



# Road Map to a Comprehensive Healthcare-Associated Infection (HAI) Prevention Program 2.0



The HAI Road Map provides evidence-based recommendations/standards for Minnesota hospitals in the development of a comprehensive Healthcare-Associated Infection Prevention Program which includes catheter-associated urinary tract infections (CAUTI), central line associated bloodstream infections (CLABSI), ventilator-associated pneumonia (VAP), surgical site infection (SSI), and clostridium difficile infection (CDI). The Road Map and accompanying tool kit were developed as part of the Minnesota HAI Prevention Collaborative, which was made possible with funding through the Centers for Disease Control and Prevention (CDC) Epidemiology and Laboratory Capacity Program (ELC) American Reinvestment and Recovery Act (ARRA) and CMS Partnership for Patients (P4P) Initiative.

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## Definitions

**Health care personnel (HCP):** All persons, paid and unpaid, working in an acute care facility who have potential for exposure to patients and/or infectious materials, including body substances, contaminated medical supplies and equipment, contaminated environmental surfaces, or contaminated air. This includes persons not directly involved in patient care (e.g. leadership, clerical, housekeeping, and volunteers) but potentially exposed to infectious agents that can be transmitted to and from HCP and patients. This term includes, but is not limited to, physicians, physician assistants, nurse practitioners, nurses, nursing assistants, therapists, technicians, emergency medical service personnel, dental personnel, pharmacists, laboratory personnel, autopsy personnel, students and trainees, and contractual personnel.

