

# UNDER PRESSURE: OFFLOADING AND PROTECTING HEELS

## (A CASE STUDY OF TWO PATIENTS)



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### BACKGROUND & GOALS

#### Background

Cherry Creek Nursing Center is a 218-bed, long-term care facility in Colorado. The facility has a 50-bed, sub-acute unit for residents with short-stay needs (e.g., patients who have undergone surgical procedures; post-stroke care/rehab; wound care/IV/TPN/tracheotomy care). A 45-bed secured unit specializes in dementia care. In addition, the facility has 128 long-term care beds where residents receive assistance with continence promotion, fall prevention, oxygen management, activities of daily living, and wound care/IV/trach care.

Among this patient population, heel pressure ulcers occur due to declining medical condition and limited mobility. Treating heel pressure ulcers can be difficult, but offloading the heels of patients to reduce pressure can improve the condition of their heels and reduce the size of the decubital wounds. According to the *International Severity Information Systems*,<sup>1</sup> pressure ulcers cost long-term care facilities between \$1,284 - \$4,647 per ulcer, per resident to heal.

Since 2007, deep tissue injuries (DTIs) have been acknowledged as part of the pressure ulcer staging system according to the National Pressure Ulcer Advisory Panel (NPUAP).<sup>2</sup> DTIs are stage IV pressure ulcers for Minimum Data Set 2.0 (MDS 2.0) documentation purposes.<sup>3</sup>

#### Goals

Two patients with heel decubitals were provided a cushioned heel protector boot with the intention of reducing pressure by offloading the heel.

### METHODS & RESULTS

#### Patient #1

Female, 87 years old with dementia. History of heel decubital ulcers. Facility-acquired wounds: bilateral heel DTIs.

This resident wore heel protector boots, and skin prep treatment was provided daily, along with vitamin therapy, increased protein, and calorie supplements. The heel protector boots were worn on both feet 24 hours a day. This resident who was historically non-compliant with other forms of heel protection, expressed appreciation with regard to the comfort of the boot.

#### Patient #2

Female, 73 years old (see **Figure #1**): No prior decubital ulcers. Readmitted after a one-week hospital stay for pneumonia with bilateral DTIs, one of which became Unstageable per NPUAP guidelines.

Treatment from start to finish was skin-prep and heel protector boots. This resident also received vitamin therapy. Heel protector boots were worn on both feet overnight. Resident reported feeling increased comfort while in bed and enjoyed the ease of wearing the boots, which resulted in greater compliance and substantially reduced typical healing time (advanced stage pressure ulcers can take months to years to heal).<sup>4</sup>

**With use of the boot, both patient's wounds healed within two months .**

### CONCLUSIONS

#### Offloading the heel with a cushioned heel protector led to clinical outcomes.

Both patients had a variety of medical problems, including heel pressure ulcers. Healing the wound relatively quickly was beneficial for the patient's overall health and comfort. In addition, the cushioned heel protector boot was easier for the nurses to use because the patients were more compliant due to its comfort in contrast to previous treatments and devices.



