

Pressure Injury

EVIDENCE-BASED PROCESSES TO PREVENT THIS HARM

RISK IDENTIFICATION

- Perform total body skin and risk assessment within four hours of admission and at least daily
- Risk assessment score should be tied to prompt prevention interventions
- Examine the skin under and surrounding medical devices (tubing, trach, orthotics, etc.) at least once a shift. Readjust as able, and discontinue as soon as possible
- Complete a perioperative skin assessment for surgical patients

BEST PRACTICES

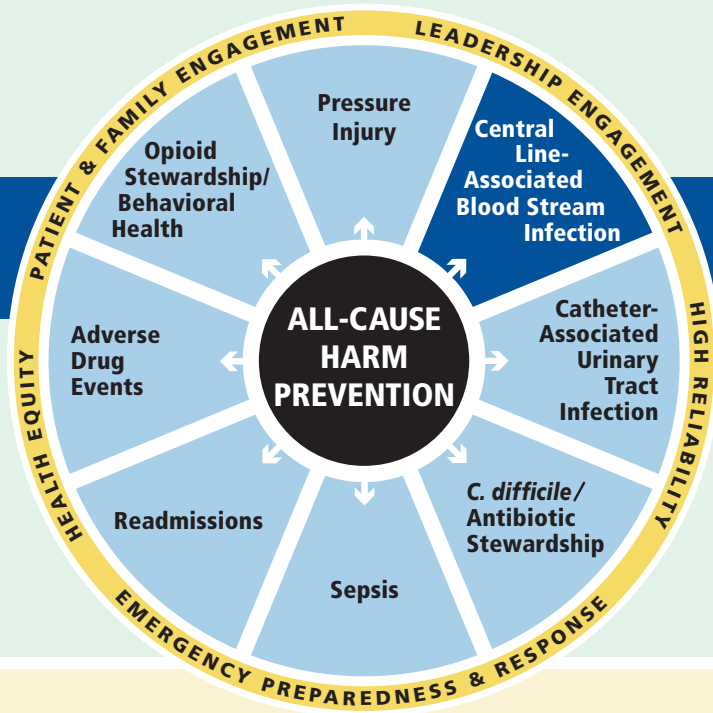
- Create a multidisciplinary skin care team, led by a certified wound care nurse
- Appoint unit-based skin care champions
- Utilize appropriate support surfaces for bed and chair
- Encourage mobility, as able
- Provide easy access to specialty beds, positioning devices, and barrier creams
- Keep head of bed less than 30 degrees to avoid skin shear
- Provide a balanced diet with adequate protein; consult dietitian for high risk patients
- Encourage adequate hydration

- Adhere to turning and positioning schedules
- Keep skin free from moisture (urine, feces, sweat)
- Utilize positioning devices in the OR to avoid skin breakdown during surgery
- Educate the patient and family, and involve them in prevention efforts
- Provide routine skin care education to direct care staff and nurses (upon hiring, annual competencies)
- Prompt reporting of any areas of concern to wound care nurse

REGULARLY MONITOR COMPLIANCE (strategies include)

- Development of policies, procedures, and practices of pressure injury prevention which are hardwired into the hospital-wide culture
- Compliance to pressure injury prevention processes
- Creation of care plans and appropriate documentation
- Monthly outcome measurement with routine reporting to staff

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Central Line-Associated Blood Stream Infection

EVIDENCE-BASED PROCESSES TO PREVENT THIS HARM

APPROPRIATE INDICATIONS FOR INSERTION

- Approved indication for insertion

STERILE INSERTION

- Sterile technique and supplies used during insertion. Best practices include
 - Hand hygiene
 - Optimal site selection (subclavian>jugular>femoral)
 - Use of a chlorhexidine (CHG) prep
 - Allow skin prep to dry
 - Use of ultrasound over a Doppler, when possible
 - Use of dedicated CLABSI/IV team, when possible
 - Use of an impregnated CHG sponge or dressing
 - Use of a securement device (not sutures)
 - Use of a line with as few lumens as possible

