

ASSESS

PREVENT

HEAL

Trained professional or interdisciplinary team + Patient, family and all care providers = Unified wound infection team

Outpatient/Inpatient and Wound initial Evaluation

- Document patient history, comorbidities and related issues that may increase likelihood of wound infection including:
 - Diabetes, COPD, ischemia, nicotine use, obesity, nutritional deficiencies, anemia, impaired renal function, BMI > 25, serum albumin < 2.5 g/dl
- Perform valid peripheral neuropathy test, e.g. Semmes Weinstein monofilament or tuning fork.
- Assess medications/therapy that may decrease immune response (>7 day corticosteroid use, chemotherapy, radiotherapy, etc.).
- Document abnormal anatomy or gait that may cause skin injury.
- Document pre-operative extended hospital stay or nursing home residence.
- Obtain ABI or TBI to assess peripheral vascular disease, oxygenation of lower extremity wounds.
- Document wound infection signs, impaired blood flow and risk factors for delayed healing:
 - Duration > 6 months, area > 5 cm² full-thickness
 - Increased pain, edema, erythema, heat, odor, drainage or wound-related leucocytosis
 - Contamination or foreign matter in wound
 - Lack of protective sensation
 - Repeated or prolonged trauma or pressure
- Take wound cultures using a validated technique only if signs of infection are present.
- Use narrow-spectrum antimicrobial agents when feasible for non-severe infections to avoid development of antibiotic-resistant pathogens.

Prevent Acute or Chronic Wound Infections

- To extent feasible alleviate all causes of delayed wound healing before prescribing antibiotics.
- Maintain a moist wound environment.
- Maintain homeostasis of patient before, during, and after all procedures, including surgery.
 - Stop nicotine use at least 4 weeks before surgery or initiate nicotine cessation therapy for patients with chronic wounds or impending emergency surgery.
 - Avoid blood transfusion before surgery unless required to improve patient outcomes.
 - Maintain normal body temperature (36-38 C).
 - Maintain blood oxygen saturation >95% .
 - Manage patient to achieve normal blood glucose, hemoglobin, serum creatinine and platelet count.
- Prepare staff, patient and operating room per CDC standards (gowns, shoe covers, hair covers, and surgical gloves. Change gloves if penetrated).
 - Clip, don't shave sites of required hair removal.
 - Use pressure redistribution under bony prominences.
- Decontaminate all surgical equipment between patients in accordance with facility protocols.
- Start prophylactic antibiotics 24 hours before surgery. Stop within 48 hours postoperatively.
- Apply CDC contact precautions to all patients with known multi-drug resistant organisms.
- Minimize duration of surgical procedures and of patient's institutional stay.
- Avoid use of toxic agents either systemically or topically on wounds if feasible.

Wound Management All Settings as Patient-appropriate

- Apply effective post-operative care standards including wound infection management and surveillance with feedback to all care providers per institutional or CDC standards.
 - Avoid stress on incision lines to reduce likelihood of dehiscence by instructing patients on appropriate activities and weight bearing techniques.
 - Apply a sterile non-gauze dressing to surgical wounds for 24-48 hours after surgery.
- Instruct patient on proper wound care and how to shower safely with or without cleansing their wound.
- Cleanse and debride wound to remove contamination, non-viable tissue and foreign matter using proper technique for wound size, severity and contamination level.
- Instruct patient to seek professional care quickly if they see signs of infection (increased pain, redness, swelling, heat, odor, drainage, or unexplained increase in wound area).
- Manage acute or chronic wound infections per institutional or CDC standards.
- Moisturize and protect wounds if site is dry or damaged
- Use patient-appropriate wound dressings with evidence that they reduce pain, healing time and chances of infection.
- Continue to alleviate causes of chronic wound breakdown:
 - Off-load / protect wounds on sites of reduced sensation.
 - Redistribute pressure on bony prominences during 2 or more hour intervals of limited mobility.
 - In patients with venous insufficiency, provide adequate compression sufficient to reduce edema unless contraindicated.
 - Improve vascular perfusion for patients with ischemic ulcers or other conditions identified on evaluation, when feasible.
 - Assure adequate hydration, nutrient intake and environment to support wound healing and homeostasis.