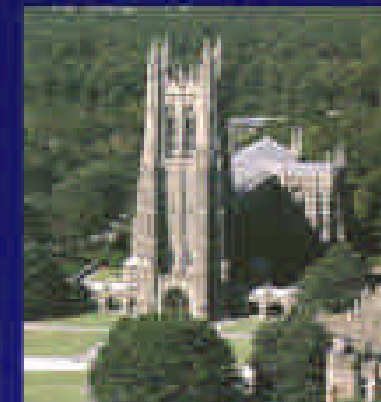




# Heel Pressure Ulcer Prevention (H-PUP)

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## ABSTRACT

Heel pressure ulcers are a significant cause of limb amputations. In acute care the rate of heel pressure ulcers ranges from 10 to 18%. Our hospital had an overall prevalence of heel pressure ulcers of 6.38% with an incidence of roughly half that rate.

**OBJECTIVE:** To decrease the incidence of heel pressure ulcers in the acute care setting. **METHOD:** We reviewed our internal pressure ulcer prevalence data that is collected monthly on all in patient units and maintained by the Wound Management Institute. Based on this data we selected the units with the highest incidence rate.

The surgical intensive care unit and 2 post surgical units were selected to participate in a one month nursing trial of a new heel ulcer prevention device. These units have the largest population of patients with peripheral vascular disease and trauma.

In-services were provided regarding the issue of heel pressure ulcers and the appropriate use of the device.

All new patients during the month were screened for inclusion in the trial. Data collection tools were completed by the admitting nursing staff.

The patient was monitored throughout their hospital stay during the month for the development of heel pressure ulcers.

**FINDINGS:** 96 heel ulcer prevention devices were utilized over the month on 52 patients. During the trial, no pressure ulcers developed. Staff and patient satisfaction with the device was excellent.

**CONCLUSIONS:** Even with pillows available and beds providing heel pressure reduction at 3 levels, our incidence of heel ulcers was 1/2 of our prevalence. With the addition of an easy to apply and relatively inexpensive heel pressure ulcer prevention device, we decreased the incidence to 0% during the trial. As a result of this trial we have incorporated this device in our overall pressure ulcer prevention protocol. We are following our monthly incidence and prevalence data and have noted sharp decline in our nosocomial heel pressure ulcers.

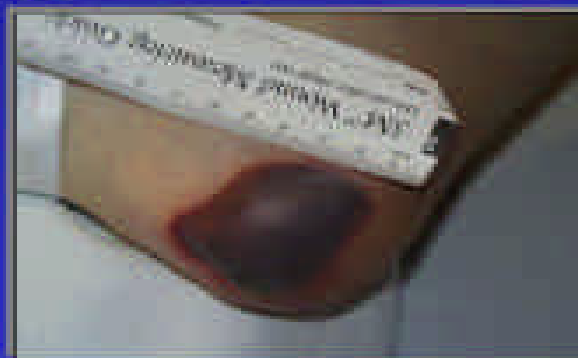
## OBJECTIVE

- To decrease the heel pressure ulcer incidence rate at Duke University Hospital

## SCOPE OF THE PROBLEM

- Pressure ulcers occur in all care settings: hospitals, rehabilitation, skilled nursing & home.
- The most common site is the sacrum, while the second most common site is the heel.
- For hospitalized patients, 10% - 18% of pressure ulcers on the heel.
- Complications associated with heel pressure ulcers include: cost of care, osteomyelitis, recurrent hospitalization, pain, lost wages, and amputations.
- Our overall pressure ulcer prevalence rate was 6.38% for the year This is well below the national average.
- We had a commercially available heel pressure reduction device that had resulted in some unacceptable outcomes in patients with vascular compromise.

We wish to thank EHOB for their financial support of this trial by providing the WAFFLE boots and funding for the poster.



## METHODOLOGY

- Identified units with the highest nosocomial heel pressure ulcer rate: surgical intensive care unit and 2 post surgical units 2.34 & .83% respectively.
- Reviewed multiple commercially available heel pressure reduction devices based on the following criteria:
  - Effectiveness
  - Ease of application
  - Cost
  - Durability
  - Flexibility of application: use with dressing, SCDs
  - Support from vendor - education & follow up
- Selected a pre-inflated flotation device, WAFFLE Boot from EHOB
- Educated the care team about appropriate utilization of the device and patient selection for the 1 month trial
- Monitored the patients utilizing the device for the development of pressure ulcers.

## RESULTS

- 96 heel pressure reduction devices were used on 52 patients.
- No heel pressure ulcers developed over the month trial.
- Patient and staff satisfaction with the device was excellent.

## CONCLUSION

- Based on this trial, the device has been implemented throughout the hospital.
- In the 5 months since the trial, the heel nosocomial pressure ulcer rate for the identified units has decreased to 1.58% for the SICU and 0% for the post surgical units.

## OPPORTUNITIES FOR IMPROVEMENT

- We have noticed a slight increase in the heel nosocomial rate in the last 2 months which likely reflects a need for refresher education of the staff on the use of the products.
- We are planning every 6 month in-servicing of the nursing staff.

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