PROPER MAINTENANCE

- Sterile technique used during dressing changes
- Chlorhexidine used during dressing changes (and daily bathing)
- Sterile technique used when accessing line/hubs
- Hubs connected or capped and scrubbed prior to accessing (scrub hub for at least 15 seconds—use alcohol-impregnated caps, when available)
- Flushing protocols to prevent access issues
- IV primary and secondary tubing dated
- Change gauze dressings at least every two days or semipermeable dressings at least every seven days (and more frequently if soiled, damp, or loose).
- For patients 18 years of age or older, use a chlorhexidine impregnated dressing or patch with an FDA cleared label that specifies a clinical indication for reducing CLABSI for short term non-tunneled catheters unless the facility is demonstrating success at preventing CLABSI with baseline prevention practices.
- Change administrations sets (including secondary sets) for continuous infusions no more frequently than every four days (96 hours), but at least every seven days
- If blood or blood products or fat emulsions are administered change tubing every 24 hours
- If propofol is administered, change tubing every 6–12 hours or when the vial is changed

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Central Line-Associated Blood Stream Infection (continued)

TIMELY REMOVAL

- Policy includes daily necessity assessment (de-escalation to a less invasive line)

PERFORMANCE IMPROVEMENT

- Unit level CLABSI nurse champion, medical staff and senior leadership champion
- Routine feedback of CLABSI rates and/or standardized infection ratio (SIR) to front-line, medical staff and leadership
- Routine feedback on central line device utilization ratio (DUR) or standardized utilization ratio (SUR) to front-line, medical staff and leadership.
- Huddles twice a day

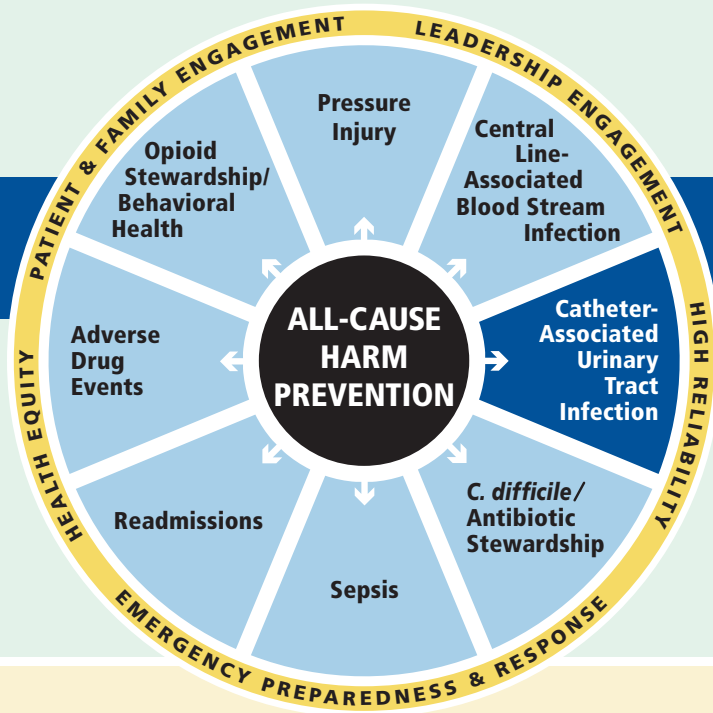
REGULARLY MONITOR COMPLIANCE (STRATEGIES INCLUDE)

- Routine audits of insertion practices
- Routine audits of maintenance practices and necessity
- Rotate responsibility among staff.
- Post results on your quality board.
- Have RNs who have bundle fall outs (when a CLABSI is identified) do chart reviews on their own documentation and identify what they missed.

CITATIONS AND LINKED RESOURCES

- **Toolkit for Reducing Central Line-Associated Blood Stream Infections.**
Content last reviewed March 2018. Agency for Healthcare Research and Quality, Rockville, MD.
<https://www.ahrq.gov/hai/clabsi-tools/index.html>
- **TAP Central Line-Associated Bloodstream Infections (CLABSI) Implementation Guide:**
<https://www.cdc.gov/hai/prevent/tap/clabsi.html>
- **Bloodstream Infection Event (Central Line-Associated Bloodstream Infection and Non-central Line Associated Bloodstream Infection): NHSN, CDC** https://www.cdc.gov/nhsn/pdfs/pscmanual/4psc_clabscurrent.pdf
- **Intravascular Catheter-related Infection (BSI) CDC**
<https://www.cdc.gov/infectioncontrol/guidelines/bsi/index.html>

NOTES



Catheter-Associated Urinary Tract Infection

EVIDENCE-BASED PROCESSES TO PREVENT THIS HARM

APPROPRIATE INDICATIONS FOR INSERTION

- Approved indication for insertion, with provider order
- Can an external device be used instead?

