

AORN Position Statement on Prevention of Perioperative Pressure Injury

POSITION STATEMENT

AORN believes:

- Perioperative patient pressure injuries are often preventable.¹
- Interdisciplinary collaboration is necessary for perioperative pressure injury prevention.^{1,2}
- Perioperative pressure injury prevention begins before the patient enters the operating or procedure room.
- All perioperative patients should be assessed preoperatively for risk factors (eg, intrinsic and extrinsic)² that are known to increase their susceptibility for pressure injury development.
 - Perioperative pressure injury assessments should be visual, comprehensive, and performed using a standardized risk assessment tool.
 - The standardized assessment tool should be validated or have demonstrated reliability.
 - The standardized assessment tool should be specific to use for perioperative patients and specific to the age of the patient being assessed, when possible.
 - The presence of identified risk factors should prompt targeted, evidenced-based interventions to reduce the patient's risk of developing a pressure injury.
- Hand-over communication processes should include a discussion of the results of skin and pressure injury assessments and interventions used to reduce the patient's risk.
- Postoperative evaluations should assess the patient's skin condition, the effects of any interventions implemented, and whether interventions should be added or changed.
- Preoperative patient skin and risk assessments, the presence of an existing pressure injury, the surgical patient position,¹ interventions provided, and postoperative patient evaluations performed should be documented in the patient's medical record and accessible to all personnel involved in the patient's care.
- Known or suspected perioperative pressure injuries should be reported in accordance with facility policy and procedure.
- When available, a nurse specializing in wound care should be consulted promptly according to facility policy and procedure for any postoperative patient with a known or suspected pressure injury.

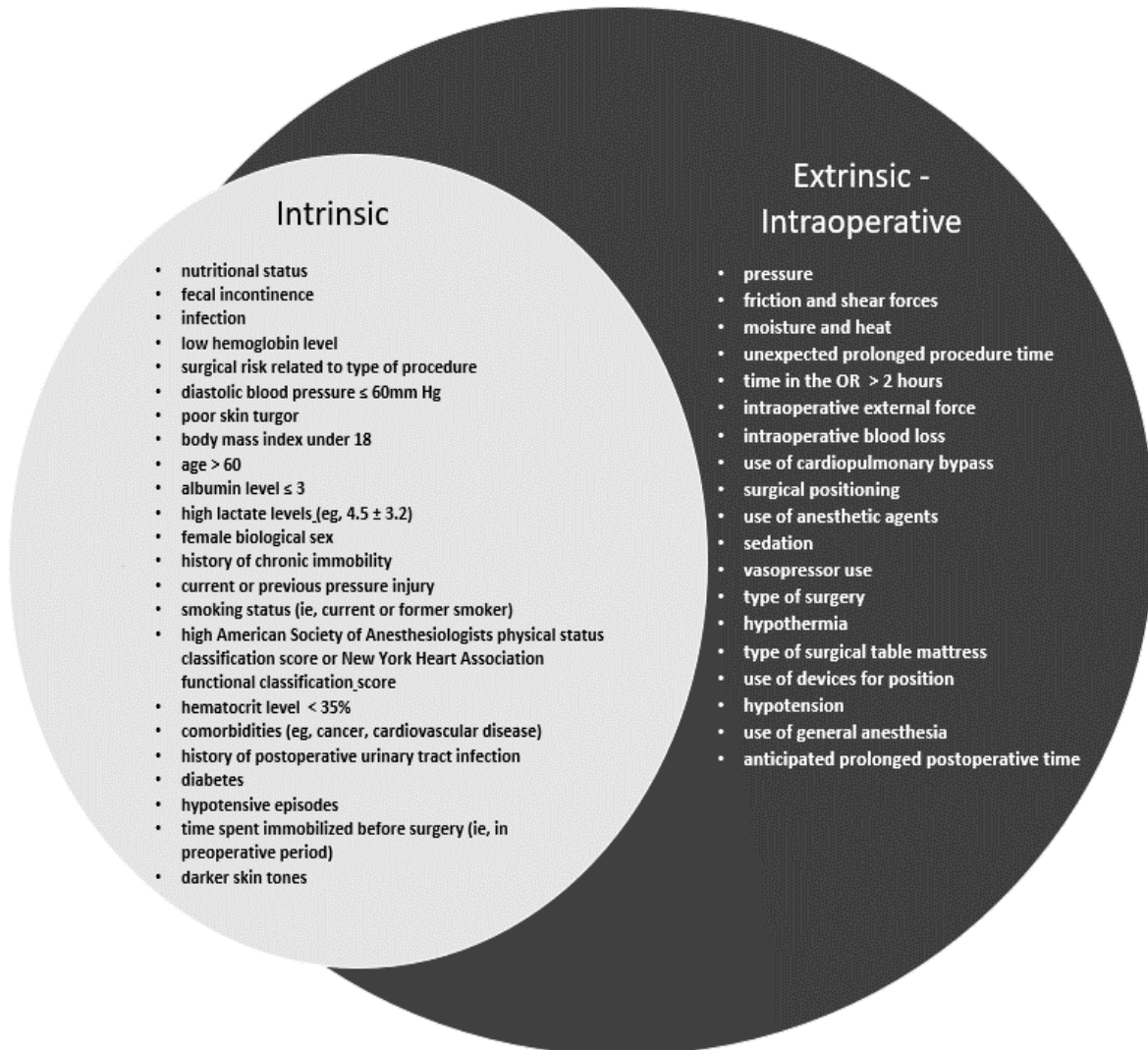
- Patients without access to a nurse specializing in wound care should be referred to their primary care physician or other community resource for follow-up care after discharge from the health care facility where the procedure was performed.
- Health care organizations should define in a policy and procedure a timeframe or method to determine how perioperative-acquired pressure injuries are identified (eg, up to 5 days after surgery or in consultation with the interdisciplinary pressure injury team).³
- Facility personnel should monitor the monthly incidence of perioperative pressure injuries and use this number as a quality indicator that informs performance improvement processes as part of the pressure injury prevention program.²
- Perioperative pressure injury incidence rates should be reported in a standardized method that enables comparison with published pressure injury incidence rates (eg, number of pressure injuries monthly (or annually) divided by the number of procedures performed monthly (or annually), # per 1,000 procedures).
- Facility personnel should use root cause analysis to investigate reported and confirmed perioperative pressure injuries. A systems mindset should be used during root cause investigations to foster a culture of safety instead of blame.
- Perioperative pressure injury rates and any identified root causes should be regularly reported to perioperative personnel to increase their awareness.
- Facility personnel should review root causes of perioperative pressure injuries for trends and use identified trends to inform quality improvement initiatives.
- Education on patient pressure injury prevention and competency verification for perioperative personnel should be provided during initial orientation, annually, and as needed.

