



**V.A.C.<sup>®</sup>**  
Therapy



**Early vs late use of 3M™ V.A.C.<sup>®</sup> Therapy  
in retrospective data set demonstrated  
wound surface area reduction<sup>1</sup>**

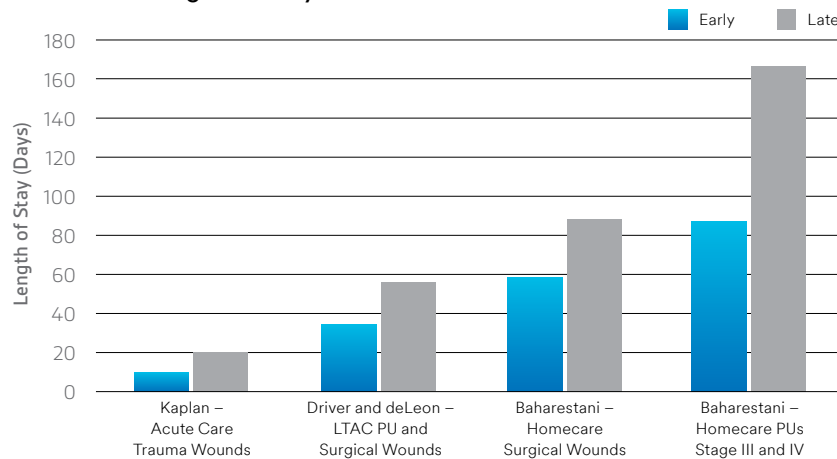
# Changes in Home Health Reimbursement Create a Value Based Care Opportunity for Wound Care Clinics (WCCs)

When reimbursement moves towards a value-based care model, focus on quality of care within WCCs will remain high. The benefits of early use of 3M™ V.A.C.® Therapy have been shown in other care settings. As value-based care models evolve, WCCs may wish to consider earlier use of NPWT in their protocols to achieve the healing rate benefits.\*

## NPWT: Early initiation shows proven benefits across many care settings<sup>2-4</sup>

V.A.C.® Therapy has been shown to be a successful way to manage wounds for the past 25 years.<sup>5</sup> Benefits of early initiation of V.A.C.® Therapy on acute and chronic wounds have been demonstrated in acute care, long-term acute care, and home health care.<sup>2-4,†</sup>

### Early Initiation of NPWT Has Been Shown to Reduce Length of Stay<sup>3,4,6</sup>



### Early vs. late initiation of V.A.C.® Therapy:

- Reduced inpatient days in acute and intensive care unit by at least 50%<sup>6</sup>
- Reduced inpatient days in long term acute care by 30%<sup>4</sup>
- Reduced homecare length of stay by 34% for surgical wounds<sup>3</sup>
- Reduced homecare length of stay by 49% for pressure injuries<sup>3</sup>

## Considering the total cost of care

A retrospective analysis conducted on a national insurance provider's medical claims data examined 6,181 acute and 1,480 chronic wound patients that received NPWT from January 1, 2009 to June 30, 2011 showed that early initiation of NPWT resulted in lower estimated total and wound-related costs than late use of NPWT.<sup>7</sup>



- Patients with **acute wounds treated early had 17.7% lower total estimated costs** (\$54,999 vs \$66,865, p<0.001)
- Patients with **chronic wounds treated early had 25% lower total estimated costs** (\$70,016 vs. \$93,289, p<0.001)
- Total Wound Costs were 30% lower for acute wounds treated Early vs. Late (\$13,416 vs. \$19,112, p<0.001), and 41% lower for chronic wounds treated Early vs. Late \$23,950 vs \$40,579, p<0.001)

\* Please reference the Center for Medicare Services reimbursement guidelines at cms.gov for more information.

† Early NPWT was defined for acute wounds as treatment initiated within the first 7 days from the first wound treatment date and within 30 days for chronic wounds; late NPWT initiation occurred after this time. A secondary analysis was conducted on a sub-set of patients where Charlson Co-morbidity Index Scores ≤5, to assess Early vs. Late cost differences by wound type, excluding the sickest patients with significant non-wound long-term care costs; this cohort represented 80% of the wounds.

# Wound care clinic “real world” use of NPWT

For all acute Wound Surface Area (WSAs), median days from first visit to 75% WSA reduction was

**40.4**  
(37.4, 41.6)  
for the early group  
(p<0.0001)



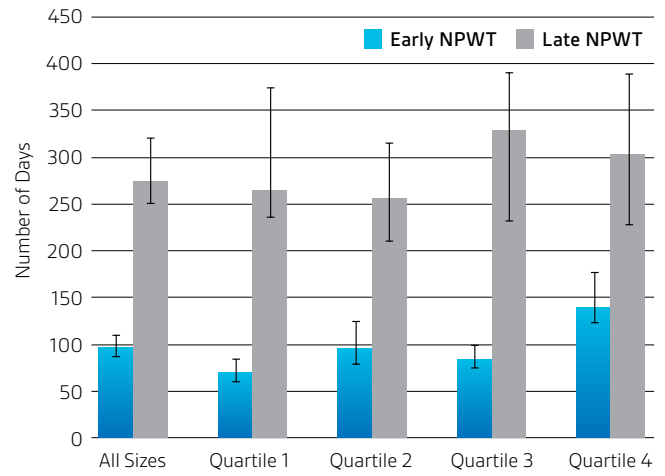
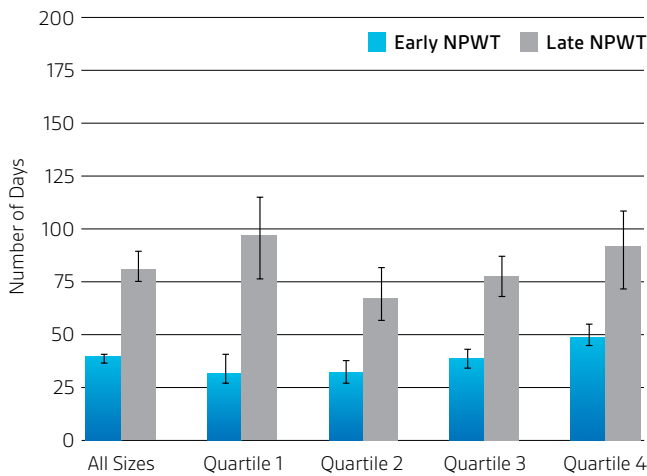
**81.6**  
(76.4, 90.5)  
for the late group  
(p<0.0001)