**Prescriber:** Health care personnel who are licensed to prescribe medications, including antimicrobial agents.



# Building blocks for HAI prevention

## Hand hygiene

Audit Questions	Yes	No
<b>The facility has instituted an infrastructure, based on CDC or WHO guidelines, to reinforce and sustain hand hygiene practices using the following strategies, at minimum:</b>		
1a) Set clear expectations for hand hygiene practices to all health care personnel (HCP) and prescribers.	<input type="checkbox"/>	<input type="checkbox"/>
1b) Consider incorporating a human factors approach to hand hygiene compliance ( <a href="http://www.mnhospitals.org/controllingcdi">www.mnhospitals.org/controllingcdi</a> )	<input type="checkbox"/>	<input type="checkbox"/>
1c) Provide visible reminders of hand hygiene expectations, e.g., computer screen savers, posters.	<input type="checkbox"/>	<input type="checkbox"/>
1d) Provide on-going coaching and just-in-time training to reinforce effective hand hygiene expectations.	<input type="checkbox"/>	<input type="checkbox"/>
1e) Provide real time performance feedback to HCP, prescribers.	<input type="checkbox"/>	<input type="checkbox"/>
1f) Tailor education in proper hand hygiene for specific disciplines.	<input type="checkbox"/>	<input type="checkbox"/>
1g) Make soap/waterless hand sanitizer readily available to HCP, prescribers, patients and visitors.	<input type="checkbox"/>	<input type="checkbox"/>
1h) Structure the hand hygiene environment to support hand hygiene, e.g., dedicated space to place items while cleaning hands.	<input type="checkbox"/>	<input type="checkbox"/>
1i) Limit the need to frequently enter or exit patient room, e.g., bedside computer, portable phone, adequate/dedicated supplies in room.	<input type="checkbox"/>	<input type="checkbox"/>
1j) Consider technologies to make it easy for HCP, prescribers to remember to clean hands, e.g., radio frequency identification, automatic reminders, warning systems.	<input type="checkbox"/>	<input type="checkbox"/>
1k) A "Justice, Learning and Accountability" model is applied when HCP, prescribers are observed not following facility expectations for appropriate hand hygiene.	<input type="checkbox"/>	<input type="checkbox"/>
1l) Celebrate improvements in hand hygiene practices.	<input type="checkbox"/>	<input type="checkbox"/>
2a) A process is in place to provide hand hygiene education for all HCP, prescribers at orientation and on an on-going basis.	<input type="checkbox"/>	<input type="checkbox"/>
3a) A process is in place to provide on-going education to patients, families and visitors on the importance of proper hand hygiene, e.g., signage, fact sheets, easily accessible hand sanitizer dispensers for patients/families.	<input type="checkbox"/>	<input type="checkbox"/>
<b>The facility has clear expectations that all HCP, prescribers may clean hands with either soap and water or an alcohol-based hand rub:</b>		
4a) When hands are not visibly dirty or contaminated.	<input type="checkbox"/>	<input type="checkbox"/>
4b) Before having direct contact with patients.	<input type="checkbox"/>	<input type="checkbox"/>
4c) After removing gloves.	<input type="checkbox"/>	<input type="checkbox"/>
<b>The facility has clear expectations that all HCP, prescribers must clean hands with soap and water:</b>		
4d) When hands are visibly dirty or contaminated.	<input type="checkbox"/>	<input type="checkbox"/>
4e) Before eating or handling food.	<input type="checkbox"/>	<input type="checkbox"/>
4f) After using a restroom.	<input type="checkbox"/>	<input type="checkbox"/>
4g) After caring for a patient with potentially infectious diarrhea.	<input type="checkbox"/>	<input type="checkbox"/>
4h) The facility's hand hygiene and surgical hand scrub products are FDA- approved.	<input type="checkbox"/>	<input type="checkbox"/>
4i) The facility follows AORN, CDC, and/or WHO guidelines as well as manufacturer's directions when using hand hygiene and surgical hand scrub products.	<input type="checkbox"/>	<input type="checkbox"/>
<b>In any setting where sterile technique is used, the facility has clear expectations for hand hygiene practices:</b>		
4j) Fingernails are short, clean, and without chipped nail polish.	<input type="checkbox"/>	<input type="checkbox"/>
4k) Artificial nails (any enhancement or resin bonding product including gel), are not worn.	<input type="checkbox"/>	<input type="checkbox"/>
4l) Rings, watches, and bracelets are removed prior to hand hygiene.	<input type="checkbox"/>	<input type="checkbox"/>
4m) Cuticles, hands and exposed skin are free of cuts, abrasions, open lesions, and new tattoos.	<input type="checkbox"/>	<input type="checkbox"/>
4n) A surgical hand scrub is performed by health care personnel before donning sterile gloves for surgical procedures as outlined by AORN guidelines.	<input type="checkbox"/>	<input type="checkbox"/>
<b>The facility conducts hand hygiene audits:</b>		
5a) The facility has a method in place to audit compliance with hand hygiene in all departments, including outpatient/clinic/ ambulatory care settings., e.g., no. of hand hygiene episodes/no. of hand hygiene opportunities, appropriate hand hygiene technique, when outbreaks of infection occur, artificial nail wearing practices, monitoring the volume of alcohol-based hand rub (or detergent used for hand cleaning or hand antisepsis) used per 1,000 patient-days.	<input type="checkbox"/>	<input type="checkbox"/>
5b) The facility uses trained observers to monitor appropriateness of hand hygiene (Consider nursing students).	<input type="checkbox"/>	<input type="checkbox"/>
5c) The facility has a process to identify hand hygiene system issues and target solutions, e.g., supplies not readily available, faulty/empty hand sanitizer dispenser.	<input type="checkbox"/>	<input type="checkbox"/>
5d) The facility has a process to assess patient/family perspective on HCP/prescriber hand hygiene compliance (e.g. patient satisfaction survey post visit survey or use of survey cards for patient-as-observer during a visit).	<input type="checkbox"/>	<input type="checkbox"/>

