

# Foundational Infection Prevention Practices

*Cal HQ Toolkit 2026*



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## About Cal HQ

California Alignment for Hospital Quality (Cal HQ) is a statewide collaboration focused on improving hospital quality through aligned action. The initiative is led by Covered California, CalPERS, and Cal Healthcare Compare, with oversight from steering committee members from state agencies, hospitals, health plans, improvement organizations, and patients to identify and advance a common set of hospital quality measures. The [Cal HQ Steering Committee](#) provides strategic guidance, ensures industry alignment, promotes Cal HQ's activities, and advises on statewide scaling and dissemination efforts.



Prevent 2,000  
Infections over two  
years



34% overall  
reduction by 2027



Projected to  
potentially save  
approximately \$64  
million



Projected to  
potentially save 120  
lives

## About this Toolkit

This toolkit compiles recommendations and resources to help health care improvement teams make patient care safer and improve outcomes. Developed by a team of experts in patient safety and infection prevention, the toolkit outlines evidence-based practices and includes a menu of strategies, change ideas, and specific, actionable steps that your team can implement in your unique context.

Use this toolkit as background information, a checklist, reference material or simply a place to start. Learn more about other Cal HQ resources on our website:

[www.calhq.calhospitalcompare.org](http://www.calhq.calhospitalcompare.org).

## Part 1: Definition and Scope

Infection prevention and control (IPC) programs are a crucial component of safe and quality healthcare delivery. Healthcare associated infections (HAI) are a threat to healthcare safety. On any given day, nearly one in 31 hospital patients has at least one HAI.

Preventing HAIs is a priority for healthcare organizations, and many can be prevented when a strong IPC program is in place. Below is a summary of core practices that are foundational to a successful IPC program.

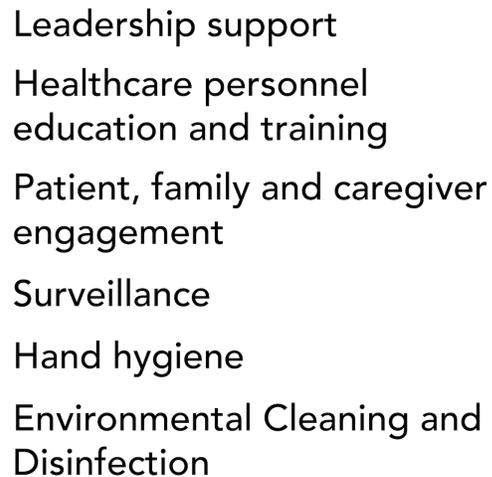
These core practices are not expected to change based on new evidence or technology. They are tried and true best practices that are applicable across all healthcare settings.

### Suggested Bundles and Toolkits

- Core Infection Prevention and Control Practices for Safe Healthcare Delivery in All Settings: <https://www.cdc.gov/infection-control/hcp/core-practices/index.html>
- Foundational Elements of Infection Prevention in the Strive Curriculum: <https://www.acpjournals.org/doi/10.7326/M18-3531>



## Foundational Practices



- Leadership support
- Healthcare personnel education and training
- Patient, family and caregiver engagement
- Surveillance
- Hand hygiene
- Environmental Cleaning and Disinfection

## Practice 1: Leadership Support

Infection prevention programs need visible leadership support to ensure success. Leadership support builds staff engagement, fosters a strong safety culture, and ensures successful implementation of protocols that will lead to fewer HAIs.<sup>1</sup>

### Change Ideas

- Governing board should have dedicated agenda item for IPC including the review of key HAI-related metrics.
- Governing board responsible for the review and approval of IPC program investments. Examples of investments include technology, training, and staff.
- Identify a champion to lead this work, including infection prevention and nursing/clinical leaders.
- Dedicate time and space for key stakeholders to collaborate and work to implement HAI prevention interventions. Those stakeholders include infection prevention, nursing, clinicians, laboratory, education, information technology, environmental services, and additional healthcare personnel as appropriate.
- Involve senior leaders in daily interprofessional rounds and root cause analyses to address why an HAI occurred.
- Utilize strategies from the AHRQ CUSP Toolkit to engage leaders and front-line staff in changing culture to support improvement in HAI prevention.<sup>2</sup>
- Identify a leadership sponsor for HAI prevention interventions. The sponsor must have the authority to provide solutions in overcoming barriers and resources needed to facilitate implementation.

