Clinical Question: In patients with pressure ulcers, do alternating pressure air mattresses affect pressure ulcer healing compared to mattress overlays

<table>
<thead>
<tr>
<th>P:</th>
<th>Patients with pressure ulcers</th>
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<tbody>
<tr>
<td>I:</td>
<td>Alternating pressure air mattresses (APAMs)</td>
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<td>C:</td>
<td>Ordinary mattresses/overlays</td>
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<td>O:</td>
<td>affect on pressure ulcer healing</td>
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<td>N/A</td>
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Evidence: Summarize key findings and cite one – three sources

Our first article followed 92 patients in a controlled trial who all were given alternating pressure air mattresses. The group was split in half: half of the patients had pre-existing pressure ulcers, half did not. All patients were high risk for pressure ulcers. In the conclusion of the study, only one patient without a pressure ulcer developed one, and patients with existing pressure ulcers saw a decrease in heel, ischium, and sacral pressure ulcers.

Meaume, S., & Marty, M. (2015). Pressure ulcer prevention and healing using alternating...
pressure mattress at home: The PARESTRY project. Journal of Wound Care, 24(8), 359-365

¥ This study was also a controlled trial, and focused on patients APAM’s vs. mattress overlays in 221 ICU patients. Patients were assessed daily for the development of pressure ulcers over 5 months. 21% of patients with a mattress overlay developed a pressure ulcer, while only 16% of patients on an APAM developed a pressure ulcer


¥ In this study was a randomized control trial, comparing 59 different studies and over 13,000 patients. The studies compared mattress overlays with static mattresses such as APAM’s. One study found no difference in pressure ulcers between using mattress overlays and APAM’s. Three other studies supported that APAM’s were superior to mattress overlays. All studies supported that overlays or APAM’s are preferable to a plain mattress for at risk patients. Overall, the conclusion seemed to support that APAM’s are superior, although not always the first choice in prevention due to their high initial costs.


Conclusion/Recommendations: Based upon these findings, I believe that individuals with pre-existing pressure ulcers should be placed on APAMs during hospitalization stays. Ideally, I also believe that patients who are deemed an 18 or below on the Braden scale should also be placed on an APAM as a prevention method. Preferably, all hospitals would implement this criteria to decrease the risk of developing or worsening a pressure ulcer.
Ideas/suggestions for next steps: In an industry where pressure ulcers are no longer a reimbursable fee, not to mention a detrimental development for patients, I believe that hospitals should adopt a stance for the use of APAMs. With research to show that APAMs do in fact support the prevention and healing of pressure ulcers, I feel that more widespread use could lead to better outcomes for patients, and less Never Events for hospitals.

Identify your collaborative partners if you were to follow this through to next steps: Wound ostomy experts, central supply staffing (or whoever it is that coordinates the delivery/ordering of APAM’s), doctors to order APAM’s, and nutritionists.