Audit Questions	Yes	No
<p><b>The facility provides feedback on hand hygiene adherence:</b></p> <p>5e) Within units</p> <p>5f) Across units</p> <p>5g) Across departments</p> <p>5h) With leadership</p> <p>5i) With medical staff</p> <p>5j) With the board(s)</p>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<p><b>Continually improve hand hygiene:</b></p> <p>6a) Establish goals for improving compliance with hand hygiene guidelines.</p> <p>6b) Improve compliance with hand hygiene guidelines based on established goals using evidence based strategies.</p>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>
<b>Transmission-based precautions</b>		
<p>1a) The facility has a process in place to apply standard infection prevention practices for all patients, regardless of suspected or confirmed infection status which includes, at a minimum:</p> <ul style="list-style-type: none"> <li>• Hand hygiene</li> <li>• Use of gloves</li> <li>• Gown</li> <li>• Mask</li> <li>• Eye protection or face shield, depending on the anticipated exposure</li> <li>• Safe injection practices</li> <li>• Respiratory hygiene/cough etiquette</li> <li>• Use of masks for insertion of catheters or injection of material into spinal or epidural spaces via lumbar puncture procedures</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>
<p>2a) The facility's infection prevention program addresses the use of transmission-based isolation precautions based on current public health and other evidence-based guidelines which addresses, at a minimum</p> <ul style="list-style-type: none"> <li>• Contact Precautions</li> <li>• Droplet Precautions</li> <li>• Airborne Precautions</li> </ul> <p>2b) Have a process in place to respond to CDC recommendations for emerging pathogens.</p>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>
<p><b>The facility's process for patient placement/room selection includes:</b></p> <p>3a) Private/single-patient room preferred for patients requiring isolation precautions when available.</p> <p>3b) If private room availability is limited, cohort patients according to CDC guideline.</p> <p>3c) Patients with discordant status of infection or colonization with other epidemiologically important organisms (e.g., VRE, MRSA) are not cohorted.</p> <p>3d) Airborne isolation infection room (AIIR) according to CDC guideline for patients with infectious agents requiring Airborne Precautions or a process to transfer patients requiring airborne isolation to another facility.</p>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<p><b>Communicate precaution status:</b></p> <p>4a) The facility has a process in place to immediately post Isolation Precautions signage in visible location outside suspected and positive patient rooms.</p> <p>4b) The facility has a process in place to communicate isolation precaution status to receiving departments/facilities when isolation patients are transferred.</p>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>
<p><b>Ensure effective use of personal protective equipment (PPE):</b></p> <p>5a) Adequate supplies for compliance with Isolation Precautions (e.g., gowns, gloves) are readily accessible outside of the patient room.</p> <p>5b) HCP, prescribers wear PPE according to Standard Precautions and Transmission-based precautions.</p> <p>5c) Gloves are changed immediately if visibly soiled and after touching or handling contaminated surfaces/materials.</p> <p>5d) HCP, prescribers change gown and gloves and perform hand hygiene when moving between cohorted patients.</p> <p>5e) Respiratory protection is worn according to CDC guidelines for patients with infectious agents requiring airborne precautions and for performance of aerosol-generating procedures.</p> <p>5f) PPE is removed before exiting the patient room (exception: N95 respirator is removed after exiting patient room).</p> <p>5g) The CDC Guideline instructions on donning and removal of PPE are followed.</p> <p>5h) Staff training is provided on donning and doffing PPE on orientation and regularly, including competency assessments.</p>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<p><b>Patient transport:</b></p> <p>6a) The facility provides clear expectations that patient transport or movement for patients with infections, outside of the room is avoided unless medically necessary.</p> <p>6b) When transport is necessary, a process is in place to ensure that infected or colonized areas of the patient's body are contained and covered.</p>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>