### Suggested Measures for Your Tests of Change

- Frequency of leadership participation in rounding
- Percentage of time on governing board agenda dedicated to infection prevention and control topics

## Practice 2: Healthcare Personnel Education and Training

Infection prevention and control is complex, and providing ongoing training and education ensures healthcare professionals can respond to and manage identified health concerns that can, in turn, prevent HAIs.<sup>3</sup> Education and training materials should be tailored based on the role and responsibility of healthcare personnel being trained.<sup>1</sup>

### Change Ideas

- Implement an infection prevention training program for staff during orientation focused on risk factors and routes of transmission.
- Provide role-specific infection prevention education and training.
- Require trainings and completion of specific competencies before insertion, maintenance and removal of invasive medical devices.
- Implement frequent in-service training regarding techniques and procedures for insertion, maintenance and removal of invasive medical devices.
- Provide additional training in response to lapses in adherence to address transmission.
- Develop process to ensure healthcare personnel understand and are comfortable following infection prevention requirements as part of their role.
- Provide written policies and procedures based on evidence-based best practices and ensure they are available for staff to review.

### Suggested Measures for Your Tests of Change

- Percentage of staff that complete annual education
- Percent of staff that complete training during orientation

## Practice 3: Patient, Family, and Caregiver Engagement

Actively engaging patients, families, and caregivers is a well-established strategy for improving the quality of care and enhancing patient safety. Integrating patients, family members, and caregivers into infection prevention and control activities can help prevent HAIs, decrease length of stay, and improve health outcomes. Involving patients and families in discussions about the risks of HAIs and devices, such as urinary catheters or intravascular catheters, allow for shared decision-making as part of a patient's care.

### Change Ideas

- Offer patients, family members, and caregivers the opportunity to provide feedback or participate in the organization's Patient and Family Advisory Council (PFAC).
- Review education materials to ensure materials address varied levels of education, language comprehension and cultural diversity.
- Provide educations around what patients, families and caregivers can do to prevent the spread of infections (see Appendix II)

### Suggested Process Measures for Your Tests of Change

- Percent compliance with documentation of patient and family education

## Practice 4: Surveillance

The primary goal of the surveillance program is to assess the risk factors related to HAIs and implement interventions that will interrupt disease transmission. Successful surveillance programs implement a systematic process for collecting, analyzing, and sharing data.<sup>4</sup>

### Change Ideas

- Complete a facility-based risk assessment for each HAI to identify infection risk factors. Examples of factors to include: current and historic infection rates, previous root cause analyses, process measures, risks specific to patient population, or resource/supply availability.
- Utilized standard definitions, such as those provided by the National Healthcare Safety Network, to provide consistent data benchmark and action.
- Utilize data to identify and monitor adherence to infection prevention practices.
- Provide feedback on adherence and outcome measures to healthcare personnel and leadership.
- Provide training using standardized tools and definitions to healthcare personnel involved in performance monitoring.
- Share unit-specific HAI data with appropriate clinical care staff.

### Suggested Measures for Your Tests of Change

- Incidence of infections
- Rates of infection

## Practice 5: Hand Hygiene

Effective hand hygiene is a cornerstone of a comprehensive and effective infection prevention program. Often, barriers to hand hygiene include limited access to supplies, skin irritation, and time.<sup>5</sup> Unless hands are visibly soiled, use of alcohol-based hand rub is preferred in most situations. Supplies necessary for adherence to hand hygiene must be accessible. Hand hygiene must be performed in situations including<sup>1</sup>:

- Before or after touching a patient, even when gloves are utilized
- Before insertion or maintenance of an invasive medical device
- Before moving from a soiled body site to a clean body site on the same patient
- After contact with blood, body fluids, or contaminated surfaces.

### Change Ideas

- Provide patients, family members, and caregivers with hand sanitizer and emphasize the routine use after toileting and prior to eating.
- Adopt a hand hygiene awareness program.
- Establish a method of monitoring hand hygiene compliance.

### Suggested Process Measures for Your Tests of Change

- Percentage compliance with hand hygiene
- Percentage of patients and visitors receiving hand hygiene education

## Practice 6: Environmental Cleaning and Disinfection

Environmental cleaning and disinfection are crucial in the prevention of HAIs. Surfaces such as bed rails, tables, IV poles, etc., act as reservoirs that can transfer infectious disease to patients via hands or direct contact. Proper cleaning techniques remove organic matter and allow disinfectants to inactivate pathogens.<sup>6</sup>

Cleaning processes physically remove dirt, dust, and organic matter (such as blood/body fluids) from surfaces using water with detergents or an enzymatic product. Thorough cleaning is required before disinfection can occur. If organic material remains on the surface it will interfere with the effectiveness of the disinfection. Disinfection is a process that eliminates many or all pathogenic organisms in healthcare settings.