ASEPTIC INSERTION

- Aseptic technique used upon insertion
- Smallest size catheter is used
- Two-person insertion (has been shown to decrease CAUTI)

PROPER MAINTENANCE

- Catheter secured to leg, free of tubing kinks, drainage bag below bladder and not touching floor, clean collection container, no broken seals, aseptic port access
- Ensure foley and peri care are being done per facility policy (educate on difference between the two)

TIMELY REMOVAL

- Stop orders for indwelling urinary catheters placed prior to surgery/procedure
- Nurse-driven protocol for daily necessity assessments and removal (or alerts to providers to question daily necessity)
- Discontinuation is inclusive of spontaneous voiding assessment within six hours, >200 ml

APPROPRIATE CULTURE PRACTICES

- Only culture when signs and symptoms of infection are present, not just for appearance of urine.
Does fever have another source?
- Avoid broad use of pan culturing

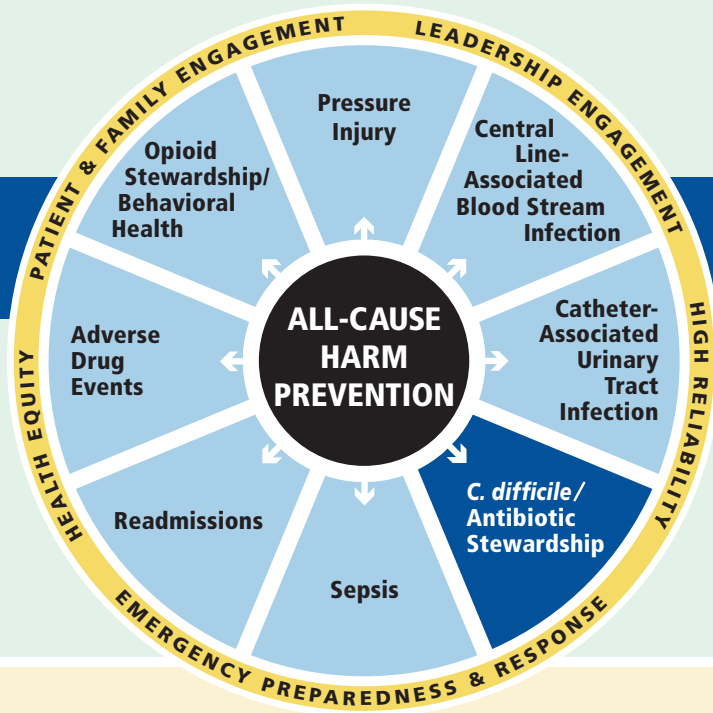
PERFORMANCE IMPROVEMENT

- Unit level CAUTI nurse champion, medical staff and senior leadership champion
- Routine feedback of CAUTI rates and/or standardized infection ratio (SIR) to front-line, medical staff and leadership
- Routine feedback on urinary catheter device utilization ratio (DUR) or standardized utilization ratio (SUR) to front-line, medical staff and leadership.

REGULARLY MONITOR COMPLIANCE (strategies include)

- Routine audits of maintenance practices and necessity
- Rotate responsibility among staff
- Post results on your quality board

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C. difficile / Antibiotic Stewardship

EVIDENCE-BASED PROCESSES TO PREVENT THIS HARM

IDENTIFICATION

- Nurse-driven protocol to rapidly identify, test, and isolate patients that meet the criteria of three or more loose stools per day with no other reason for the diarrhea, such as use of laxatives, bowel preps, new antibiotics, etc.
- Documentation of Bristol Stool Scale (BSS) and appropriate specimen to test (diarrhea algorithm)

MANAGEMENT

- Appropriate isolation precautions
- Hand hygiene (soap and water) before and after entering the patient room
- Use of gloves and gowns in patient rooms
- Dedicated medical equipment in each room
- Environmental cleaning of high-touch surfaces with approved sporicidal agents
- Cohorting of *C.diff* patients when single rooms are not available