Audit Questions	Yes	No
<p><b>Environmental cleaning and disinfection:</b></p> <p>7a) The facility has processes in place for routine and targeted cleaning and disinfection of environmental surfaces as indicated by level of patient contact and degree of soiling which includes emphasis on high-touch surfaces in the patient care environment.</p> <p>7b) The facility uses EPA-registered disinfectant products that have microbiocidal activity against the pathogens most likely to contaminate the patient care environment.</p> <p>7c) The facility has a process in place to use disinfectant products in accordance with manufacturer instructions for use and contact time.</p>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<p><b>Linen and waste management:</b></p> <p>8a) The facility has a process in place to follow Standard Precautions for the handling of soiled linen and waste materials.</p> <p>8b) The facility has a process in place to dispose of infectious/biohazard waste according to the OSHA Bloodborne Pathogen Standard.</p>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>
<p><b>Patient care supply/equipment management:</b></p> <p>9a) Patient care equipment and instruments are handled according to Standard Precautions.</p> <p>9b) Single-use or dedicated patient care equipment is utilized when possible (e.g. blood pressure cuff).</p> <p>9c) Reusable patient-care equipment is cleaned and disinfected between patients.</p> <p>9d) The amount of supplies stocked in the patient room is limited to what will be needed for care.</p> <p>9e) Responsibility is assigned for regularly checking and restocking supplies.</p> <p>9f) A defined process is in place for handling supplies remaining in the patient room after discharge.</p> <p>9g) Responsibility is defined for who is assigned to clean patient care supplies/equipment and surfaces, eg., nursing, EVS.</p> <p>9h) A defined process is in place for separating and identifying clean and dirty equipment, eg., commodes, IV pumps.</p>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<p><b>Communicate clear expectations for patient and visitors:</b></p> <p>10a) The facility has a process in place to educate patients/families on recommended hand hygiene, respiratory hygiene and transmission-based precautions as well as infectious agent specific information as appropriate.</p> <p>10b) The facility has a process to clearly communicate and enforce requirements for visitors to enter isolation rooms, e.g., hand hygiene, PPE requirement.</p> <p>10c) The facility has established a process to clearly communicate and enforce restrictions for visitors based on potential for their exposure as well as if they have signs/symptoms of infection, e.g., fever, acute respiratory symptoms, gastrointestinal symptoms.</p>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<p><b>Establish parameters for discontinuation of precautions:</b></p> <p>11a) The facility has a process in place to discontinue precautions based on CDC recommendations, such as:</p> <ul style="list-style-type: none"> <li>• after signs and symptoms of infection have resolved and</li> <li>• patient is no longer contagious</li> <li>• according to pathogen-specific recommendations</li> <li>• if infectious agents that require isolation precautions have been ruled out</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Antimicrobial Stewardship Program (ASP)</b>		
<p>1a) A physician who is knowledgeable about antimicrobials and is respected by peers has been appointed to serve as a champion for the ASP.</p> <p>1b) The facility has established an ASP team that includes, at a minimum, the physician champion and a pharmacy champion.</p> <p>1c) Senior leadership supports the ASP by providing compensation and/or time for team members to work on the ASP.</p> <p>1d) The ASP team is familiar with the key published ASP literature.</p> <p>1e) The pharmacy provides antimicrobial use data to the ASP team.</p> <p>1f) The ASP Team (or pharmacy or Pharmacy and Therapeutics Committee) has reviewed and updated the formulary to promote optimal, non-duplicative availability of antimicrobials.</p> <p>1g) The facility's laboratory produces a facility-specific antibiogram or has access to a region-specific antibiogram that is updated annually.</p> <p>1h) A baseline assessment of resources and barriers for an ASP has been conducted.</p> <p>1i) The ASP Team utilizes antimicrobial use data and microbiology data (e.g., antibiogram) to prioritize ASP strategies.</p> <p>1j) The ASP Team considers adopting policies requiring the use of minimal clinical criteria for prescribing antibiotics to treat urinary tract infections.</p>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<b>Injection practices</b>		
<p><b>The facility has established injection practices policies/protocols with clear expectations that the practices below are followed:</b></p> <p>1a) Aseptic technique is used to avoid contamination of sterile injection equipment.</p> <p>1b) Used syringes, needles and cannulas are discarded at the point of use in an approved Sharps container immediately after use.</p>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>