RATIONALE

Pressure injury is defined as “localized damage to the skin and/or underlying tissue, as a result of pressure or pressure in combination with shear.”^{1(p16)} “Pressure injuries usually occur over a bony prominence but may also be related to a device or other object.”^{1(p16)} The primary cause of pressure injuries is sustained cell and tissue deformation.^{1,4} Health care–associated pressure injuries have been estimated to affect more than 2.5 million patients annually in the United States.⁵ Pressure injuries may cause pain, increased length of hospital stay, readmission, reoperation, financial burden, increased morbidity and mortality, disfigurement, psychological harm, and reduced quality of life.¹ Care for treatment of hospital-acquired pressure injuries is not reimbursed by the Centers for Medicare & Medicaid Services and has been estimated to cost between \$11.6 billion¹ to \$26.8 billion annually.⁵ The cost of care for a pressure injury in one patient may range from \$500 to \$152,000.¹

Perioperative patients are at increased risk for pressure injuries due to intrinsic and extrinsic factors that include being anesthetized, immobile, and unable to express pain or discomfort from positioning (Figure 1).^{1,6} In the United States, the reported rates of pressure injuries acquired during the perioperative phase are between 8.1% and 27.3%, compared to almost 19% reported globally across 19 studies.⁶ However, the reported incidence of perioperative pressure injuries should be reviewed with caution because of the lack of published information, differences in study methodologies, and the varying time before discovery.¹

Figure 1. Intrinsic and Extrinsic Risk for Pressure Injury



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There is no standard definition or criteria (eg, time range) for determining when a pressure injury discovered in the postoperative period is attributed to perioperative care.³ In part, this is because perioperative pressure injuries may not be visually detected during skin assessments in the immediate postoperative period.³ In a review of 931 pressure injuries in perioperative patients whose procedures lasted more than 4 hours, 5% of pressure injuries were visually present within 24 hours compared to 58% visually present after the fifth hospital day.³ It may be easier to identify perioperative pressure injuries that are related to procedural positioning or devices used or that occur shortly after a procedure.¹

Prevention of perioperative patient pressure injuries is based on standardized, interdisciplinary processes that start with a comprehensive patient assessment (eg, skin, history).^{2,4,7,8} After the patient assessment

is complete, the patient’s risk for pressure injury development is calculated using a standardized tool.^{2,7,8} Using a standardized risk assessment tool validated for use in perioperative patients and specific to the age of the patient being assessed increases the likelihood of correctly identifying the patient’s risk for perioperative pressure injury development.² When a tool has been studied for **reliability** and **validity** in the population of interest, data about the tool’s ability to identify or predict a condition in a patient population is understood.⁹⁻¹¹ Alternatively, diagnostic tests may be studied for **sensitivity** and **specificity**.^{12,13} Detailed information about tools for assessing a patient’s risk for pressure injury is available in the AORN Guideline for Prevention of Perioperative Pressure Injury.² Depending on the patient’s risk for perioperative pressure injury, the interdisciplinary team may implement targeted interventions (eg, use of pressure-distributing surfaces, prophylactic dressings) specific to the patient’s unique needs (Table 1).²

Table 1. Interventions that May Reduce the Risk of Perioperative Pressure Injuries¹

- Using preoperative and postoperative positioning that is different from the intended surgical position
- Providing pressure redistributing support surfaces and padding
- Elevating the heels off the bed, with slight knee flexion, and supporting the calves without pressure on the Achilles tendon or popliteal vein
- Applying prophylactic dressings to protect bony prominences
- Repositioning when possible; may not entail full body movement (eg, micro turn, micro shift)
- Using pressure mapping to provide visual cues to guide repositioning

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GLOSSARY

Reliability: The degree of consistency or dependability with which an instrument measures the attribute it is designed to measure.

Sensitivity: The degree to which a procedure used to identify a condition produces positive results in individuals who have that condition; an assessment of the value of a process.

Specificity: The degree to which a process used to identify a condition yields negative results in individuals who do not have that condition; the ability of a process to exclude individuals that are free of a condition.

Validity: The degree to which an instrument measures what it is intending to measure. Validity requires reliability, but the reverse is not true.

ADDITIONAL RESOURCES

[AORN Tool Kit for Prevention of Perioperative Pressure Injuries](#)

Guideline for positioning the patient. In: *Guidelines for Perioperative Practice*. Denver, CO: AORN, Inc; 2022:705-780.

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