PREVENTION

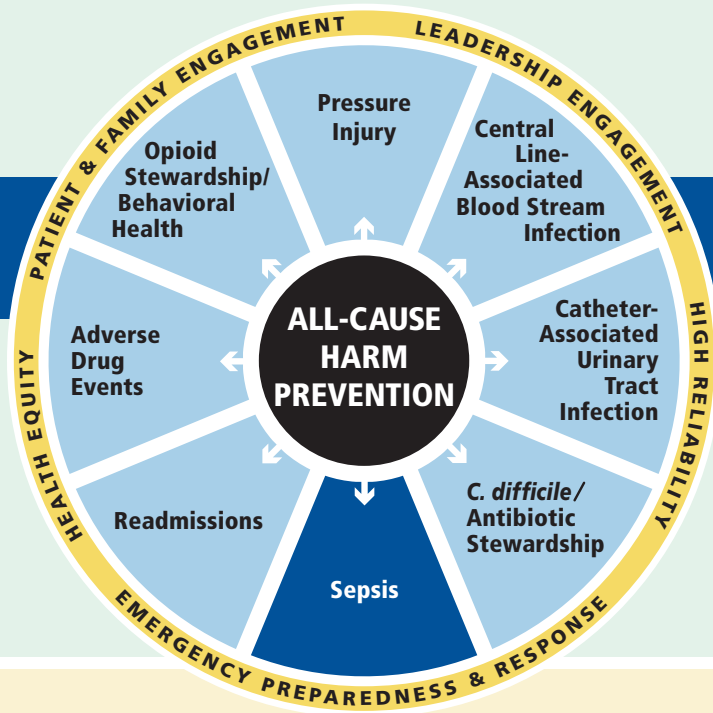
- Antibiotic Stewardship: Get executive support, identify a leader, pull together a multidisciplinary team
- Monitoring days of therapy (DOT) of fluoroquinolones and carbapenems per one thousand patient days per month
- Monitoring of daily defined doses (DDD) for fluoroquinolones and carbapenems per one thousand patient days if unable to collect DOT

PERFORMANCE IMPROVEMENT

- Unit level nurse champion, medical staff (i.e., infectious disease provider and pharm.D) and senior leadership champion
- Routine feedback of *C.diff* rates and antibiotic stewardship efforts (DOT/DDD) to front-line, pharmacy, medical staff and leadership

REGULARLY MONITOR COMPLIANCE (strategies include)

- At least ten observations of patients on *C.diff* precautions monthly. May proceed to quarterly if compliance is good. If less than 80%, process measure audits should continue monthly.
- Environmental testing of high touch areas should be done on at least ten patient discharge rooms monthly. May proceed to quarterly if compliance is greater than 80%. Rotate high-touch areas that are tested quarterly.



Sepsis

EVIDENCE-BASED PROCESSES TO PREVENT THIS HARM

EARLY IDENTIFICATION

- Protocols that alerts staff to criteria for sepsis, with specific actions for timely intervention (tachycardia, hypotension, tachypnea, hyper/hypothermia, mental status, etc.)

MANAGEMENT (one-hour bundle)

- Standing orders for sepsis bundle if patient screens positive
- Measure lactate
- Blood cultures obtained prior to starting antibiotics
- Start broad spectrum antibiotics
- Rapid fluid administration of crystalloid 30ml/kg for hypotension or lactate equal to or greater than 4mmol/L
- Apply vasopressors if hypotension during or after fluid resuscitation to keep mean arterial pressure at or above 65mm Hg
- Hand-off communication of completed and non-completed bundle elements