Audit Questions	Yes	No
1c) Single-dose vials are used whenever possible and discarded immediately after use on a single patient.	<input type="checkbox"/>	<input type="checkbox"/>
1d) Medications are not administered from a syringe to multiple patients, even if the needle or cannula on the syringe is changed.	<input type="checkbox"/>	<input type="checkbox"/>
1e) Needles, cannulae, and syringes are sterile, single-use items and should not be reused for another patient or to access a medication or solution that might be used for a subsequent patient.	<input type="checkbox"/>	<input type="checkbox"/>
1f) A syringe or needle/cannula is considered contaminated once it has been used to enter or connect to a patient's intravenous infusion bag or administration set.	<input type="checkbox"/>	<input type="checkbox"/>
1g) Medication is not prepared in one syringe to transfer to another syringe.	<input type="checkbox"/>	<input type="checkbox"/>
1h) A sterile syringe and needle/cannula is always used when entering vial —never one that has been used on another patient.	<input type="checkbox"/>	<input type="checkbox"/>
1i) Multidose vials are discarded 28 days after opening, unless specified by the manufacturer, or sooner if sterility is questioned or compromised.	<input type="checkbox"/>	<input type="checkbox"/>
1j) Multi-dose vials are not kept in the immediate patient treatment area and are stored in accordance with the manufacturer's recommendations.	<input type="checkbox"/>	<input type="checkbox"/>
1k) A needle, cannula, or spike device is never left inserted into a medication vial rubber stopper because it leaves the vial vulnerable to contamination.	<input type="checkbox"/>	<input type="checkbox"/>
1l) Fluid infusion and administration sets (eg., intravenous bags, tubing, and connectors) are used for one patient only and discarded appropriately after use.	<input type="checkbox"/>	<input type="checkbox"/>
1m) Bags or bottles of intravenous solution are not used as a common source of supply for multiple patients.	<input type="checkbox"/>	<input type="checkbox"/>
1n) Once IV solution bags have been spiked; administration must begin within 1 hour.	<input type="checkbox"/>	<input type="checkbox"/>
1o) All opened vials, IV solutions and prepared or opened syringes that were used in an emergency situation are discarded.	<input type="checkbox"/>	<input type="checkbox"/>
1p) Insulin pens are never shared between patients.	<input type="checkbox"/>	<input type="checkbox"/>
1q) Only single-use, disposable lancets are used for fingersticks.	<input type="checkbox"/>	<input type="checkbox"/>
1r) Glucometers are not shared between patients unless the manufacturer indicates they are proved for multi-use and disinfection instructions are carefully followed.	<input type="checkbox"/>	<input type="checkbox"/>
1s) Equipment that minimizes recapping needlestick injuries is utilized.	<input type="checkbox"/>	<input type="checkbox"/>
1t) Facility follows recommendations outlined by the One & Only Campaign ( <a href="http://oneandonlycampaign.org/content/what-are-they-why-follow-them">http://oneandonlycampaign.org/content/what-are-they-why-follow-them</a> ).	<input type="checkbox"/>	<input type="checkbox"/>

## System-wide environmental cleaning

**CORE Prevention Strategies = Strategies that should always be in place.**

**ENHANCED Prevention Strategies = Strategies to be considered in addition to core strategies when:**

- a) There is evidence that the core strategies are being implemented and adhered to consistently.
- b) There is evidence of on-going transmission as appropriate.
- c) There is evidence that rates are not decreasing.
- d) There is evidence of change in pathogenesis as appropriate (e.g. increased morbidity/mortality among patients).

### CORE PREVENTION

1a) Patient rooms and patient care equipment are appropriately cleaned and disinfected.	<input type="checkbox"/>	<input type="checkbox"/>
<b>The facility has a standardized environmental cleaning and disinfection protocol that includes:</b>		
1b) Hospital grade EPA-registered germicide is used for routine disinfection and in accordance with the manufacturers' instructions.	<input type="checkbox"/>	<input type="checkbox"/>
1c) Manufacturer product recommendations are followed for use, including contact time and dilution.	<input type="checkbox"/>	<input type="checkbox"/>
<b>Provide cleaning/ disinfection education for nursing/support staff:</b>		
2a) The facility has a process in place to provide cleaning and disinfection education for nursing and support staff.	<input type="checkbox"/>	<input type="checkbox"/>
<b>Provide education and competency testing for environmental services trainers — the facility has a process in place to require person(s) responsible for environmental services training to:</b>		
3a) Receive education on current environmental cleaning/disinfection practices at least annually.	<input type="checkbox"/>	<input type="checkbox"/>
3b) Complete a competency evaluation of cleaning/disinfection practices at least annually.	<input type="checkbox"/>	<input type="checkbox"/>



