Skin Infections
For Staff

What are common types of skin infections seen in nursing homes?

- **Cellulitis**
  - Infection of the dermis or subcutaneous tissue caused by the entry and colonization of bacteria through an opening in the skin
  - Can be purulent or non-purulent depending on the presence of pus
    - Purulent cellulitis often caused by *Staphylococcus aureus*
    - Non-purulent cellulitis often caused by *Streptococcal* species
- **Abscess**
  - Collections of pus in the dermis or subcutaneous layers of skin
  - Often caused by *S. aureus*
- **Infected pressure injuries**
  - Chronic wounds that can be staged based on type of tissue involved
  - Pressure injuries and other chronic wounds can have many different bacteria in them, so it is important to monitor and assess signs and symptoms of infection in these cases

What are the signs and symptoms of skin infections?

- Warmth, redness, and swelling around the site
- Fever or increase from baseline temperature
  - Older adults might not have a fever at all, so be sure to monitor for other changes.
- Increased white blood count

What factors make patients at a higher risk for skin infections?

- Wound or skin tear
- Edema: accumulation of fluid causes stretching of the skin and increases likelihood to break
  - **CHF and PVD** are chronic conditions that can cause reduced blood flow and edema, increasing the likelihood of infection
- Older age: breakdown and frailty of skin with age, as well as decreased water retention contributes to thinner or more fragile skin
- Poorly controlled diabetes: hyperglycemia can cause dysfunction of the immune system
- Immunosuppressant medication
- Incontinence: contributes to skin breakdown and raises pH of skin, increasing susceptibility to infection
- Obesity
What kind of care is needed to resolve skin infections?

- Antibiotics or anti-viral medications may be necessary
- Dressing changes provide barrier to microbes, eliminate buildup of drainage
- Irrigation may be needed to remove loose material and lower bacterial load
- Topical treatments such as iodine or silver based products
- Assessment and documentation of:
  - vital signs
  - any adverse reactions to medications.
  - wound characteristics (drainage, color, size, odor, pain)

What are some ways skin infections can be prevented?

- **Treatment of dry skin**
- Management of health conditions that are risk factors
  - CHF, PVD: reduce edema
  - Control diabetes
  - Weight loss
  - Proper nutrition
- Regular skin checks
  - Foot examinations for residents with diabetes
  - Monitor sacrum and coccyx, especially in less mobile residents
  - Notify wound care team of any discoloration or skin breakdown

What can be done to prevent the spread of MRSA in nursing homes?

- MRSA (Methicillin-resistant *staphylococcus aureus*) has a high prevalence in nursing homes and can cause serious infections that can be difficult to treat due to resistance to many antibiotics
- Close quarters in nursing homes allow for higher likelihood of outbreaks
- Hand washing: MRSA can be spread from patient to patient through the colonization of a non-infected health care professional
- Contact precautions
- Proper cleaning of medical equipment
- Education and monitoring of MRSA outbreaks