PERFORMANCE IMPROVEMENT

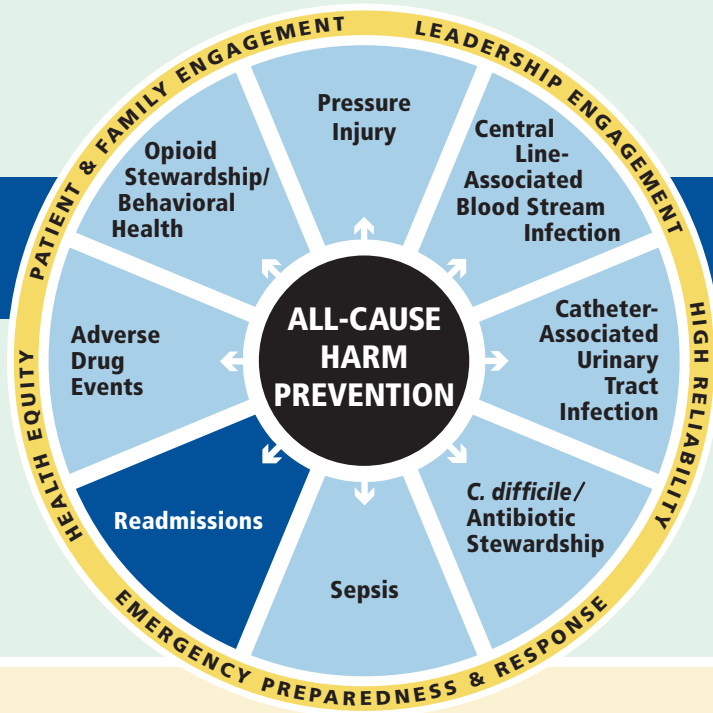
- Unit-level sepsis nurse champion, medical staff and senior leadership champion
- Routine feedback of sepsis rates, timely identification of sepsis and adherence to one-hour bundle elements to front-line, medical staff and leadership

REGULARLY MONITOR COMPLIANCE (STRATEGIES INCLUDE)

- Time from presentation to sepsis screen performed
- Time from positive screen (Time 0) to huddle/orders in place
- Time 0 to IV bolus completed (30ml/kg crystalloid for hypotension or lactate ≥ 4)
- Time 0 to antibiotics (broad spectrum)
- Time 0 to lactate result available
- Blood cultures obtained prior to antibiotics Y/N
- Blood pressure managed with vasopressors if MAP less than 65 Y/N

CITATIONS AND LINKED RESOURCES

- **Best Practices in the Diagnosis and Treatment of Sepsis. Content last reviewed November 2019.**
Agency for Healthcare Research and Quality, Rockville, MD. <https://www.ahrq.gov/antibiotic-use/acute-care/diagnosis/sepsis.html>
- **Hospital Toolkit for Adult Sepsis Surveillance. CDC, 2018**
https://www.cdc.gov/sepsis/pdfs/Sepsis-Surveillance-Toolkit-Aug-2018_508.pdf
- **Early Identification of Sepsis on the Hospital Floor: Insights for Implementation of the Hour-1 Bundle (SCCM)**
<https://www.sccm.org/SurvivingSepsisCampaign/Resources/Implementation-Guide>
- **Society Critical Care Medicine, Surviving Sepsis Resource Library** <https://www.sccm.org/SurvivingSepsisCampaign/Resources/Resource-Library>
- **Sepsis Alliance Resources** <https://www.sepsis.org/education/resources/>
- **Sepsis and Equity Fact Sheet (Sepsis Alliance)** <https://www.sepsis.org/wp-content/uploads/2021/01/Sepsis-and-Equity-Fact-Sheet-2021-1-25.pdf>
- **CDC Sepsis Webpage** <https://www.cdc.gov/sepsis/index.html>



Readmissions

EVIDENCE-BASED PROCESSES TO PREVENT THIS HARM

PROCESSES

- Monitoring Readmission rates as part of daily workflow.
- Performing RCA on seven-day and 30-day readmissions.
- Utilizing a Readmissions Risk Assessment (L.A.C.E. etc.)
- Standardized discharge checklist
- Providing post-acute care discharge support (schedule PCP appointment, etc.)
- Standard discharge and hand-off process from acute care to post-acute care
- Established communication processes for high-risk drug use upon discharge (anticoagulants, diabetes, opioids)
- Actively building relationships with post-acute care providers (SNF, home health, rehabs, hospice, etc.)