Prevalon® Heel Protector with Wedge

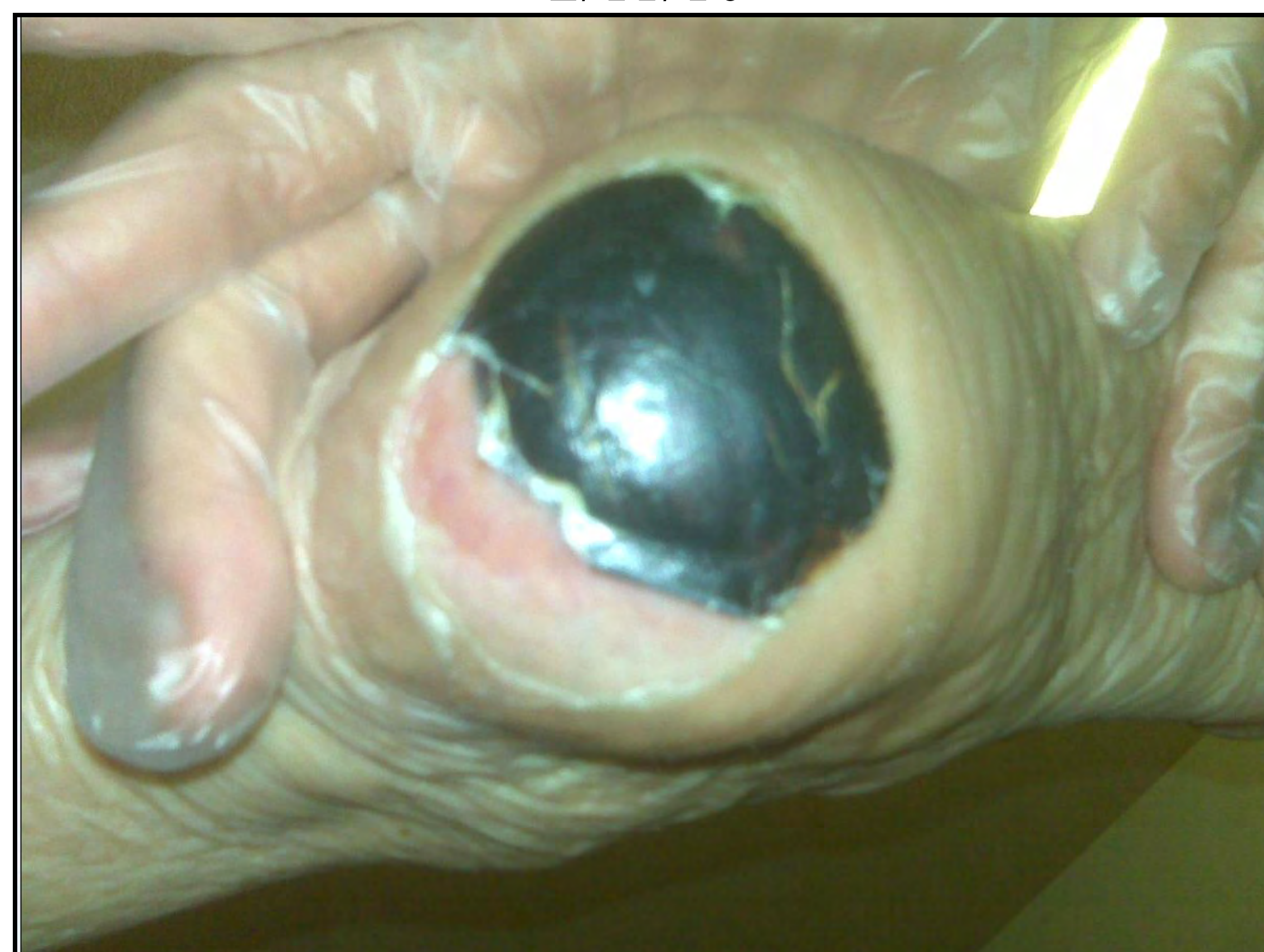
#### REFERENCES

- 1) Int'l Severity Information Systems: <http://www.isisicor.com/cpisum/PreventingPressureUlcersInLongTermCareFacilities.html>
- 2) National Pressure Ulcer Advisory Panel (NPUAP): <http://npuap.org/pr2.htm>
- 3) NPUAP: Coding Suspected Deep Tissue Injury on MDS 2.0: [http://npuap.org/MDS\\_DTI\\_2\\_0%20rev%207-16-09.pdf](http://npuap.org/MDS_DTI_2_0%20rev%207-16-09.pdf)
- 4) Cigna: Pressure Sores Treatment Overview: <http://www.cigna.com/healthinfo/tp17772.html>

### FIGURE #1

Photos of the heels of Patient #2, before and after boot was implemented

2/11/10



3/11/10



Note: Heel is clinically noted as "healed." All that remains is a few dry flakes and some blanchable fresh new skin.