solventum
V.A.C.® Therapy

The value of 3M™ V.A.C.® Therapy

Clinical and economic benefits of negative pressure wound therapy in subcutaneous abdominal wound healing impairment

Solid evidence: The largest 3M™ V.A.C.® Therapy clinical trial

Negative pressure wound therapy vs conventional wound treatment in subcutaneous abdominal wound healing impairment (SAWHI):
The SAWHI randomised clinical trial[1]

Objective

Evaluate the effectiveness and safety of negative pressure wound therapy (NPWT = V.A.C.® Therapy) compared to conventional wound care (CWT) for SAWHI after surgery in clinical practice.

Methods

Multicentre, multinational observer-blinded randomised clinical trial

539 patients

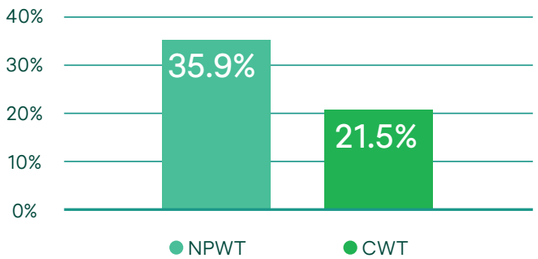
539 patients randomised to V.A.C.® Therapy or CWT between 2 August 2011 and 31 January 2018

34 centres

Abdominal surgical departments of hospitals in Germany, Belgium and the Netherlands

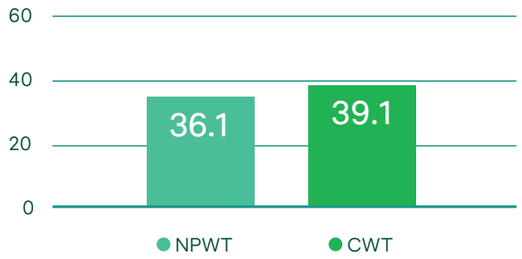
Results

Wound closure rate (P=0.001)



Significantly more patients achieved wound closure with V.A.C.® Therapy than CWT.

Wound closure time (p<0.001)



Significantly shorter time to wound closure with V.A.C.® Therapy than CWT within the 42 day study period.

Conclusions

It was demonstrated in this study that negative pressure wound therapy (NPWT) is superior to conventional dressings in achieving complete closure of post-surgical subcutaneous abdominal wounds.

Clinical benefits translated to health economic impact

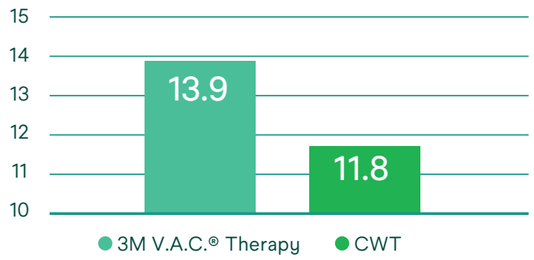
NPWT resource use compared with conventional wound treatment in subcutaneous abdominal wounds with healing impairment after surgery:
SAWHI randomised clinical trial results[2]

Objective

To compare resource utilisation of NPWT (3M™ V.A.C.® Therapy) and Conventional Wound Treatment (CWT) for Subcutaneous Abdominal Wound Healing Impairment (SAWHI) after surgery in the Per Protocol (PP) population.

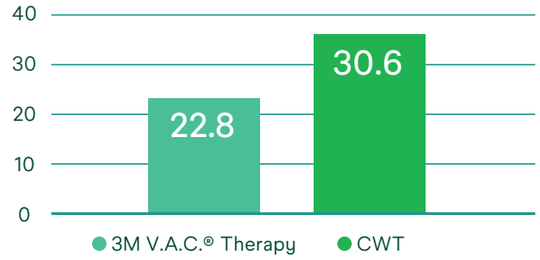
Results

Hospitalisation time (p=0.047)



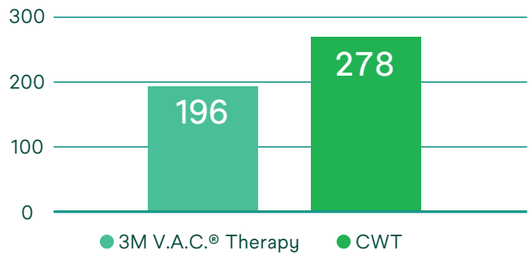
Local infrastructure and reimbursement challenges during the study prevented many V.A.C® Therapy patients from transferring to the out of hospital (OOH) setting. The results of this study encouraged a change in OOH reimbursement policy for NPWT.

