

# Evaluation of efficacy and cost savings utilizing a super absorbent leg wrap dressing and its' management of exudate versus traditional composite pads

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## Problem statement

Venous insufficient legs traditionally are very edematous because of valve incompetence and many times weep large amounts of fluid. Sustained compression therapy and ambulation with calf pumping is the traditional treatment. Unfortunately, if an active cellulitis is present, compression is contraindicated until the active infection is brought under control. The exudate compromises dignity and much nursing time is utilized in order to attain or maintain dignity because of the "open fire hydrant" effect of weeping skin. This study examines the efficacy and cost savings established while utilizing a super absorbent leg wrap dressing versus traditional composite pads.

## Study overview and past treatment and execution

Four residents were chosen between the ages of 49 and 87 years of age. All had active cellulitis involving both lower extremities and were contraindicated for compression secondary to active cellulitis and/or arterial insufficiency being present. Both legs had 90 to 100% maceration at the start of each study. Both legs on each resident were cleansed with pH balanced soap and water between dressing changes. The left leg was chosen for the composite dressing group and the right leg was to utilize the super absorbent boot dressing. Both frequency and cost of care inclusive of nursing time and equipment was taken in to account and measured. The cost of items was based on an average cost derived from contract pricing, a private DME and a walk in pharmacy. The composite pad cost \$.16 per dressing and the wrap to secure cost \$.48 per unit. The super absorbent was priced at \$39/boot. The cost of nursing time was based on LPN wages for the

| Patient | Traditional composite pads |                      |            | Super absorbent leg wrap dressing |                      |            |         |
|---------|----------------------------|----------------------|------------|-----------------------------------|----------------------|------------|---------|
|         | Cost of dressings          | Cost of nursing time | Total cost | Cost of dressings                 | Cost of nursing time | Total cost | Savings |
| 1       | \$40.80                    | \$45.00              | \$85.80    | \$39.00                           | \$3.00               | \$42.00    | \$43.80 |
| 2       | \$35.20                    | \$60.00              | \$95.20    | \$78.00                           | \$6.00               | \$84.00    | \$11.20 |
| 3       | \$20.80                    | \$30.00              | \$50.80    | \$39.00                           | \$3.00               | \$42.00    | \$8.80  |
| 4       | \$24.64                    | \$42.00              | \$66.64    | \$39.00                           | \$3.00               | \$42.00    | \$24.64 |

Western Pennsylvania marketplace of \$18/per hour (entry level) with 10 minutes allotted to each dressing change or \$3.00 per change for nursing time. The legs were followed for a period of 5 days. Maceration was measured per day via 10% increments.

## Findings

**Resident #1:** Left leg changed three times a day for five days because of soiling. 11 pads used per dressing change and 2 gauze wraps.

Total cost of goods: \$26.40 pads \$14.40 wraps  
Nursing time: \$45. Total cost of care: \$85.80

Right leg: Changed one time in 5 days.

Total cost of goods: \$39/boot

Nursing time: \$3.00 Total cost of care: \$42.00

**Savings using boot: \$43.80**

Maceration left versus right leg:

Day 1: 100/100 Day 2: 100/40 Day 3: 100/20

Day 4: 90/0 Day 5: 80/0

**Resident #2:** Left leg changed four times/day for 5 days. 8 pads used per dressing change and 1 gauze wrap.

Total cost of goods: \$25.60 pads \$9.60 wraps  
Nursing time: \$60.00 Total cost of care: \$95.20

Right leg changes 2 times in 5 days.

Total cost of goods: \$78.00 boots

Nursing time: \$6.00 Total cost of care: \$84.00

**Savings using boot: \$11.20**

Maceration left versus right leg: Day 1: 100/100

Day 2: 90/50 Day 3: 90/50 Day 4: 70/0

Day 5: 70/0

**Resident #3:** Left leg changed 2 times/day for 5 days. 10 pads used per dressing change and 1 gauze wrap.

Total cost of goods: \$16.00 pads \$4.80 wraps

Nursing time: \$30.00 Total cost of care: \$50.80

Right leg changed 1 time in 5 days.

Total cost of goods: \$39/boot

Nursing time: \$3.00 Total cost of care: \$42.00

**Savings using boot: \$8.80**

Maceration left versus right leg: Day 1: 100/100

Day 2: 100/60 Day 3: 100/20 Day 4: 90/0

Day 5: 80/0

**Resident #4:** Left leg changed three times/day for 4 days and 2 times/day for 1 day. 8 pads and 1 wrap used per dressing change.

Total cost of goods: \$17.92 pads \$6.72 wraps

Nursing time: \$42.00 Total cost of care: \$66.64

Right leg changed 1 time in 5 days.

Total cost of goods: \$39.00/boot

Nursing time: \$3.00 Total cost of goods: \$42.00

**Savings using boot: \$24.64**

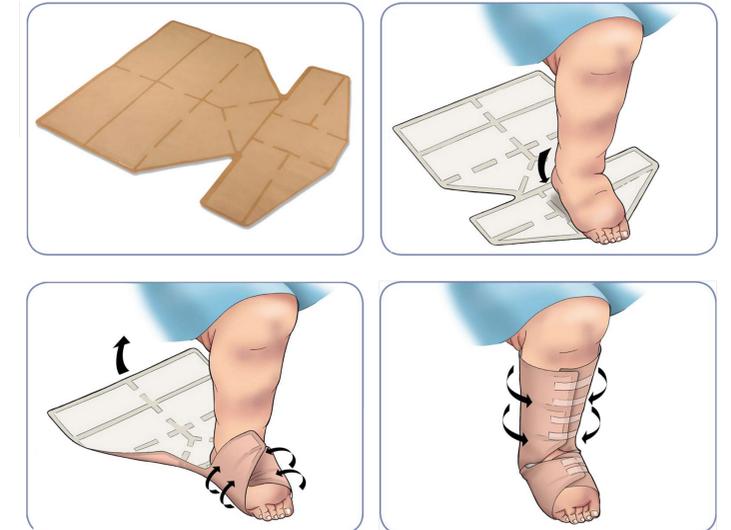
Maceration left versus right leg: Day 1: 100/100

Day 2: 90/60 Day 3: 80/40 Day 4: 60/0

Day 5: 50/0

## Conclusion

The high capacity super absorbent leg wrap exceeded and out-performed the traditional composite pads when being used to manage peri-wound maceration and resulted in significant cost savings for the facilities involved.



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