

Protecting Vulnerable Skin in High-Risk Settings

Integrating Pressure Injury Prevention, Ischemia Awareness, and Enhanced Barrier Protection



Key Insight

Risk is multiplicative, not additive. A resident with immobility + IAD + indwelling device + dark skin tone is not at 4× risk—the risks compound exponentially.

Why This Matters

- High prevalence of pressure injuries in LTC/post-acute settings.^{1,2}
- Residents with wounds, devices, or incontinence carry elevated infection transmission risk.³⁻⁵
- Regulatory consequences: EBP deficiencies and citations under F880 and F686 are actively surveyed.⁶

Converging Risk Domains

Pressure/Shear

Immobility • Medical devices • Inadequate support surfaces^{1,2}

Skin Vulnerability

Moisture (IAD) • Dry/fragile skin • Edema • Medications • Aging • Chronic disease • Malnutrition⁷⁻⁹

Infection Transmission

Open wounds • Indwelling devices • Uncontrolled secretions³⁻⁵

Trigger » Action

Trigger	Action
Chronic wound or wound with uncontained drainage	Initiate EBP (gown + gloves); reinforce dressing; review F880 compliance ³⁻⁵
Non-blanchable erythema	Offload; reassess support surface; increase inspection frequency; evaluate nutrition, medications, chronic disease ^{1,2}
Macerated skin	Identify and address the causative moisture source; apply barrier protection; avoid moisturizing macerated tissue ⁷⁻⁹

Abbreviations:

CE: critical element • EBP: enhanced barrier precautions • IAD: incontinence-associated dermatitis
LTC: long-term care • PPE: personal protective equipment • SNF: skilled nursing facility

Education Spotlight

Skin tone and early signs

Non-blanchable erythema appears red on lighter skin. On darker skin tones, look for purple or dusky discoloration, warmth, coolness, firmness, or bogginess—color change alone may be absent.^{1,10}

Support surfaces: trade-offs

Low-friction surfaces reduce skin shear—but also increase slide and fall risk. Match the surface to the whole patient, not just the wound.^{1,2}

Offloading devices cut both ways

A heel offloading boot relieves heel pressure but may create new pressure at the ankle, dorsal foot, 5th metatarsal, or Achilles. Inspect the whole device contact area.^{1,11}

Pressure vs. ischemia: know the difference

Pressure injuries follow bony prominences and offloading relieves pain. Ischemic wounds often appear at tips/toes, are cold, and pain may be absent due to neuropathy. Misclassification drives wrong treatment.^{1,12}

IAD ≠ pressure injury

IAD is a moisture injury, not a pressure injury. Applying moisturizer to macerated skin worsens it. Identify the cause first, manage containment, then protect the skin barrier.^{8,9}

Repositioning without shear reduction is incomplete

Dragging a patient across a surface transfers shear forces to skin—often worse than the pressure itself. Use slide sheets, lift assists, or friction-reducing devices.^{1,2}

Protecting Vulnerable Skin in High-Risk Settings

Integrated Prevention Bundle



Skin Care

- Gentle cleansing—avoid harsh soaps⁷
- Moisturize intact, dry skin (not macerated skin)⁸
- Barrier protection for at-risk areas⁷
- Evaluate and address the causative reason⁷⁻⁹



Pressure Redistribution

- Repositioning: individualized to mobility, wound location, patient preference, and sleep hygiene^{1,2}
- Heel offloading: inspect entire device contact zone^{1,11}
- Support surfaces: evaluate holistically (mobility, skin health, wound location, fall risk)^{1,2}



Early Ischemia Recognition

- Color changes (pallor, dusky, cyanotic discoloration)^{1,10}
- Temperature differences—cool extremity = reduced perfusion^{1,12}
- Pain or altered sensation—may be absent in neuropathy^{1,12}



