

# Improvements in Skin Integrity with the Unique UTS™ Alternating Mattress

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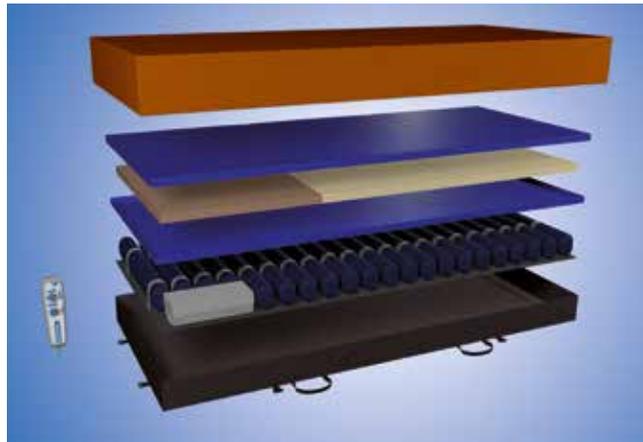
**Abstract:** To conduct Case Studies on the UTS™ (Universal Therapy System) alternating mattresses.

**Introduction:** WoundConsultancy Ltd completed case studies on the new, unique UTS™ mattresses.

These alternating air cell mattresses have an integrated compressor (pump) set into the body of the mattress which significantly reduces both noise and vibration compared to traditional compressors that hang on the end of the bed. The compressor unit has an in-built fan to ensure it does not overheat and is covered in high specification foam to prevent accidental injury. The mattress is controlled using a small handset, similar to those used to control profiling beds enhancing independence for those individuals who are able to manage the controls themselves. The mattress has an Auto-sensing function to optimise patient comfort and enhance pressure reducing capability. They are suitable for use among a range of patients in a variety of settings. WoundConsultancy Ltd received positive feedback both by the Subjects and Care Home staff; a range of measurements, including High Frequency Ultrasound (HFU) identified a consistent improvement in the skin integrity of the users.

**Methodology:** Subjects were residents in Local Care Homes with elevated risk of pressure ulceration and/or skin damage. A range of measurements including skin temperature, sub dermal moisture, CRF data points and HFU were used to monitor the condition of the skin at Time 0 (day 1) and Time 2 (3 weeks later). Measurements were taken at 8 points (4 left; 4 right) over the sacrum, buttocks and ischial tuberosities.

**Results:** Positive feedback was received from both subjects and staff, who valued the quietness of the pump and the ease of use of the handset; the subjects reported improved comfort and welcomed being able to control the mattress themselves, such as adjusting the comfort settings. The HFU scans identified a clear improvement in the integrity of the skin in the subjects over the 3 week period of using the mattress, as shown in the examples,



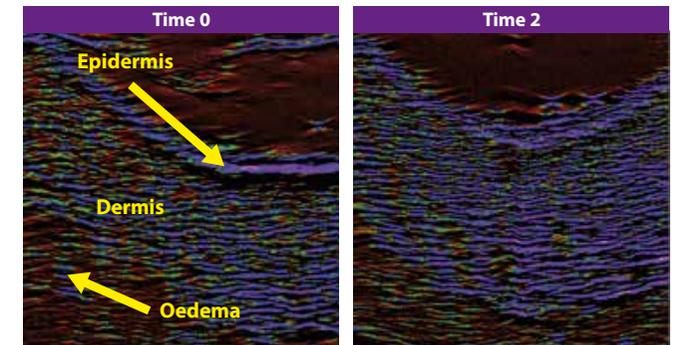
to the right. Areas of red pixilation indicate oedema in the sub dermal tissues; the more blue pixels are representative of normal tissue presentation.

## Features of the UTS™ include:

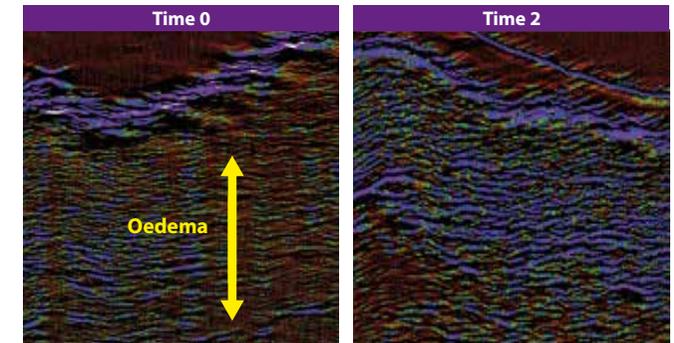
- Auto-Sensing Comfort Control
- Torsion Guard Air Cells™
- User Step-Up / Step-Down Flexibility
- Full Depth Protection
- AOD™ (Air on Demand) Efficiency
- Outstanding Clinical Performance
- Full Depth Alternation
- Zonal Management & Care
- Multi-Functional Surface Support
- Continuous Low Pressure (CLP) Therapy
- Micro Climate Management
- Advanced Multi-Stretch Cover
- Alternative Power Source Options
- Ease of Stocking & Shipping

## HFU SCANS

### Subject 1



### Subject 7



**Conclusions:** This was a small scale study to test the UTS™ mattress with it's new and unique feature of a built-in compressor; it proved to be a popular feature and, having returned positive outcomes evidenced by the measurements and HFU scans, suggests further investigations as to the efficacy of the mattress would be beneficial.

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