Audit Questions	Yes	No
<p><b>Provide cleaning/ disinfection training and evaluation for environmental services staff:</b></p> <p>4a) Training materials are provided in HCP, prescribers native language (or ensure communication of the information through other means).</p> <p>4b) Environmental services staff training includes return demonstration.</p> <p>4c) A systematic process is in place to periodically evaluate terminally cleaned rooms.</p> <p>4d) Processes are in place to address issues identified through evaluations.</p>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<p><b>Provide competency testing to environmental services staff:</b></p> <p>5a) Environmental services staff training includes written or verbal competency testing which includes demonstrated understanding of the rationale for cleaning/disinfection components.</p> <p>5b) Expectations are in place for environmental services staff to pass a competency test prior to assignment to patient care areas.</p> <p>5c) Expectations are in place for environmental services staff that do not pass the competency test to receive additional training or be assigned to non-patient care areas.</p>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<b>ENHANCED PREVENTION</b>		
<p><b>Establish enhanced cleaning &amp; disinfection practices:</b></p> <p>6a) The facility has a process to consider technology to monitor for room cleanliness, e.g., ATP, bioluminescence, fluorescent dye/marker, as appropriate.</p> <p>6b) The facility has a process to consider other technologies for environmental disinfection, e.g., UV light, hydrogen peroxide vapor.</p>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>

<b>Patient influenza immunizations</b>				
<p><b>The facility has a process to screen and administer influenza vaccinations to hospitalized persons 6 months or older according to National Hospital Inpatient Quality Measures and ACIP guidelines that includes:</b></p> <p>1a) Incorporation of influenza immunization status into initial patient assessment.</p> <p>1b) Consideration of nursing standing orders for influenza vaccinations according to ACIP guidelines.</p> <p>1c) Establishment of protocol for influenza immunizations for obstetric patients.</p> <p>1d) A review of influenza vaccination status included in the discharge process with administration of vaccine if indicated</p> <p>1e) Consider the promotion of patient influenza vaccinations in outpatient settings.</p>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		
<b>Immunization of healthcare personnel</b>				
<p>1a) The facility has policies and procedures in place based on the Advisory Committee on Immunization Practice (ACIP) recommendations that ensure employees are protected against vaccine-preventable diseases that pose a threat to the HCP's or patient's wellbeing within the institutional setting.</p> <p>1b) Policy and procedure has been established for each HCP-recommended vaccine that includes the following:</p> <ul style="list-style-type: none"> <li>• Category of HCP indicated for vaccination</li> <li>• Presumptive immunity for each vaccine-preventable disease</li> <li>• The ACIP recommended schedule</li> <li>• Annual review of these policies and updates as necessary</li> </ul> <p><i>(See Appendix A for summary of current guidelines)</i></p>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>		
<p><b>Policy to implement new HCP-related ACIP recommendations:</b></p> <p>2a) Facility has procedure to ensure that all current employees are vaccinated within 1 year of new recommendation.</p>			<input type="checkbox"/>	<input type="checkbox"/>
<p><b>Policy and appropriate follow-up for non-vaccinated employees without evidence of immunity:</b></p> <p>3a) Facility has taken steps to minimize/reduce potential for spread of vaccine preventable disease by unvaccinated employees who have not met the criteria for presumptive immunity.</p> <p>3b) Reasons for non-receipt of a recommended vaccine are documented.</p> <p>3c) Employee has received appropriate follow-up</p> <ul style="list-style-type: none"> <li>• Contraindications: advise HCP on post-exposure protocols and any need to restrict or modify normal work duties</li> <li>• Declination/Refusal: consider policy for a follow-up conversation to provide resources to counter misinformation (if indicated) and advise employee on post-exposure protocols and any need to restrict or modify work duties</li> </ul>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		



# HAI specific topics

## Implement CAUTI Roadmap practices

Audit Questions	Yes	No
1a) The facility provides care for patients with Foley catheters.	<input type="checkbox"/>	<input type="checkbox"/>
1b) The facility has performed a gap analysis of current policies and practices against the CAUTI recommendations.	<input type="checkbox"/>	<input type="checkbox"/>
1c) An implementation plan has been developed to address relevant gaps.	<input type="checkbox"/>	<input type="checkbox"/>
1d) The plan to address relevant gaps has been implemented to achieve at least 90% of the recommended practices.	<input type="checkbox"/>	<input type="checkbox"/>

