

Zachary A. Rubin, MD, Chair

California State Prevention Plan Subcommittee Report

May 8, 2014

Subcommittee had 12 meetings between July 2013 and present

Members:

Zachary Rubin, MD, chair

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Goals

- Set prevention standards for CA hospitals that can be emphasized by CDPH and used for “Data for Action” site visits.
 - CLABSI
 - CLIP
 - Catheter-associated UTI (CAUTI)
 - Surgical Site Infection (SSI)
 - Ventilator Associated Pneumonia (VAE/VAP)
 - Influenza Vaccines for Healthcare Workers (HCW)
- Recommend surveillance changes to CDPH

Central Line-Associated Blood Stream Infections (CLABSI)

- *Recommendations to CDPH for surveillance:*
 - Separate Mucosal Barrier Injury-Laboratory Confirmed Bloodstream Infection (MBI-LCBI) from other CLABSI in analysis.
 - Hospitals with high CLABSI rates, should participate in a prevention collaborative or develop action plans in coordination with CDPH.
 - Recommend that CDPH send a letter to CDC for a model analysis that excludes MBI-LCBI from their CLABSI SIR analysis.

Central Line-Associated Blood Stream Infections (CLABSI)

- *CLABSI Prevention Strategies:*
 - Hospitals should be following CDC's core strategies for CLABSI prevention.
 - Hospitals should implement a root cause analysis or other review process when CLABSIs occur.
 - Hospitals should adopt a central line maintenance bundle.
 - Hospitals should monitor adherence to a central line maintenance bundle on a regular basis, with emphasis on:
 - Daily review of line necessity and prompt removal of CVC.
 - Accessing the line using "scrub-the-hub" practices.
 - Care of catheter site, including dressing practices.

Central Line Insertion Practices (CLIP)

- If hospitals continue to have elevated CLABSI rates after initial efforts at mitigation, they should consider utilizing CLIP forms in all hospital locations where lines are inserted, including the OR and interventional radiology.
- Hospitals should assess compliance with completion of CLIP forms in relation to the total central lines inserted (preferably on a regular basis).
- Preferentially, an observer should complete the CLIP form instead of the inserter.
- Incorporate regular review of adherence to CLIP.
- When CLIP forms demonstrate failure to perform all CLIP aspects successfully, the problem should be reviewed with inserter.
- When a CLABSI is identified, CLIP forms for that central line should be reviewed along with review of maintenance of central lines to help identify probable cause.

Clostridium difficile Infection (CDI)

■ *Core Prevention Strategies:*

- Contact Precautions should be used for the duration of diarrhea.
- Hand hygiene should be performed, before and from going from dirty to clean tasks and after care of the patient on contact precautions.
- Equipment and the environment should be cleaned/disinfected daily.
- Laboratory-based alert systems should be used for immediate notification of positive test results.
- Educate healthcare workers, housekeeping, administration, patients and families about the prevention of CDI.
- Presumptively isolate patients with diarrhea pending confirmation of CDI diagnosis.
- Implement an antimicrobial stewardship program.
- Establish hand hygiene adherence monitoring and assess hand hygiene adherence regularly.

Clostridium difficile Infection (CDI)

- *Supplemental Prevention Strategies:*
 - Consider collecting unit-based CDI rates.
 - Extend use of contact precautions beyond duration of symptoms (e.g. 48 hours or hospital stay).
 - Implement hand washing with antimicrobial soap and water before exiting the room of CDI patient.
 - Implement universal glove use on units with high CDI rates.
 - Use sodium hypochlorite (bleach) solutions for environmental cleaning.
 - Track the use of antibiotics associated with CDI.
 - Consider establishing a nurse driven protocol (in accordance with CMS Interpretive Guidelines) for ordering *C. difficile* testing and initiating presumptive contact isolation for patients with diarrhea.

Catheter-associated UTI (CAUTI)

- To facilitate support in making quality improvement, CDPH should encourage hospitals to confer NHSN rights for CAUTI rates to CDPH.
- Insertion and maintenance of urinary catheters should be performed consistent with guidelines published by [CDC Healthcare Infection Control Practices Advisory Committee \(HICPAC\)](#).
- Hospitals should follow HICPAC's list of appropriate indications for placement of urinary catheters.
- Rationale for the continued use of a urinary catheter should be documented every day. Urinary catheters that do not meet the criteria for necessary use should be removed.
- Hospitals should measure compliance with daily necessity to continue use of urinary catheter.
- Data feedback of CAUTI rates and daily review of necessity of urinary catheters should be provided to nursing units on a regular basis.
- Consider establishing a nurse driven protocol (in accordance with CMS Interpretive Guidelines) for discontinuation of unnecessary urinary catheters.

Surgical Site Infection (SSI)

- *Recommendations to CDPH for surveillance:*
 - CDPH HAI program should define a standardized surveillance methodology for SSI case-finding.

Surgical Site Infection (SSI)

- *Core Prevention Strategies:*
 - Timely administration of appropriate antimicrobial prophylaxis in accordance with evidence-based standards and guidelines.
 - Treat remote infections whenever possible before elective operations.
 - Avoid hair removal at the operative site unless it will interfere with the operation; do not use a razor.
 - Use appropriate antiseptic agent and technique for skin preparation.
 - Keep OR doors closed during surgery except as needed for passage of equipment, personnel, and the patient.

Surgical Site Infection (SSI)

- *Core Prevention Strategies (cont):*
 - Maintain immediate postoperative normothermia.
 - Protect primary closure incisions with sterile dressing.
 - Control blood glucose level during the immediate post-operative period (cardiac).
 - Discontinue antibiotics according to evidence-based standards and guidelines.
 - When SSIs are identified, the surgical team should be notified as soon as possible and cases should be reviewed to identify probable causes.
 - Surgeon and surgical service specific SSI data should be fed back to providers on a regular basis.

Surgical Site Infection (SSI)

- *Supplemental Prevention Strategies:*
 - Nasal screening and decolonization for *Staphylococcus aureus* carriers for select procedures (i.e., cardiac, orthopaedic, neurosurgery procedures with implants).
 - Screen preoperative blood glucose levels and maintain tight glucose control.
 - Re-dose antibiotic at the 3 hr interval in procedures with duration >3hrs.
 - Adjust antimicrobial prophylaxis dose for obese patients (body mass index >30).
 - Use at least 50% fraction of inspired oxygen intraoperatively and immediately postoperatively in select procedure(s).

Ventilator-associated pneumonia

- Hospitals should follow prevention strategies as outlined by the Institute for Healthcare Improvement Ventilator Bundle, the 2003 HICPAC “Guidelines for preventing Healthcare-Associated Pneumonia, 2003,” and SHEA/IDSA Practice Recommendations.

Influenza Vaccination for Healthcare Workers (HCW):

- To increase Influenza vaccination rates among HCW, hospitals must require mandatory yearly Influenza vaccination for all HCW.

Reporting HAI data within healthcare facilities

- Hospitals should regularly review both internal healthcare associated infection data and state and national comparative data when available.
- Hospitals should regularly review the validity of their internal data.
- Hospitals should publicize internal healthcare associated infection data regularly to their administrators, physicians, nursing and other clinical staff.
- Hospitals should use internal and comparative healthcare associated infection data to drive local prevention efforts.
- Hospital administration should provide adequate ongoing resources to ensure healthcare associated infection prevention efforts are successful.

Final steps

- CDPH to format recommendations.