

The purpose of this white paper is show all health care professionals who are decision-makers for patient care that AFT beds can have a tremendous impact on patients whose pressure ulcers are challenging and are potentially life-threatening.

## AFT Beds Accelerate Healing of Large, Non-Healing Pressure Ulcers: Effectiveness of Air Fluidized Therapy revealed with 4 case studies\*

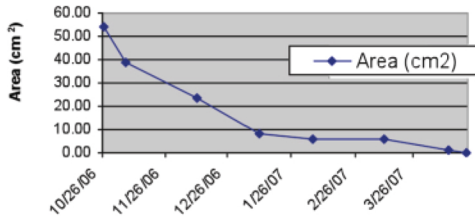
The following four case studies involved patients with significant-sized pressure ulcers who were treated with Medical Modalities' air fluidized therapy (AFT) beds. The outcomes in all but one of the cases resulted in complete healing of the wounds. The other case was healed sufficiently to be released of home health services.

AFT beds have shown to heal patients as much as four times faster than convention surfaces.<sup>1</sup> For patients who are compliant, the beds represent the best hope for having a significant impact on their wound healing.

Conclusion: AFT beds are an excellent method to treat non-healing pressure ulcers and give home health nurses another healing alternative that can positively affect agency outcomes.

<sup>1</sup> Comparison of air-fluidized therapy with other support surfaces used to treat pressure ulcers in nursing home residents. Ochs, R.F., Horn, S.D., van Rijswijk, L., Pietsch, C., Smout, R.J. *Ostomy Wound Manage.* 2005 Feb;51(2):38-68.

### WOUND MEASUREMENT DATA



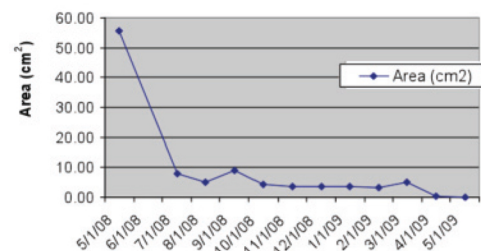
Patient Age/Gender:	<b>Male 28 years old; 4'5" ht., 180 lbs.</b>
L x W x Depth (largest wound):	Start size: <b>54.0 Area (cm<sup>2</sup>) (LxW) 5 x 9.5 x 3.5 (LxWxD) (sacrum)</b>
Previous Surface:	<b>Group II low-air loss mattress</b>
<b>Start of AFT use: 8-17-06</b>	<b>End of AFT use: 4-21-07 (Healed)</b>
Ave. Monthly Healing rate (cm <sup>2</sup> )	<b>7.71 cm<sup>2</sup> per month</b>

### Case Study 1

Patient #1 is a 32-year-old male with severe spina bifida resulting in paraplegia and severe scoliosis. In May 2006, he developed multiple pressure ulcers with the largest being staged as a Stage 4. The patient was ordered a low-air loss Group 2 mattress for home use on 6-15-06 to replace the alternating pressure pad he had been using. In early August, the patient developed a urinary tract infection with further deterioration of his pressure wounds and was admitted to a hospital.

While at the hospital his physician ordered an air fluidized therapy (AFT) bed for home use from Medical Modalities. The MMI sales consultant conducted a home survey and met with the caregiver to explain the AFT bed use. The patient was discharged on 8-17-06 with the largest pressure ulcer being measured on the sacrum at 54 cm<sup>2</sup> or 5 cm x 9.5 cm (WxL) with a depth of 3.5 cm at the start AFT bed application.

✓ Remarkably, the patient's sacrum Stage 4 pressure ulcer reduced down to a size of 8.4 cm<sup>2</sup> from the starting size of 54 cm<sup>2</sup> over the next 143 days at a average healing rate of 9.6 cm<sup>2</sup> per month. The patient was declared completely healed of all wounds by the 8th month.



Patient Age/Gender:	<b>Male 58 years old; 6'0", 260 lbs.</b>
L x W x Depth (largest wound):	Start size: <b>55.8 Area (cm<sup>2</sup>)(LxW) 9.3 x 6.0 x 0.1 (LxWxD) (sacrum)</b>
Previous Surface:	<b>Group II low-air loss &amp; alternating mattress</b>
<b>Start of AFT use at home: 6-6-08</b>	<b>End of AFT use: 5-1-09 (Healed)</b>
Ave. Monthly Healing rate (cm <sup>2</sup> )	<b>5.07 cm<sup>2</sup>/month</b>

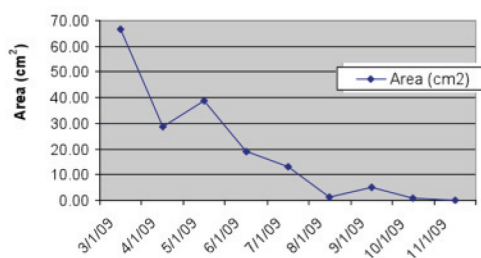
### Case Study 2

Case Study #2 involves a 58-year-old male with paralysis that came to Medical Modalities' attention in February 2008 while he was convalescing in a nursing home. At that time he had a total of four Stage 4 (two of the wounds involved undermining) and four Stage 2 pressure ulcers. In addition he was 6' 0" tall and weighed 260 lbs. The patient was using a Group 2 low-air loss mattress at the time he was referred to Medical Modalities.