## Implement CLABSI Roadmap practices and/or Checking CLABSI bundle

2a) The facility provides care for patients with central lines.	<input type="checkbox"/>	<input type="checkbox"/>
2b) The facility has performed a gap analysis of current policies and practices against the CLABSI recommendations.	<input type="checkbox"/>	<input type="checkbox"/>
2c) An implementation plan has been developed to address relevant gaps.	<input type="checkbox"/>	<input type="checkbox"/>

## Implement SSI Roadmap practices and/or Slashing SSI bundle

3a) The facility has an OR and does surgeries.	<input type="checkbox"/>	<input type="checkbox"/>
3b) The plan to address relevant gaps has been implemented to achieve at least 90% of the recommended practices.	<input type="checkbox"/>	<input type="checkbox"/>
3c) The facility has performed a gap analysis of current policies and practices against the SSI recommendations.	<input type="checkbox"/>	<input type="checkbox"/>
3d) An implementation plan has been developed to address relevant gaps.	<input type="checkbox"/>	<input type="checkbox"/>
3e) The plan to address relevant gaps has been implemented to achieve at least 90% of the recommended practices.	<input type="checkbox"/>	<input type="checkbox"/>

## Implement VAE Roadmap practices and/or Vanishing VAE bundle

4a) The facility provides care for patients on ventilators.	<input type="checkbox"/>	<input type="checkbox"/>
4b) The facility has performed a gap analysis of current policies and practices against the VAP recommendations.	<input type="checkbox"/>	<input type="checkbox"/>
4c) An implementation plan has been developed to address relevant gaps.	<input type="checkbox"/>	<input type="checkbox"/>
4d) The plan to address relevant gaps has been implemented to achieve at least 90% of the recommended practices.	<input type="checkbox"/>	<input type="checkbox"/>

## Implement CDI Roadmap practices and/or Checking CDI bundles

5a) The facility has a process in place to manage patients with CDI.	<input type="checkbox"/>	<input type="checkbox"/>
5b) The facility has performed a gap analysis of current policies and practices against the CDI recommendations.	<input type="checkbox"/>	<input type="checkbox"/>
5c) An implementation plan has been developed to address relevant gaps.	<input type="checkbox"/>	<input type="checkbox"/>
5d) The plan to address relevant gaps has been implemented to achieve at least 90% of the recommended practices.	<input type="checkbox"/>	<input type="checkbox"/>

## Appendix A: Guidelines for Vaccination of HCP (adapted from ACIP Recommendations)

Vaccination	Indicated Population	Presumptive Immunity	Primary Vaccine Schedule and Boosters	Special Considerations
Hepatitis B	HCP at risk for exposure to blood or body fluids	<ul style="list-style-type: none"> <li>3 valid doses of Hep B vaccine or</li> <li>Anti-HBs titer of <math>\geq 10</math> mIU/mL</li> </ul>	3 doses given at 0, 1-2, 4-6 month intervals; booster doses not necessary	
Influenza	All HCP	N/A	Annual vaccination with current seasonal vaccine.	
Measles	All HCP who lack presumptive immunity	<ul style="list-style-type: none"> <li>2 valid doses of measles or MMR vaccine</li> <li>Laboratory evidence of immunity gained through either vaccination or disease</li> <li>Birth before 1957</li> </ul>	2 doses at least 28 days apart	When there is a community outbreak, including an identified case within the health care facility, vaccination should be considered for those born before 1957.
Mumps	All HCP who lack presumptive immunity	<ul style="list-style-type: none"> <li>2 valid doses of mumps or MMR vaccine</li> <li>Laboratory evidence of immunity gained through either vaccination or disease</li> <li>Birth before 1957</li> </ul>	2 doses at least 28 days apart	When there is a community outbreak, including an identified case within the health care facility, vaccination should be considered for those born before 1957.
Rubella	All HCP who lack presumptive immunity	<ul style="list-style-type: none"> <li>1 valid dose of rubella or MMR vaccine</li> <li>Laboratory evidence of immunity gained through either vaccination or disease</li> <li>Birth before 1957</li> </ul>	1 dose (However, due to the two dose requirements of measles and mumps, most HCP will have 2 doses of rubella-containing vaccine)	
Pertussis	All HCP, regardless of age	N/A	1 dose of Tdap, as soon as feasible if Tdap not already received and regardless of interval from last Td	
Varicella	All HCP who lack presumptive immunity	<ul style="list-style-type: none"> <li>2 valid doses of varicella vaccine</li> <li>Laboratory evidence of immunity</li> <li>Diagnosis or verification of either varicella or herpes zoster disease by a health care provider</li> </ul>	2 doses at least 28 days apart	
<b>Non Routine Vaccines (for “at-risk” HCP categories)</b>				
Meningococcal	Clinical and research microbiologists who might routinely be exposed to isolates of <i>Neisseria meningitides</i>		1 dose; booster dose every 5 years if person remains in indicated population	Meningococcal conjugate vaccine, 4-valent (MenACYW) is preferred for persons through age 55 years and ACIP recommends off-label MenACYW for persons over 55 years who will need booster doses every 5 years

