v.a.c.® therapy

The Economics of Healing Matters

Economic Value with V.A.C.® Therapy System

Effect of early vs. late initiation of negative pressure wound therapy on chronic pressure ulcer patients.

Skilled Nursing Facility Patients

3M + KCI™

Analysis of Insurance Claims Data

Considering Total Cost of Care

- Negative pressure wound therapy (NPWT*) has become a common treatment choice for many wounds over the past 20 years[1]
- Benefits of early versus late initiation of NPWT on acute and chronic wounds have also been demonstrated in acute care, long-term acute care and home health care[2–4]
- NPWT Patients with a Skilled Nursing Facility (SNF) stay is a gap in the current evidence
- Chronic Pressure Ulcer patients in the SNF setting are challenging to treat and may benefit from early initiation of advanced wound therapies such as NPWT

Analysis Methodology

- A retrospective analysis of a national insurance provider's medical claims data examined patients that received NPWT* in the outpatient setting from January 1, 2009 to June 30, 2011[5]
- Claims were used to identify a subset of pressure ulcer patients with a Skilled Nursing Facility (SNF) stay that included NPWT (n=133); the subset included patients discharged from an inpatient stay directly to SNF, as well as patients who had a SNF stay within 30 days of initiation of NPWT in the outpatient setting
- Patient costs were tracked for 6 months post NPWT. Total costs include all claims submitted for the patient after the initial post acute NPWT claim. Costs were classified as "wound related" if a wound diagnosis appeared within the top three diagnoses on the claim.
- Early NPWT was defined as treatment initiated within 14 days from the first wound treatment for chronic wounds; late-NPWT initiation occurred after this time.

Selected Study Findings[5]

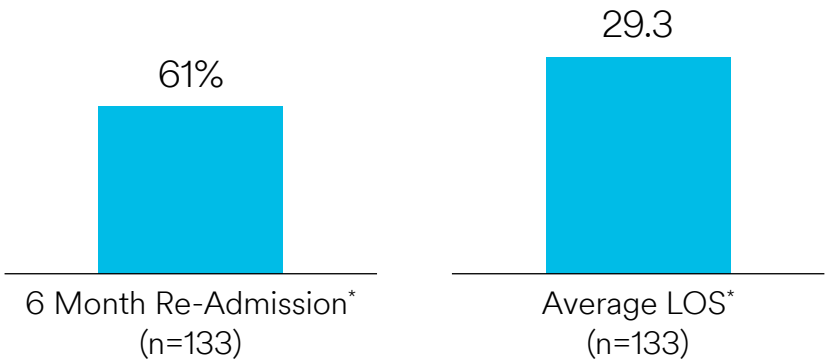
- Chronic pressure ulcer patients treated in a SNF setting were more likely to be treated late: 84% (n=112) vs. 16% early (n=21)
- Pressure Ulcer patients (n=133), which represented 35% of SNF wound patients (n=382), tended to be older, sicker, and costlier to treat, with high rates of inpatient readmission within 6 months of NPWT in the outpatient setting, regardless of early vs. late initiation of NPWT
- Total wound related costs for Pressure Ulcer patients were 70% lower ($7,359 vs. $24,760) for those treated early with NPWT vs. late $p<0.0001$
- Additionally, total 6 month wound-related inpatient costs were lower for PU patients treated early with NPWT vs late ($1,338 vs. $8,653 $p<0.01$), and wound-related ER Costs were lower ($182 vs. $1,189, $p=0.02$)

*Each patient received at least 1 charge for NPWT HCPCS code (E2402). Includes patients on V.A.C.® Therapy only.

The Economics of Healing Matters

Chronic pressure ulcer patients with a SNF stay are costly and challenging to manage: 61% of patients were re-admitted to the hospital within 6 months for an average 29 day hospital stay, regardless of early vs. late NPWT initiation

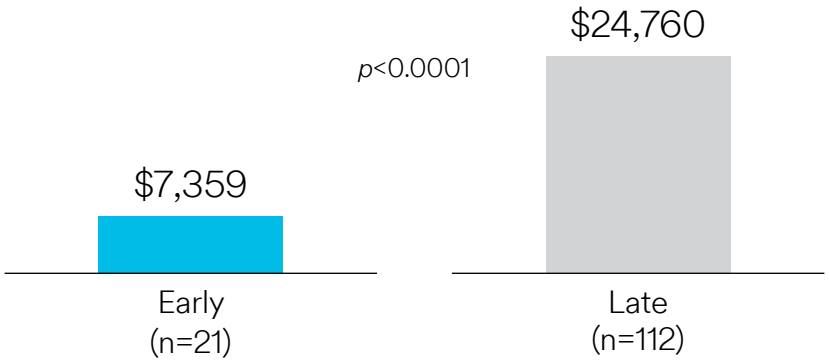
Average 6 Month Re-Admission Rate and Inpatient LOS All Pressure Ulcer SNF Patients (Early and Late)



*No statistically significant difference was noted for these metrics for patients treated early vs. late with NPWT.

