department of Health [Infection Prevention Orientation Manual Section 13: Current Infection Prevention Issues in Dialysis](#)

## C. difficile Prevention

1. Guidelines, Recommendations & FAQs
  - a. Implement or expand an [Antibiotic Stewardship Program](#)
  - b. IDSA [Clinical Practice Guidelines for Clostridium difficile Infection in Adults and Children: 2017 Update by the Infectious Diseases Society of America \(IDSA\) and Society for Healthcare Epidemiology of America \(SHEA\)](#)
  - c. CDC [FAQs for Clinicians about C. diff](#)
2. Tools & Toolkits
  - a. MDH [C. difficile Toolkit for LTCF](#) (includes sample policy and response algorithm for potential infection)
  - b. CDC [National Healthcare Safety Network denominator collection form](#)
3. Education & Training: CDC/STRIVE [CDI Training Modules](#)
4. Cleaning & Disinfecting Products: EPA [List K: EPA's Registered Antimicrobial Products Effective Against C. difficile Spores](#)

## MDRO

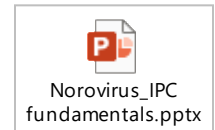
1. General MDRO Guidelines & Recommendations

- a. North Carolina Surveillance for Healthcare-Associated and Resistant Pathogens Patient Safety (SHARPPS) Program [Multidrug-Resistant Organisms Toolkit for Long-Term Care Facilities](#)
  - b. MDH: [Guideline for the Management of Antimicrobial Resistant Organisms in Minnesota LTCF](#)
  - c. CDC [Management of Multidrug-Resistant Organisms in Healthcare Settings](#)
  - d. CDC [Enhanced Barrier Precautions](#)
  - e. CDC [Antibiotic Resistance Threats in the United States, 2019](#)
  - f. Mass.gov [HAI and Infection Prevention and Control Information for Long-Term Care Facilities](#)
2. Organism- Specific Guidelines & Recommendations
    - a. CRE
      - i. MDH [Recommendations for the Management of Carbapenem-resistant Enterobacteriaceae in LTCF](#)
      - ii. CDC [Facility Guidance for Control of Carbapenem-resistant Enterobacteriaceae](#)
    - b. MRSA:
      - i. APIC [Guide to the Elimination of Methicillin-Resistant Staphylococcus aureus \(MRSA\) in the LTCF](#)
        1. Includes an MRSA risk assessment
      - ii. MDH [MRSA Guidelines and Resources](#)
    - c. *Candida auris*
      - i. CDC [General Information about Candida auris](#)
      - ii. MDH [Candida auris Information for Health Professionals: Case Definition, Required Reporting & Testing, and Infection Prevention Guidance](#)
      - iii. CDC [Fungal Diseases](#) landing page
  3. Resident Education: CDC [Be A Safe Resident](#)

## Outbreaks

1. Templates
  - a. Consider using the following documents to guide action plan development; modify for use with other pathogens:
    - i. MDH [COVID-19 Action Plan for Congregate Settings](#)
    - ii. MDH [Template: COVID-19 Response Summary for Long-term Care Facilities](#)
    - iii. CDC [COVID-19 Preparedness Checklist for Nursing Homes and other Long-Term Care Settings](#)
    - iv. West Virginia Department of Health & Human Resources [HAI Outbreak Investigation/ Notification Protocol](#)
    - v. Wyoming Department of Health Infection Prevention Orientation Manual Section 6: [Outbreak Management](#)
2. Line list examples
  - a. MDH [Influenza-Like Illness Line List](#)
  - b. MDH [Resident GI Illness Log](#) and [Staff GI Illness Log](#)
3. Guidance, Recommendations & Information to Inform Protocols
  - a. [Reingold AL. Outbreak Investigations—A Perspective. \*Emerg Infect Dis.\* 1998;4\(1\):21-27](#)
  - b. Norovirus
    - i. MDH [2020-2021 Norovirus Information for Long-Term Care Facilities](#)
    - ii. CDC [Key Infection Control Recommendations for the Control of Norovirus Outbreaks in Healthcare Settings; Norovirus Guidelines for Healthcare Settings](#) and [General Information about Norovirus](#)
  - c. Influenza
    - i. MDH [Interim Guidance for Influenza Outbreak Management in Long-Term Care Facilities](#)
    - ii. CDC [Interim Guidance for Influenza Outbreak Management in LTC & Post-Acute Care Facilities](#)

