Pads and Pressure
An investigation into the effects of absorbent incontinence pads on pressure management mattresses

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Background

- Pressure ulcers and incontinence often co-exist
- Patients using pressure management products are also likely to use absorbent pads
Aims

• to determine the effects of absorbent pads on the pressure-redistributing properties of ‘standard’ and ‘pressure-reducing’ mattresses.
Products

• Absorbent pad and pant system for moderate to heavy incontinence:
  • Tenaform Super, SCA Hygiene Products AB.
  • This was tested with three different mattresses:
    (1) a standard ‘contract’ foam mattress
    (2) a visco-elastic foam mattress
    (3) a surface-cut foam mattress.
Procedure

Phantom repositioned 10 times on each of the 3 mattresses in 3 states:
(1) *naked*
(2) wearing a *dry pad*
(3) wearing a *wet pad*. 
Naked buttocks on standard foam mattress
The graph illustrates the pressure in mm Hg for different pad conditions: naked, dry pad, and wet pad. The legend indicates the following:

- ▲ Standard foam
- ● Visco-elastic foam
- • Surface-cut VE foam

The data points suggest a variation in pressure across different conditions and foam types, with standard foam generally showing higher pressures compared to the others.
Unsmoothed pad on standard foam mattress
Discussion

• incontinence pad between the patient and the support surface raises the peak pressure by 20-25%.

• Pad folds cause localised areas of high pressure.
Conclusions

• Absorbent pads have adverse effect on mattress

• Pad folds appear to contribute to this effect.

• Design considerations