Infection Prevention

- Enhanced barrier precautions for caregivers: gown + gloves for high-risk residents^{4,5}
- Hand hygiene before and after all resident contact³
- Avoid cross-contamination between wounds and residents⁵
- Note: Follow your facility policy; these are minimum requirements (F880)⁵

Common Failure Points



Dressings without offloading^{1,2,11}



Moisturizing macerated skin⁷⁻⁹



Inconsistent PPE use⁴⁻⁶



Repositioning without shear reduction^{1,2}



Missing early signs in darker skin tones^{1,10}



Misclassifying wound etiology^{1,8,9}

Regulatory Alignment Snapshot

F880

Infection Control—EBP requirements for SNF/LTC^{3,6}

F686

Pressure Ulcer CE Pathway—wound diagnoses + root cause documentation⁶

F684

Quality of Care—individualized care planning documentation⁶



Remember

Documentation matters as much as the clinical act. If it isn't documented, it didn't happen.

References:

1. National Pressure Injury Advisory Panel (NPIAP), European Pressure Ulcer Advisory Panel (EPUAP), Pan Pacific Pressure Injury Alliance (PPPIA). *Prevention and Treatment of Pressure Ulcers/Injuries: Clinical Practice Guideline*. 3rd ed. EPUAP/NPIAP/PPPIA; 2019. <https://www.internationalguideline.com/2019>
2. Agency for Healthcare Research and Quality (AHRQ). Preventing Pressure Ulcers in Hospitals: A Toolkit for Improving Quality of Care. AHRQ Publication No. 14-0043-EF. Updated 2014. <https://www.ahrq.gov/sites/default/files/publications/files/putoolkit.pdf>
3. Centers for Medicare & Medicaid Services. "Enhanced Barrier Precautions in Nursing Homes (QSO-24-08-NH)." March 20, 2024. <https://www.cms.gov/files/document/qso-24-08-nh.pdf>
4. Stone ND, Ashraf MS, Calder J, et al. Surveillance definitions of infections in long-term care facilities: revisiting the McGeer criteria. *Infect Control Hosp Epidemiol*. 2012;33(10):965-977. doi:10.1086/667743
5. Nicolle LE. Infection prevention issues in long-term care. *Curr Opin Infect Dis*. 2014;27(4):363-369. doi:10.1097/QCO.0000000000000076
6. Centers for Medicare & Medicaid Services (CMS). State Operations Manual Appendix PP—Guidance to Surveyors for Long Term Care Facilities. Rev. 2023. CMS; 2023. Accessed June 11, 2026. https://www.cms.gov/Regulations-and-Guidance/Guidance/Manuals/downloads/som107ap_pp_guidelines_itcf.pdf
7. Wound, Ostomy and Continence Nurses Society (WOCN). Guideline for prevention and management of pressure injuries (ulcers). WOCN Society; 2021.
8. Gray M, Black JM, Baharestani MM, et al. Moisture-associated skin damage: overview and pathophysiology. *J Wound Ostomy Continence Nurs*. 2011;38(3):233-241. doi:10.1097/WON.0b013e318215f798
9. Gray M, Giuliano KK. Incontinence-associated dermatitis, characteristics and relationship to pressure injury: a multisite epidemiologic analysis. *J Wound Ostomy Continence Nurs*. 2018;45(1):63-67. doi:10.1097/WON.0000000000000390
10. Oozageer Gunowa N, Hutchinson M, Brooke J, Jackson D. Pressure ulcers in people with darker skin tones: a literature review. *J Clin Nurs*. 2018;27(17-18):3266-3275. doi:10.1111/jocn.14526
11. National Pressure Injury Advisory Panel (NPIAP). Preventing heel pressure injuries. NPIAP; September 16, 2025. <https://www.internationalguideline.com/heels>
12. Frykberg RG, Banks J. Challenges in the treatment of chronic wounds. *Adv Wound Care (New Rochelle)*. 2015;4(9):560-582. doi:10.1089/wound.2015.0635