Typhoid	Workers in microbiology laboratories who frequently work with Salmonella typhi.		Oral: 4 capsules every 48 hours; booster on same schedule every 5 years Injectable: One-time dose; booster every 2 years	
Polio	HCP who have close contact with patients who might be excreting polioviruses; or work in a lab with poliovirus.		Adults who have previously received a complete series of polio vaccine may receive one lifetime booster. Primary series for unvaccinated adults: 3 doses at 0, 1-2, 6 month intervals.	

**Routine Adult Immunizations (recommendation not based on occupational risk)**

	<b>Consider offering to:</b>	<b>Vaccine Schedule and Booster Doses</b>	<b>Special Considerations</b>
Zoster	All persons 60 years and older	1 dose	Give vaccine regardless of history of shingles disease
Pneumococcal Conjugate (PCV13)	Persons 19-64 with who are immunocompromised, have chronic renal failure, nephrotic syndrome, asplenia, CSF leak, or cochlear implants and all persons 65 and older	1 dose, no booster	<ul style="list-style-type: none"> <li>When both pneumococcal vaccines are indicated PCV13 should be administered first, PCV13 and PPSV23 should not be administered at the same visit</li> <li>Whenever possible, the conjugate vaccine should be given before the polysaccharide vaccine.</li> </ul>
Pneumococcal Polysaccharide (PPSV23)	Persons 19-64 who are eligible for PCV13, and those who have heart disease, lung disease, liver disease, diabetes, alcoholism, or a smoker or resident of long term care and all persons 65 and older	2 doses in certain situations, most commonly, 1 dose	The timing and sequence of the pneumococcal vaccines is important to attaining an appropriate immune response, please see <a href="http://eziz.org/assets/docs/IMM-1152.pdf">http://eziz.org/assets/docs/IMM-1152.pdf</a> for detailed guidance.
Human Papillomavirus (HPV)	Females through age 26 Males through age 21, additionally males 22-26 at high risk* or who simply want to be protected	3 doses at 0, 2 and 6 months	
Meningococcal	All adults at risk*	2 doses at least 2 months apart	
Hepatitis A	All adults at risk* or those who simply want to be protected	2 doses, usually at 0 and 6-18 months depending on vaccine brand	
Hepatitis B	All adults at risk* or those who simply want to be protected	3 doses at 0, 1-2, and 4-6 months, booster not necessary	
Tetanus, Diphtheria, and Pertussis (Tdap, Td)	All adults not previously vaccinated, women need 1 dose in each pregnancy	1 dose if have received childhood series	All adults also need a Td-only booster every 10 years

The above table is for convenience purposes, more complete and detailed information should be sought out when providing these vaccinations.

<http://www.health.state.mn.us/divs/idepc/immunize/adult/>

\*see full Adult Immunization Schedule for risk categories