- iii. IDSA [Clinical Practice Guidelines by the Infectious Diseases Society of America: 2018 Update on Diagnosis, Treatment, Chemoprophylaxis, and Institutional Outbreak Management of Seasonal Influenza](#)
- d. Scabies:
  - i. CDC [Scabies website](#)
  - ii. Colorado Department of Public Health & Environment [Guidelines for Investigation & Management of Scabies](#)
  - iii. California Department of Public Health [Scabies Control & Prevention slide deck](#)
- e. Group A *Streptococcus*:
  - i. MDH [Invasive Group A Streptococcus \(GAS\) in Long-Term Care Facilities](#)
  - ii. Colorado Department of Public Health & Environment [Group A Streptococcal Infections in LTCF FAQs](#)
- f. Respiratory Syncytial Virus (RSV): Colorado Department of Public Health & Environment [Guidance for Prevention & Control of RSV Outbreaks in Long-Term Care Facilities](#)
- g. COVID-19: MDH [COVID-19 Toolkit](#)
- 4. Education: Norovirus Outbreak Scenario (audience: facility leadership and IPs).  
Edit by right-clicking on PowerPoint icon. Select 'presentation object' then select 'edit.'
  - a. CDC [Investigating an Outbreak](#)
  - b. CDC [Responding to Norovirus Outbreaks](#) (includes case definition)

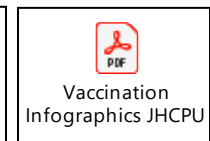
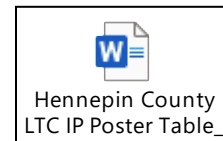


## Occupational Health

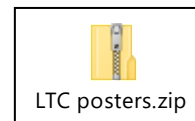
1. Wyoming Department of Health [Employee Health Program Template](#)
2. CDC [Infection Control in Healthcare Personnel](#)
3. National Institute for Occupational Safety & Health (NIOSH) Donning & Doffing and User Seal Checks [video](#)
4. NIOSH [Safety and Health Information for Healthcare Workers](#)
5. CDC [Information for Employers Complying with OSHA's Bloodborne Pathogens Standard](#)

## Vaccines

1. CDC Immunization Schedule: [Adult Immunization Schedule by Medical Condition and Other Indication, 2022](#)
2. MDH [Recommended Vaccines for Health Care Personnel](#). Information on which vaccines are recommended for people who work in health care settings.
  - a. MDH [Vaccines for Adults](#)
3. Toolkits & Templates
  - a. Immunization Action Coalition [Standing Orders Templates for Administering Vaccines](#)
  - b. CDC [Post-acute and Long-term Care Facility Toolkit: Influenza Vaccination among Healthcare Personnel](#)
4. Conversation Guides
  - a. CDC [Interactive COVID-19 Vaccine Conversations Module](#)
  - b. de Beaumont [Language That Works to Improve Vaccine Acceptance: Communications Cheat Sheet](#)
  - c. Health & Human Services [COVID-19 Public Education Campaign](#)
5. Hennepin County Vaccine Access Information: [Vaccination events](#)
6. Print Media
  - a. Poster collection & handout (right)
  - b. Infographic (right) 'Vaccines Throughout Your Life' Developed by Ida Darmawan, MA, Mark Schleiss, MD, & Milton Eder, PhD, in collaboration with WellShare International & Community-University Health Care Center. Last updated: May 2020



