

## **Volker AG Symposium**

### **"Clinical evidence of a micro-stimulation device"**

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Pressure redistributing beds, mattresses and cushions are commonly used in the prevention and treatment of pressure ulcers. Despite this widespread adoption within health care there remains little evidence supporting the use of one technique for managing pressure sores (NICE 2005). While there are now 56 randomised controlled trials (RCT's) that have compared various support surfaces used to prevent (n=41, Cullum et al 2005) or treat (n=15, NICE 2005) pressure ulcers the general low methodological quality of these studies has limited inferences regarding their relative efficacy. Presently fundamental questions such as the relative benefits of two principle approaches to managing loading on the skin and soft tissues – constant low pressure (CLP) or alternating pressure (AP) remain unanswered with the selection of alternating pressure (along with specialised CLP support surfaces such as low-air loss or air-fluidised beds) dependent upon clinical consensus rather than objective evidence (NICE 2005).

Nine RCT's have compared the ability of CLP and AP surfaces to prevent (n=8) or treat established pressure ulcers (n=1, grades 1 and 2 only, Russell et al 2003). Even when the data were pooled from the eight preventive studies the numbers of subjects recruited to either arm were too small to provide robust comparisons of the effect of the CLP and AP surfaces. In the single treatment study no apparent differences were observed between the resolution of superficial pressure ulcers upon AP or CLP surfaces. Undertaking such studies to illustrate the relative efficacy or effectiveness of CLP or AP surfaces can be complex with for example challenges faced when blinding patients, staff and investigators to the surface allocated. The rate of subject recruitment and the likely high attrition rates that might be expected in studies where patients with severe pressure ulcers are recruited also interact to often prevent individual investigations achieving an appropriate power to detect true non-significant differences between intervention comparisons.

This workshop will demonstrate in the first presentation the prevalence and incidence of pressure-sores in hospitals and nursing homes from a surgeons perspective. The second presenter will concentrate of the state of the art treatments for pressure-sores in a hospital setting. The final speaker will depict the concept and demonstrate the efficacy of Micro-Stimulation as preventive measure for pressure sores. Furthermore he will present results from a multicentral RCT-Study which was preformed in two teaching hospitals and various Nursing Homes in Germany.