For all chronic WSAs, median days from first visit to 75% WSA reduction was

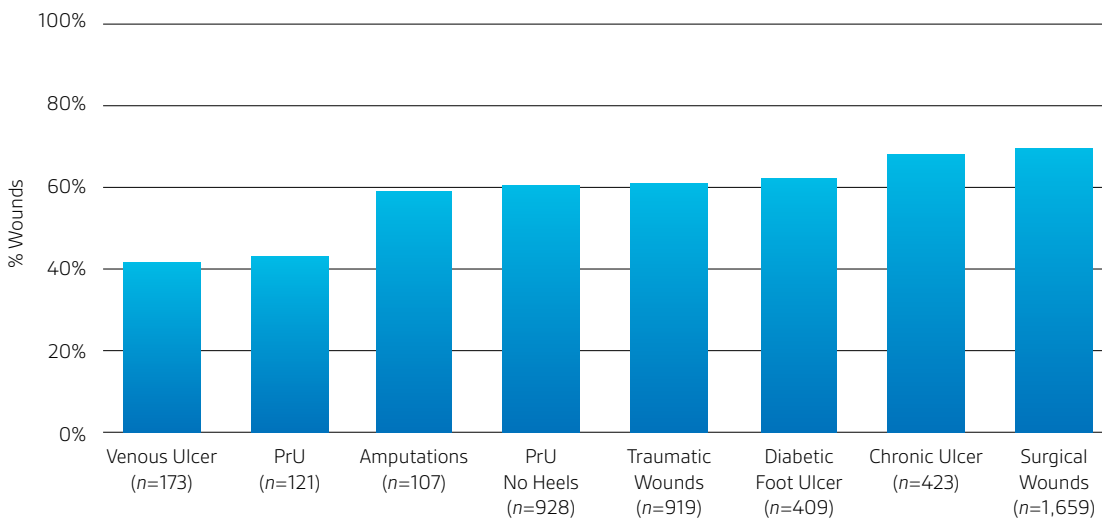
**96.4**  
(88.5, 111.4)  
for the early group  
(p<0.0001)



**274.6**  
(251.5, 321.5)  
for the late group  
(p<0.0001)



## Proportion of Wounds Receiving Early Initiation of NPWT



**Early:**  
**Acute wounds**  
defined as NPWT initiated within the first **7 days**.

**Chronic wounds**  
defined as NPWT initiated within first **30 days**.

**LATE:**  
NPWT initiation occurred after these time periods.

Based on this data, WCCs have an opportunity to initiate 3M™ V.A.C.® Therapy earlier on all wounds represented in chart.

**Footnote:** A separate retrospective analysis was conducted on wound care Intellicure data to determine if the results were similar to the insurance claims data on post-acute wounds. This included 3,604 patients with 4,739 wounds treated in Wound Care Clinics, 2000-2010: Acute wounds 56.7%, Chronic wounds 43.3%

# Results of early initiation of 3M™ V.A.C.® Therapy at wound care clinics<sup>1</sup>

When V.A.C.® Therapy was initiated early in the WCC treatment time period compared to late initiation, the days to reach significant closure (75% WSA reduction) were:

**1/2** The time  
For Acute Wounds

**1/3** The time  
For Chronic Wounds

**Additionally, the early group was twice as likely to reach 75% surface area reduction as the late group for both acute and chronic wounds.**

- This analysis supports previously published benefits of early initiation of V.A.C.® Therapy reported in other care settings<sup>3,4</sup> extending the trend to outpatient WCCs
- In addition, improved wound surface area reduction was observed for all sizes of acute and chronic wounds with early treatment

Footnotes:

Time to WSA change was defined as the number of days from the first visit to first date after NPWT initiation that WSA was reduced by 75%.

Kaplan-Meier estimates were used to estimate median time in days to 75% reduction in WSA.

Early versus late NPWT was compared using the log-rank test.

Cox proportional hazard models were used to adjust for size and age of wound at the initial visit; wounds that did not reach 75% reduction in WSA were censored.

Hazard ratio (after adjustment for WSA and age at initial visit using Cox proportional hazards model):

— Early-NPWT initiation:

- Acute wounds: 2.27 (2.04, 2.53)
- Chronic wounds: 2.43 (2.13, 2.79)

**For more information about the benefits of early initiation of 3M™ V.A.C.® Therapy, please contact your 3M sales representative**

References:

1. Miller-Mikolajczyk C, MStat RJ. Real world use: comparing early versus late initiation of negative pressure wound therapy on wound surface area reduction in patients at wound care clinics. Poster presented at The Wound Ostomy and Continence Nurses Society Annual Conference, June 22-26, 2013. Seattle, Washington.
2. Baharestani MM, Driver VR. Optimizing clinical and cost effectiveness with early intervention of V.A.C.® Therapy. *Ostomy Wound Manage.* 2008;54(11 Suppl):1-15.
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