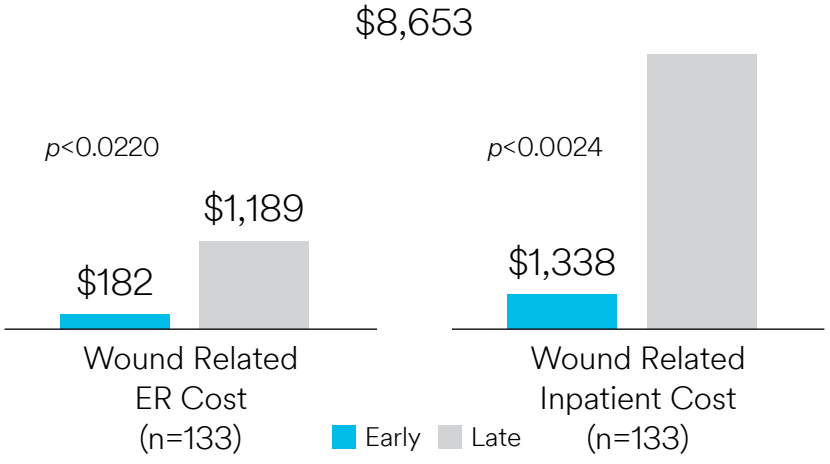
However, total wound related costs at 6 months were 70% lower for PU Patients treated early vs. late

Wound Related Costs 6 Months



Additionally, total wound-related ER costs and wound-related inpatient costs within 6 months of NPWT were lower for patients receiving NPWT early vs. late

ER Visit and Readmission Rates Within 6 Months



Subset Population: PU Patients with SNF Stay

	Early	Late	*p*-value
Patients	21	112	
Age (mean)	71	73	0.5088
Insurance			
Commercial: n (%)	4 (19%)	9 (8%)	0.1189
Medicare Advantage: n (%)	17 (81%)	103 (92%)	
Charlson Co-morbidity (mean)	4.7	5.4	0.2856
Gender			
Male n (%)	8 (38%)	50 (45%)	0.5787
Female n (%)	13 (62%)	64 (55%)	

Conclusion

In this small retrospective analysis of Chronic PU patients with a SNF stay, early NPWT initiation resulted in lower wound-related costs than late use of NPWT, supporting previous published benefits of early initiation of NPWT[1–4]

V.A.C.® Therapy is designed to accurately deliver the programmed negative pressure

- Individual sensing lumens **measure, monitor, manage**, and **maintain negative pressure** at the wound site
- Monitoring and adjusting software adjusts pump output, compensating for wound distance, wound position, exudate characteristics, and patient movement

Safety alarms alert caregivers if target pressure is not met or therapy is interrupted

Nationwide clinical and **technical support** for patients, clinicians and caregivers available 24/7/365

3M understands the importance of demonstrating our therapies' value in **improving outcomes, patient satisfaction,** and **lowering the total cost of care**.

For additional information, please contact your local V.A.C.® Therapy representative.

1. Gupta S. The impact of evolving V.A.C. Therapy technology on outcomes in wound care. *Int Wound J* 2012 Aug;9 Suppl.
2. Baharestani MM, Driver VR, DeLeon JM et al. Optimizing clinical and cost effectiveness with early intervention of V.A.C. Therapy. *Ostomy Wound Manage* 2008 Nov;1;54(11 Suppl):1-15.
3. Baharestani MM, Houliston-Otto DB, and Barnes S. Early Versus Late Initiation of Negative Pressure Wound Therapy: Examining the Impact Home Care Length of Stay. *Ostomy Wound Manage* 2008 Nov;54(11):48-53.
4. Driver R, de Leon J. Health Economic Implications for Wound Care and Limb Preservation. *J Managed Care Medicine* 2008 January;11:13-19.
5. Law A. Economic value with V.A.C.® Therapy: Effect of early versus late initiation of negative pressure wound therapy on total treatment and wound-related costs. Analysis conducted on insurance claims data by Axia Ltd. 2015.

NOTE: Specific indications, contraindications, warnings, precautions and safety information exist for these products and therapies. Please consult a physician and product instructions for use prior to application. Rx only.

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