- c. Long-Term Care HCW appreciation and vaccine social norming posters in English, Somali and Spanish.
  - i. "Long-term care workers take care of each other. Thank you for getting up-to-date on your COVID-19 vaccines."
  - ii. "Vaccines provide strong protection against serious illness and death from COVID-19. Thank you for protecting long-term care residents."
  - iii. "Many long-term care workers are up-to-date with their COVID-19 vaccines. If you're not there yet, it's okay to have questions. Talk to your doctor about their recommendations."
  - iv. "More and more people in Hennepin County are getting up-to-date with their COVID-19 vaccines. By choosing to get the vaccine, you're helping to keep everyone healthy."



- 7. Videos
  - a. The Ad Council and COVID Collaborative ["It's Up To You" campaign](#)
  - b. CDC Project Firstline video: [Safety Tips for Giving Vaccines from a Multi-Dose Vial](#)

## Tuberculosis

- 1. CDC [Tuberculosis Screening, Testing, and Treatment of U.S. Health Care Personnel: Recommendations from the National Tuberculosis Controllers Association and CDC, 2019](#)
- 2. MDH [TB Information for Health Professionals](#) (includes training resources)

## Environment of Care

- 1. Education:
  - a. CDC Nursing Home Infection Preventionist Training courses [Module 11A: Reprocessing Reusable Resident Care Equipment](#) and [Module 11B: Environmental Cleaning and Disinfection](#)
  - b. Oregon Patient Safety Commission: [Environmental Hygiene: Best Practices to Use When Cleaning and Disinfecting Patient Rooms](#) (animated educational videos)
  - c. Minnesota Hospital Association [Environmental Services Cleaning Guidebook](#)
  - d. Association for the Health Care Environment (AHE) [Project Firstline IPC Training Collaborative](#) & [Trainings for Management & Leadership \(CHESP\) and Frontline EVS \(CHEST\)](#)
  - e. Education: Superior Health Quality Alliance [IPC Tips: Environmental Cleaning and Laundry](#)
  - f. Environmental Protection Agency (EPA): [6 Steps for Safe and Effective Disinfectant Use](#)
  - g. CDC/STRIVE [Environmental Cleaning Training Modules](#)
- 2. Guidelines & Recommendations:
  - a. CDC: [Guidelines for Environmental Infection Control in Health-Care Facilities: Recommendations of CDC and the HICPAC](#), Recommendations on Environmental Services and Recommendations on Laundry and Bedding
  - b. CDC [Recommendations for Disinfection and Sterilization in Healthcare Facilities](#)
  - c. IHI [Maintaining a Clean and Safe Environment Using Reliable Processes During COVID-19](#)
- 3. Templates & Tools:
  - a. Wyoming Department of Health
    - i. [Environmental Services/Linen Procedure](#)
    - ii. [New Employee Training Program](#)
    - iii. [Management & Use of Corrugated Cardboard Containers](#)
  - b. APIC Forms & Checklists for Infection Prevention Volume 2 [preview](#)

## Construction & Renovation

- 1. Wyoming Department of Health [Infection Control Risk Assessment \(ICRA\) During Construction: Basic ICRA with Matrix](#)

2. CDC: [Guidelines for Environmental Infection Control in Health-Care Facilities: Recommendations of CDC and the HICPAC](#), Section II: Recommendations on Construction, Renovation, Remediation, Repair and Demolition
3. Facility Guidelines Institute [Guidelines for Design and Construction of Residential Health, Care, and Support Facilities](#) (requires purchase)
4. APIC [State-of-the-Art Report: The role of infection control during construction in health care facilities](#)
5. North Central States Regional Council of Carpenters [Infection Control Risk Assessment \(ICRA\) Training](#)
6. APIC Epi® Education Series: [Basics of Construction and Renovation](#)
7. APIC [Infection Prevention Manual for Construction & Renovation](#) (requires purchase)