

# The Financial Impact of Pressure Injuries

A review of the direct and indirect costs associated with pressure injuries.

## Abstract

The costs associated with pressure injuries are considerable. According to the Agency for Healthcare Research & Quality (AHRQ), pressure injuries cost the US healthcare system an estimated \$9.1-\$11.6 billion annually<sup>1</sup>. In addition to direct treatment related costs, pressure injuries also result in litigation, government penalties, and impact hospital performance metrics. On top of the financial implications, pressure injuries also have a significant impact on patient morbidity, mortality, and quality of life. To further exacerbate the problem, as the population ages, the percent of patients at risk for developing pressure injuries is growing, thus increasing the demand for early stage prevention.

### Direct Costs

Every year, billions of dollars are spent treating pressure injuries and their associated complications. Hospital-acquired pressure injuries are one of the most common preventable conditions, affecting over 1 million patients annually. In 2008, the Centers for Medicare & Medicaid Services discontinued reimbursement for hospital-acquired pressure injuries (HAPIs). However, despite heightened awareness, recent studies have shown that an estimated 3.5 - 4.5% of all hospitalized patients are developing potentially preventable, hospital-acquired pressure injuries.<sup>2</sup>

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Hospital-acquired pressure injuries significantly increase healthcare costs. The increased costs are primarily due to prolonged hospitalizations. Studies have shown that the development of a pressure injury independently increases the length of a patient's hospital stay by 4-10 days.<sup>3,5</sup> These prolonged hospital stays are also associated with an increased incidence of nosocomial infections and other complications. The cost of treating a pressure injury depends on its severity, with estimates generally ranging from \$2,000- \$20,000 per injury.<sup>6</sup> The incremental cost of treating stage 1 PUs is just over \$2,000, stage 2 PUs range between \$3,000-\$10,000, stage 3 PUs range between \$5,900-\$14,840, and stage 4 PUs cost as much as \$18,730-\$21,410.<sup>7</sup> The Society of Actuaries has calculated that the overall incremental cost of treating an average pressure injury is \$10,700.<sup>8</sup>

**Table 1. Incremental Costs of Treating Patients With PUs, as Reported in the Published Literature**

Source	Stage 1	Stage 2	Stage 3	Stage 4
Trueman and Whitehead (2010) <sup>2,5</sup>	\$2,159.07	\$8,932.55	\$14,839.56	\$21,410.12
Pham et al (2011) <sup>27,37</sup>	N/A	\$10,283.96	\$11,129.57	\$18,731.47
Padula et al (2011) <sup>5</sup>		\$2,909.07 <sup>a</sup>		\$5,904.13 <sup>b</sup>
Society of Actuaries (2010) <sup>19</sup>			\$10,699.52 <sup>c</sup>	
Mean costs (using all data, including costs that span stages)	\$5,255.89	\$8,206.27		\$13,785.73
Minimum costs	\$2,159.07	\$2,909.07		\$5,904.13
Maximum costs	\$10,699.52	\$10,699.52		\$21,410.12

All costs converted to 2011 US dollars.

<sup>a</sup>Stages 1-2.

<sup>b</sup>Stages 3-4.

<sup>c</sup>Stages 1-4.

In addition to prolonging hospitalizations, there are several other cost drivers in the treatment of pressure injuries, such as: nursing time for wound care, nursing time for patient position changes, wound dressings and other advanced wound care products, specialty beds/mattresses, medications, and surgical debridement/treatment.<sup>9</sup>

### Litigation

Hospital-acquired pressure injuries have important legal implications, as lawsuits over pressure injuries are becoming increasingly common. According to the Agency for Healthcare Research and Quality, there are more than 17,000 pressure injury related lawsuits filed annually (second only to wrongful death lawsuits).<sup>1</sup> The average settlement in a pressure injury malpractice lawsuit is \$250,000. One study found that settlements favoring patients occurred in up to 87% of cases, with some awards as high as \$312 million.<sup>10-11</sup>

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### Penalties/Reimbursement/Performance Measures

The U.S. Centers for Medicare and Medicaid Services views a pressure injury as a “never event” and therefore the development of a pressure injury can lead to significant monetary penalties. Furthermore, in an era of value-based reimbursement, hospital performance scores are increasingly tied to reimbursement rates. In October 2014, as mandated in the Patient Protection and Affordable Care Act, the quartile of hospitals with the highest HAPI rates will be penalized a 1% pay reduction for all Medicare patients. In addition, we are entering an era where Medicare reimbursement rates are being tied to patient satisfaction scores.

### Cost to Patients

A conversation regarding the costs of pressure injuries can't discount the impact that they have on a patient's quality of life. Beyond the financial implications, pressure injuries are a source of significant morbidity and mortality for patients and have broad physiological and psychological effects. Each year, ~60,000 patients die as a direct result of pressure injuries.<sup>1</sup> Patient's living with pressure injuries suffer the burden of pain and decreased quality of life. Other indirect costs to patients include: time lost from work, forced early retirement, impact on patient's families, and other expenses associated with morbidity/mortality.

### Perspective

With just a one percentage point reduction in HAPI incidence, a hospital with 15,000 annual admissions could potentially save \$1,605,000 per year.

A small reduction in pressure injury incidence can have a dramatic cost savings effect. Consider a 300-bed hospital with 15,000 admissions per year, a HAPI rate of 3.5%, and an incremental treatment cost of \$10,700 per injury. If the hospital were able to decrease their incidence of HAPIs by only one percentage point (from 3.5% to 2.5%), they could save \$1,605,000 annually.

### Conclusion

Pressure injuries place a substantial financial burden on hospitals. By preventing pressure injuries, hospitals can save on treatment costs, minimize litigation/penalties, improve their performance metrics and reimbursement rates, and improve overall outcomes for their patients.

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