Treatment length (p=0.001)



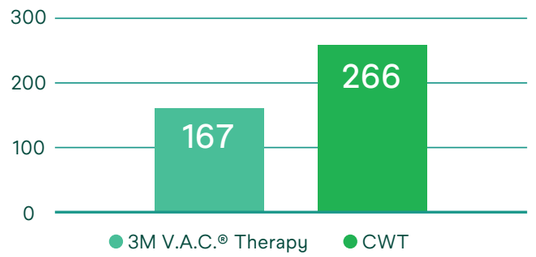
Treatment length within 42-day study period was significantly shorter in the V.A.C.® Therapy arm.

Time for dressing changes (minutes) (p<0.001)



Time for dressings changes per study participant was significantly shorter in the V.A.C.® Therapy group.

Time for wound-related procedures (minutes) (p<0.001)



Time for wound-related procedures was significantly shorter in the V.A.C.® Therapy arm.

Conclusions

Although NPWT hospitalisation time was longer, NPWT reduces resources used and may be an efficient treatment alternative to CWT for SAWHI after surgery.

Why choose 3M™ V.A.C.® Therapy?

>10 million
wounds treated with V.A.C.® Therapy[3]

>25 years
of V.A.C.® Therapy

>75%
of all NPWT evidence is based on V.A.C.® Therapy[4]

3M™ V.A.C.® Therapy is proven

Number of published clinical articles, evidence levels 1-3 across manufacturers as of 12 August 2021.

	3M	Smith & Nephew	Others
Burns	2	0	0
Enteric fistula	2	0	0
Mediastinitis	10	1	0
Mixed	45	9	4
Necrotizing fasciitis	1	1	0
Other	19	5	2
Other - Basic science	1	0	0
Surgical - Fasciotomy	3	0	0
Surgical - Open abdomen	78	5	5
Surgical- Amputations (diabetic)	5	0	0
Surgical- Amputations (non-diabetic)		1	0
Surgical- Dehisced	26	1	2
Surgical- Grafts and flaps	22	4	1
Surgical- Pilonidal	3	0	0
Surgical- Prophylactic	75	30	2
Surgical- Sternal	22	2	1
Trauma- Compartment syndrome	1	0	0
Trauma- Mixed	1	0	0
Trauma- Orthopedic	20	1	4
Ulcers- Diabetic	22	2	4
Ulcers- Pressure	5	0	1
Ulcers- Venous stasis	7	2	0
Total	**370**	**64**	**26**

Clinical benefits with a variety of wound types such as:

Lowered incidence of readmission, additional surgeries and complications[5]

Reduced amputation rates[6]

Reduced time to wound closure[6]

Reduced incidence of surgical dehiscence and infection[7]

References

1. Seidel D, Diedrich S, Herrle F, *et al*. Negative Pressure Wound Therapy vs Conventional Wound Treatment in Subcutaneous Abdominal Wound Healing Impairment: The SAWHI Randomized Clinical Trial. *JAMA Surgery*. 2020;155(6):469-478.
2. Seidel D, Lefering R. NPWT Resource Use Compared With Conventional Wound Treatment in Subcutaneous Abdominal Wounds With Healing Impairment After Surgery: SAWHI Randomized Clinical Trial Results. *Ann Surg*. 2021 Jun 10. doi: 10.1097/SLA.0000000000004960. Epub ahead of print. PMID: 34117147.
3. 3M Internal Report: Cumulative NPWT Wounds - 10 million - 2013-2015.
4. 3M Medical Publications Analysis, August 2020.
5. Page JC, Newsander B, Schwenke DC, Hansen M, Ferguson J. Retrospective analysis of negative pressure wound therapy in open foot wounds with significant soft tissue defects. *Adv Skin Wound Care*. 2004;17(7):354-364.
6. Blume PA, Walters J, Payne W, Ayala J, Lantis J. Comparison of negative pressure wound therapy using vacuum-assisted closure with advanced moist wound therapy in the treatment of diabetic foot ulcers: a multicenter randomized controlled trial. *Diabetes Care*. 2008;31(4):631-636.
7. Stannard JP, Volgas DA, McGwin G III, *et al*. Incisional negative pressure wound therapy after high-risk lower extremity fractures. *J Orthop Trauma*. 2012;26(1):37-42.

Note: Specific indications, contraindications, warnings, precautions and safety information exist for these products and therapies. Please consult a clinician and product instructions for use prior to application. This material is intended for healthcare professionals.

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