A link to the disinfection products appropriate for preventing the spread of MRSA can be found on the Registered Disinfectants section of the Environmental Protection Agency website here: <https://www.epa.gov/pesticide-registration/selected-epa-registered-disinfectants>

### Change Ideas

- Integrate role-related cleaning and disinfection processes into orientation and annual compliance education.
- Develop written protocols for daily and terminal cleaning of patient care areas.
- Partner with supply chain and environmental services to review cleaning and disinfection products utilized in the organization.
- Define who is responsible for cleaning and disinfecting various patient care equipment including IV pumps, ventilator machines, etc.
- Work with environmental services to implement a monitoring program to establish the effectiveness of cleaning and disinfection processes.
- Provide feedback to staff around cleaning and disinfection processes.

### Suggested Measures for Your Tests of Change

- Percentage of healthcare workers that have received education around cleaning/disinfection processes
- Compliance with cleaning and disinfection processes

## PDSA IN ACTION

### Tips on How to use the Model for Improvement

#### Choice of Tests and Interventions for Foundational Infection Prevention Practices

- There are many potentially effective interventions to reduce the transmission of HAIs. Improvement teams should begin their efforts by asking: “What is the greatest need at our facility? Where can we have the greatest impact?”
- Conduct small tests of change using the resources available and then upgrade the processes, equipment and technology over time.

### Implement Small Tests of Change

#### Test a System for Development of Discharge Education

**PLAN** | Develop discharge education flyer for patients, families, and caregivers that focuses on HAI prevention.

**DO** | Convene a small workgroup that includes one/two PFAC members (if the organization has one) or one/two recent patients, patient experience officer, patient advocate and nursing champion to develop and review discharge education flyer.

**STUDY** | Ask small workgroup:

- Is the language utilized in the flyer easy to understand?
- Are there elements of the flyer that can be simplified?
- Does the flyer contain enough information so family members/caregivers that were not at the hospital, are able to provide support when a patient is discharged?

**ACT** | Update the flyer. If this worked well, can we test this flyer on a small group of patients, such as lines on a med-surg unit. How soon of change. How soon

patients with central  
Plan the next small test  
can this be tested?



## Action Planning

Infection prevention programs aim to prevent and minimize the spread of infection in hospitals and other healthcare settings. A successful infection prevention program relies on the implementation of foundational practices in partnership with all individuals that interact with the healthcare system. Gather small multidisciplinary groups of champion clinicians and administrators and design very small tests of change, then take those learnings and design new tests. Quickly repeat this PDSA cycle, learning iteratively. Improvement cannot be made in a meeting room. Improvement happens while learning from doing, and small tests allow for quick learning cycles and more rapid achievement

## Part 5: Appendices

## Appendix 1: Foundational Infection Prevention Top Ten Checklist

**Purpose of Tool:** A checklist to review current interventions or initiate new ones as part of your facility's infection prevention program.

- Involve senior leaders in daily rounding.
- Include a leadership sponsor in each HAI prevention intervention.
- Integrate role-specific infection prevention training during staff orientation.
- Work with an interdisciplinary team to develop healthcare personnel education that is easy to understand and allows for successful implementation.
- Review patient and family member education materials to ensure they address varies levels of education, language comprehension and cultural diversity.
- Complete a facility-based risk assessment for each HAI to assist with the successful implementation of a surveillance program.
- Establish a method for monitoring hand hygiene compliance.
- Develop written protocols and checklists to assist with daily and terminal cleaning of patient care areas.
- Provide feedback to clinical areas around HAI rates, hand hygiene compliance, and environmental cleaning and disinfection.
- Implement a program to celebrate successes with HAI prevention.

## Appendix II: Healthcare Associated Infection Prevention Strategies for Patients, Families and Caregivers

*Association for Professionals in Infection Control and Epidemiology (APIC)*

**Purpose of Tool:** Strategies that patients, families and their caregivers can use to prevent the spread of infections.

- Ask healthcare providers to clean their hands before providing care, especially when handling a dressing or touching an incision. Hand hygiene is important even when gloves are used.
- Avoid touching or manipulating catheters or ventilator tubing.
- Ask whether medical devices (e.g. urinary catheters or central lines) are necessary and how long they will remain in place.
- Notify healthcare providers if a bandage becomes wet, dirty, or dislodged.
- Do not touch surgical wounds or dressings.
- Ensure central line ports are cleaned vigorously for at least 15 seconds before use.
- Encourage good oral hygiene. Teeth should be brushed at least twice daily to help prevent pneumonia.
- If antibiotics are prescribed, consider asking:
  - “Is an antibiotic necessary?”
  - “Can recovery occur without it?”
  - “What side effects or drug interactions should be expected?”
  - “What side effects should be reported?”
  - “How do you know what kind of infection this is? It is understood that antibiotics won’t work for viral infections.”

**Reference:** APIC Infection Prevention and You,  
<https://infectionpreventionandyou.org/settings-of-care/acute-care-hospital/>

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