Zero Compromise to Clinical Outcomes, Improved Patient Experience in Patients with Complex Wounds Utilizing an Innovative Negative Pressure Wound Therapy (NPWT) System

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OVERVIEW OF CLINICAL CHALLENGE:

Long-term Acute Care Hospitals (LTACH) treat complex wounds and require high levels of staff skill when applying NPWT[1]. The NPWT goal of therapy in LTACH's often is to decrease wound volume and increase granulation tissue in order to facilitate discharge to lower acuity settings like rehab or home health[2]. AMG is a top-five, post-acute hospital system with 11 hospitals, some of which are embedded in larger, full-service hospitals. With a reputation for providing expert wound care, we often take on difficult cases that other hospitals turn away. AMG had relied on a particular NPWT system for years which met our high clinical standards but was noisy, hindered mobility, had poor reliability, and required additional documentation outside of the facility charting system. After an extensive evaluation two years ago, AMG transitioned to an Innovative NPWT System. Switching to the new system not only delivered excellent clinical outcomes, equal to if not exceeding the previous device, but improved staff and patient satisfaction as well.

References:

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2. Arnold, M., Yanez, C. & Yanez, B. (2020). Wound healing in the Long-term acute care setting using an air fluidized therapy/continuous low pressure therapeutic bed. Journal of Wound Ostomy and Incontinence Nursing, 47(3), 284-290. doi:10.1097/WON. 0000000000000646
3. Apelqvist, J., Willy, C., Fagerdah, A.M. et al. Negative Pressure Wound Therapy – overview, challenges and perspectives. J Wound Care 2017; 26: 3, Suppl 3, S1–S113.
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ŧ Invia® Liberty™ NPWT System

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METHODS

Case series of 16 patients exhibiting a range of challenging wounds including necrotizing fasciitis, CABG dehiscence with osteomyelitis and exposed bone, Fournier's gangrene, and pressure injuries. The Innovative NPWT System[ŧ] was effectively applied to patients. Dressings were changed 2-3 times weekly and wound measurements were taken. The staff noted their overall satisfaction with the device and provided notable patient feedback.

OUTCOMES

The Innovative NPWT System[ŧ] continues to exceed our expectations for clinical performance[3,4]. We've made zero compromises on clinical outcomes with wound healing rates similar to, or exceeding, the previous system (avg wound reduction of 79% and time on therapy avg 4.4 weeks). With implementation of the Innovative NPWT System[ŧ], we have maintained a budget reduction of 68% over the previous NPWT device*. Staff also reported multiple unforeseen advantages which have positively impacted staff satisfaction and morale. Our staff continue to report that the system[ŧ] is easy to use and reduces time spent problem solving. It also eliminates daily documentation outside of the facility charting system, leaving them more time to focus on patient care.

CONCLUSIONS

We are extremely satisfied with our system-wide adoption of the Innovative NPWT System[ŧ]. It has allowed us to continue to provide exceptional wound care with zero compromise while also seeing exponential savings*. Additionally, the unforeseen benefits have empowered the staff and given them confidence to develop care plans for patients and troubleshoot any problems on their own, leading to increased staff and patient satisfaction.

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TABLE 1

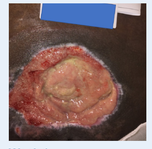
Patient 1-7* 8-16^	M / F	Age	Weeks on NPWT	Length (cm)	Width (cm)	Height (cm)	Length (cm)	Width (cm)	Height (cm)	Volume Reduction
1	M	54	4	19.5	14	5.9	10	7	2.5	89%
2	M	68	3	17	2.2	2.4	15	2	1	67%
3	M	50	4	7	7.3	1.7	6.5	5	0.7	74%
4	F	67	3	7.5	7.4	1.1	6.5	5.6	1	40%
5	M	70	5	8	10	1	5.6	7	0.3	85%
6	M	64	2	6.3	6	1.5	6	4.2	1	56%
7	F	63	4	12.2	9	3.5	9.1	7.1	2.6	56%
8	M	53	5	46	27	5	13	9	0.1	100%
9	M	77	5	17	4	5	13	2	1	92%
10	M	44	4	10	8	6	4	2.5	0.3	99%
11	M	42	4	18	5	3.3	13.2	3	3	60%
12	M	49	5	35	23	9	30	12	3	85%
13	M	62	7	11	3	2	4	4	0.5	88%
14 a	F	44	5	16	8	4	7	5	2.5	83%
14 b	F	44	5	13	10	3	7.2	7	1.2	84%
15	M	66	5	13.2	5.2	1	8.8	3.6	0.1	95%
16	F	58	4	29	2.3	3	23	0.8	0.8	93%
	Average time on therapy weeks		**4.4**					**Average wound reduction**		**79%**

Patient 1

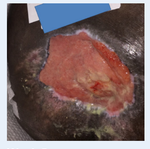
Week 1

Week 4

Patient 5



Week 1



Week 5

Patient 15

Week 1

Week 5

Average budget reduction of 68%*

*Patients seen by KM

^Patients seen by JB