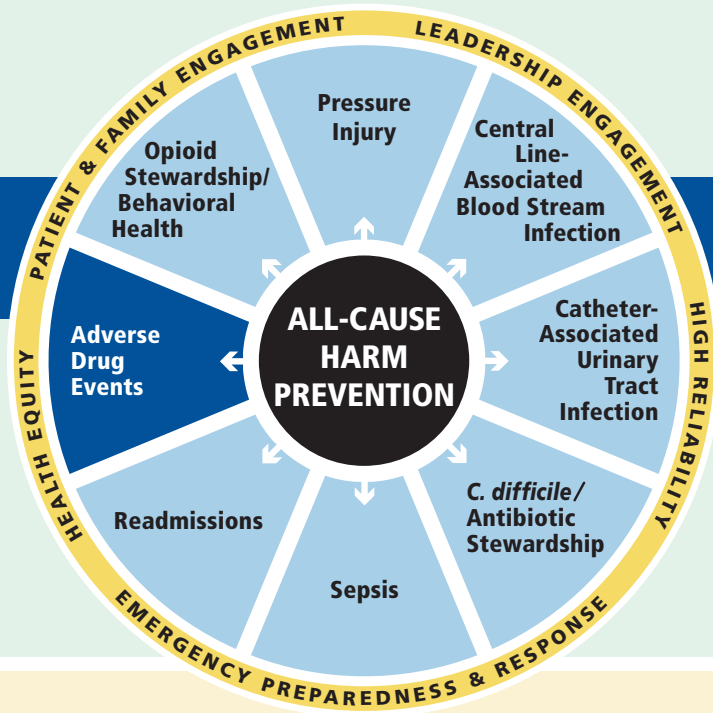
REGULARLY MONITOR COMPLIANCE (strategies include)

- Monitor readmission rates as part of daily workflow
- Perform RCA on seven-day and 30-day readmissions
- Evaluate staff adherence to discharge procedures, checklists
- Assess post-acute goal achievement (e.g., PCP appointment completion rate, etc.)
- Sample discharge communication records of high-risk drug users experiencing readmission

Readmissions (continued)

CITATIONS AND LINKED RESOURCES

- **Re-Engineered Discharge (RED) Toolkit.** Content last reviewed February 2020. Agency for Healthcare Research and Quality, Rockville, MD. <https://www.ahrq.gov/patient-safety/settings/hospital/red/toolkit/index.html>
- **Designing and Delivering Whole-Person Transitional Care.** Content last reviewed June 2017. Agency for Healthcare Research and Quality, Rockville, MD. <https://www.ahrq.gov/patient-safety/settings/hospital/resource/guide/index.html>
- **Taking Care of Myself: A Guide for When I Leave the Hospital.** Content last reviewed November 2020. Agency for Healthcare Research and Quality, Rockville, MD. <https://www.ahrq.gov/questions/resources/going-home/index.html>
- **Guide to Reducing Disparities in Readmissions.** CMS, Office of Minority Health. http://www.cms.gov/About-CMS/Agency-Information/OMH/Downloads/OMH_Readmissions_Guide.pdf
- **Hospital Guide to Reducing Medicaid Readmissions Toolbox (AHRQ)** <https://www.ahrq.gov/sites/default/files/publications/files/medread-tools.pdf>
- **National Association of Community Health Centers Protocol for Responding to and Assessing Patients' Assets, Risks, and Experiences (PRAPARE):** <https://prapare.org>
- **Care Transitions From Hospital to Home: IDEAL Discharge Planning (AHRQ)** <https://www.ahrq.gov/patient-safety/patients-families/engagingfamilies/strategy4/index.html>



Adverse Drug Events

EVIDENCE-BASED PROCESSES TO PREVENT THIS HARM

GLYCEMIC SAFETY

- Implement policies for safe and effective diabetes management that
 - Effectively coordinate glucose testing, meals, and medication administration;
 - Proactively evaluate and adjust monitoring and treatment for changes in clinical status, procedures, and glucose-altering medications; and
 - Prioritize a basal/bolus protocol for insulin.
- Establish standard order sets or protocols for the timely and appropriate management of hypoglycemia including
 - Pre-determined triggers to initiate immediate hypoglycemia response (e.g., glucose value, signs/symptoms)
 - Hypoglycemia “rescue” agents (dextrose, glucagon) readily accessible throughout the facility
 - Standing orders allowing nurses to immediately administer hypoglycemia “rescue” agents
- Implement controls to minimize insulin administration errors, such as
 - Minimization of floor stocks of insulin
 - Utilization of individual patient insulin devices (i.e., pens) rather than syringes
 - Limit the number of available insulin infusion concentrations to one
 - Pharmacy preparation of individual patient-scheduled doses of intermediate or long-acting insulins
- Real-time rules/alerts to flag low blood glucose triggers and changes in patient condition predisposing patient to hypoglycemia
 - Change in nutrition and/or fluid status – admission, acute illness, NPO for surgery, start/stop PN/EN, inconsistent nutrition in hospital.
 - Addition or discontinuation of medication(s) that affect blood glucose.
 - Disease state – acute renal failure (ARF), acute hepatic failure, severe sepsis/shock.
 - Transitions in care/handoffs.
- Education for staff, prescribers and patients and families
- Programmable infusion pumps