The facility wound care nurse suggested using an AFT bed and his physician ordered the bed for the patient on 2-26-08 for use in the skilled facility. Even though the patient began to make progress on the AFT bed, his largest wound still measured 55.8 cm<sup>2</sup> (9.3 cm x 6.0 cm) and a depth of 0.1 cm. As the patient's wounds began to heal, the facility decided that the patient could receive the same therapy in his home from Medical Modalities. On 6-6-08 he was discharged home and this time began AFT bed treatment at his residence. At the time of discharge from the skilled nursing facility the patient had three Stage 4 ulcers (sacrum, left ischium, left trochanter) and two Stage 2 (left heel and right ischium) pressure ulcers.

✓ Once at home the only wound care treatment other than his surface was wound gel and Silvadene dressings. Ultimately on 5-1-09 with all wounds reported to be healed the patient was discharged from his AFT bed and released from home health services.

## WOUND MEASUREMENT DATA



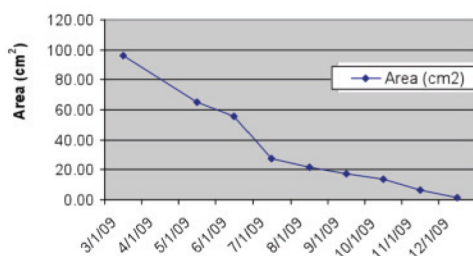
Patient Age/Gender:	<b>44 yr. old female; 5'8", 104 lbs.</b>
L x W x Depth (largest wound):	Start size: <b>66.5 Area (cm²) (LxW) 9.5 x 7 x 5 (LxWxD) (sacrum)</b> 2nd largest: <b>49.0 Area (cm²) (LxW) 7 x 7 x 7 (LxWxD) (gluteal)</b>
Original Surface:	<b>Group 2 low-air loss mattress</b>
<b>Start of AFT use at home: 3-13-09</b>	<b>End of AFT use: 11-24-09 (Healed)</b>
Ave. Monthly Healing rate (cm²)	<b>7.95 cm²/month</b>

### Case Study 3

Case Study #3 involves a 44-year-old female with a lifetime of medical problems. Starting at the age of three, she became a paraplegic from an accident. Subsequently over the years her health had been compromised from: breast cancer, hypertension, diabetes, a colostomy and an amputation below the left knee.

She was admitted to a hospital with sepsis and two Stage 4 pressure ulcers on 1-19-09 after recently being weaned off of a ventilator while at a LTAC hospital. Once in the hospital, her pressure ulcers progressed in size and she developed two Stage 4 pressure ulcers, with the largest on the sacrum which measured an area of 100cm<sup>2</sup> or 10 cm x 10 cm x 0 cm (LxW). The patient had previously been on a low-air loss mattress at home. She was discharged from the hospital on 3-13-09 and her physician now upgraded her surface therapy and arranged for an AFT bed from Medical Modalities to be delivered for home use. She recorded gluteal Stage 4 pressure ulcer size of 7 cm x 7 cm (LxW) or 49 cm<sup>2</sup> and a Stage 4 sacrum pressure ulcer size of 9.5 cm x 7 cm (LxW) or 66.5 cm<sup>2</sup> on discharge from the hospital.

✓ *Initially a negative pressure wound pump was ordered upon home discharge and subsequently the home health nurse went to wet-to-dry dressings beginning 7-13-09. The patient wounds were deemed to be completely healed on 11-24-09 after eight months on the AFT bed and the patient was successfully discharged from home health on that date, as well.*



Patient Age/Gender:	<b>60 yr. old male; 6'4", 189 lbs.</b>
L x W x Depth (largest wound):	Start size: <b>96.0 Area (cm²) (LxW) 12 x 8 x 0 (LxWxD) (sacrum) and bilateral heel ulcers</b>
Original Surface:	<b>Group 2 alternating pressure</b>
<b>Start of AFT use at home: 7-31-09</b>	<b>End of AFT use: 2-28-10 (final size measurement 1.50 cm² on 2-28-10)</b>
Ave. Monthly Healing rate (cm²)	<b>11.05 cm²/month</b>

### Case Study 4

Case #4 is a 60-year-old male who was admitted to a LTAC hospital on 3-4-09 with multiple pressure ulcers and urinary tract infection. On 3-16-09 his largest sacral wound was a Stage 4 pressure wound and measured at an area of 96 cm<sup>2</sup> or 12 cm x 8 cm (LxW). In addition there was tunneling and necrotic tissue involved with this wound. Other co-existing conditions included diabetes, bilateral paraplegia.

✓ *Discharge planning at the LTAC hospital assisted in ordering home health and an AFT bed which was delivered to his home on 4-2-09. As part of the standard MMI protocol the MMI sales consultant explained the importance of staying in the AFT bed for a minimum of 18 hours per day. The patient was compliant of the bed use and over the next three and half months the wound reduced from 96 cm<sup>2</sup> down to 27.2 cm<sup>2</sup> (a rate of 19.9 cm<sup>2</sup>/month). On 1-5-10 the home health agency decided that the wound (now 1.71 cm<sup>2</sup>) no longer required skilled care at home and the patient was discharged from their services. The AFT bed was finally picked up on 2-28-10 with the ulcer measuring 1.50 cm<sup>2</sup>.*

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Generation II Air-Fluidized  
Therapy Bed



#### \*About the Medical Modalities case studies:

- All the patient data are factual and supported by monthly MMI Wound Outcome Reports (WOR®), as well as nursing and physicians' notes.
- All of the patients' case studies had multiple pressure ulcers, however the focus of the case study is the largest pressure ulcer.
- All other pressure ulcers healed in advance of the largest.
- These case studies represent just a few of the hundreds of patients who have had positive outcomes on Medical Modalities AFT beds.
- Most patients who have used AFT beds primarily have at least a Stage 3 or a Stage 4 pressure ulcer on the trunk or pelvis.

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