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Adverse Drug Events (continued)

ANTICOAGULANT SAFETY

- Anticoagulant Stewardship: Get executive support, identify a leader, pull together a multidisciplinary team
- Anticoagulation Protocols (Warfarin, Heparin, DOACs)
 - Dosing algorithms, guidelines to manage high INR levels,
 - Guidelines (bridge protocols) to manage anticoagulation therapy in patients requiring procedures or surgery

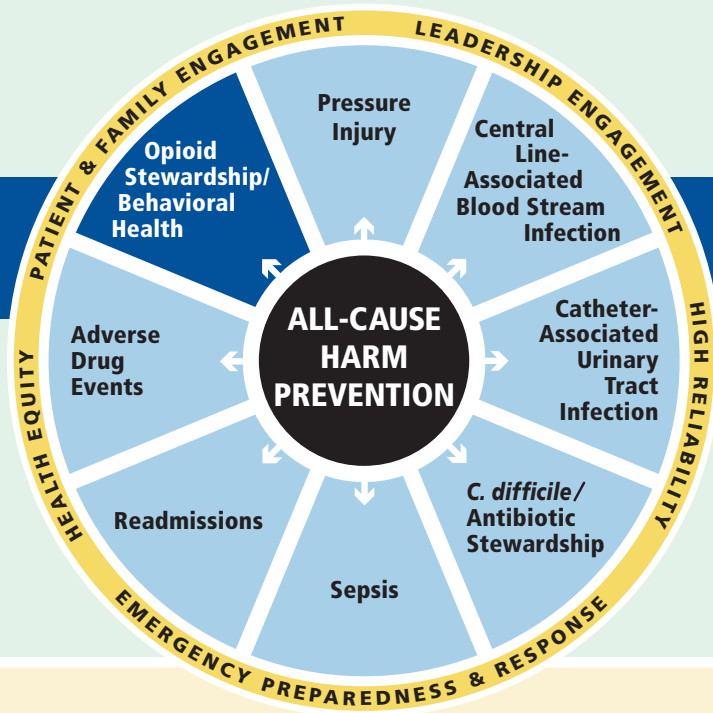
- Education for staff, prescribers and patients and families on the anti-coagulation process
- Programmable infusion pumps

OPIOID SAFETY

- For more on Opioid related ADEs, see separate sheet titled **Opioid Stewardship/Behavioral Health**

CITATIONS AND LINKED RESOURCES

- **National Action Plan for ADE Prevention. Office of Disease Prevention and Health Promotion.**
<https://health.gov/our-work/health-care-quality/adverse-drug-events/national-ade-action-plan>
- **CDC Guideline for Prescribing Opioids for Chronic Pain**
<https://www.cdc.gov/drugoverdose/prescribing/guideline.html>
- **Colorado ALTO Project** <https://cha.com/opioid-safety/colorado-alto-project/>
- **E-QUAL Opioids Toolkits, ACEP**
<https://www.acep.org/administration/quality/equal/emergency-quality-network-e-qual/e-qual-opioid-initiative/e-qual-opioid-toolkit>
- **Improving Pain Management for Hospitalized Medical Patients, Society Hospitalist Medicine**
https://www.hospitalmedicine.org/globalassets/clinical-topics/clinical-pdf/shm_painmanagement_guide.pdf
- **Reducing Adverse Drug Events Related to Opioids (RADEO) Implementation Guide, Society Hospitalist Medicine**
https://www.hospitalmedicine.org/globalassets/clinical-topics/clinical-pdf/shm_reducingopiodevents_guide.pdf
- **The Glycemic Control Implementation Guide: Improving Glycemic Control, Preventing Hypoglycemia And Optimizing Care Of The Inpatient With Hyperglycemia And Diabetes, Society Hospitalist Medicine**
<https://www.hospitalmedicine.org/globalassets/clinical-topics/clinical-pdf/gcmi-guide-m4.pdf>
- **Anticoagulation Forum** <https://acforum.org/web/>
- **National Blood Clot Alliance, Stop the Clot** <https://www.stopthecлот.org/health-professionals/curriculum>
- **Managing the risks of direct oral anticoagulants (The Joint Commission Sentinel Event Alert)**
<https://www.jointcommission.org/-/media/tjc/documents/resources/patient-safety-topics/sentinel-event/sea-61-doacs-final.pdf>
- **MAPPP-app. Management of Anticoagulation in the Peri-procedural Period SMART on FHIR mobile application**
<http://mappp.ipro.org>
- **MAPPP app is a resource for The Joint Commission's National Patient Safety Goal for Anticoagulant Therapy "EP 3: The hospital uses approved protocols and evidence-based practice guidelines for perioperative management of all patients on oral anticoagulants."**
https://www.jointcommission.org/-/media/tjc/documents/standards/r3-reports/r3_19_anticoagulant_therapy_rev_final1.pdf



Opioid Stewardship/ Behavioral Health

EVIDENCE-BASED PROCESSES TO PREVENT THIS HARM

OPIOID STEWARDSHIP

- Get executive support, identify a leader, pull together a multidisciplinary team.
- Designated leader or team responsible for pain management and safe opioid prescribing.
- Maximize appropriate use of non-opioid analgesics, non-pharmacologic therapies and multimodal pain therapy.
- Process that allows for the use of the lowest effective dosage to be attempted first (with the intent of avoiding a dosage of greater than or equal to 90 MME per day)
- Process for management of acute pain and chronic pain which ensures that acute pain management opioid prescribing is targeted to three days or less with no refills until a follow-up visit
- Align standardized pain and vital sign assessments with patient-centered pain treatment plans and monitoring.
- Use of a validated, standardized sedation scale to guide assessment and early detection of unintended sedation or respiratory depression
- Provider and patient and family education and engagement on impact/risks and expectation of opioid therapy to include signs of respiratory depression, potential for fall, etc.

- Prescribe naloxone with opioids and educate patient and family on use.
- System that monitors the rate at which naloxone is given for opioid related adverse events that occur in the hospital setting
- System that allows for the monitoring of morphine milligram equivalent tiers and the prevention of co-prescribing with benzodiazepines and muscle relaxants
- System that encourages prescribers to use state prescription drug monitoring programs (PDMPs)
- Established process to identify and offer/referral to access to medication assisted treatment (MAT) for opioid use disorder

REGULARLY MONITOR COMPLIANCE (strategies include)

- Monitor compliance to non-opioid or multi-modal attempts for initial pain control.
- Use a dashboard to show clinicians percent or number of patients on high doses or MMEs.
- Monitor if naloxone was prescribed with opioids.
- Monitor co-prescribing, with clinician feedback.

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- Healthcentric Advisors ■ Qlarant
- Kentucky Hospital Association
- Q3 Health Innovation Partners
- Superior Health Quality Alliance

HQIC

Hospital Quality Improvement Contractors
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QUALITY IMPROVEMENT & INNOVATION GROUP

All-Cause Harm must be inclusive of Patient and Family Engagement (PFE) and Health Equity.

PFE

- Planning Checklists (Admission)
- Planning Checklists (Discharge)
- Shift Change Huddles
- Accountable PFE leader
- Active PFE Committee

HEALTH EQUITY

- Collect Race, Ethnicity and Language (REAL) data (socioeconomic data).
- Stratify quality and safety outcomes data, by REAL (socioeconomic data).
- Identify disparate gaps in care.
- Take action to close those gaps with targeted solutions.

**IPRO HQIC Resource Library has many resources to support your
All-Cause Harm, PFE and Health Equity, and
Emergency Preparedness and Response efforts.**

<https://hqic-library.ipro.org>



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HQIC

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QUALITY IMPROVEMENT & INNOVATION GROUP

**Does your hospital need additional resources to reduce all-cause harm?
Contact your state-designated IPRO Hospital Quality Improvement Contract (HQIC)**

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