

Determining whole life impact and costs for powered pressure area care support surfaces: Balancing cost vs. quality vs. risk?

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Introduction

With national outcomes frameworks, clinical guidelines and healthcare regulators focused on 'patient safety' and 'effective, harm free care' these are clear, established, board-level priorities for every healthcare provider. As pressure ulcers continue to be a key indicator of care quality, reducing pressure ulcer incidence remains a primary driver for all healthcare providers irrespective of the care setting.

The cornerstone of pressure ulcer prevention is the effective management of patients' pressure areas. For healthcare providers this means the provision of effective pressure area care (PAC) to all patients at an elevated risk of pressure ulceration. Whilst the EPUAP recommend active therapy PAC support surfaces for patients who are at risk of pressure ulcers and who cannot be regularly repositioned ¹ they are unsurprisingly non-prescriptive when it comes to stipulating any specific performance parameters or design characteristics for these devices. It is therefore left to individual healthcare providers to determine the most appropriate 'active therapy' support surface to meet their patients' clinical needs and their internal financial targets.

Powered PAC Support Surface Costs

Budget cuts in both the NHS and private healthcare sectors have resulted in a more competitive marketplace and the past ten to fifteen years has seen the cost of powered PAC (active therapy) support surfaces come down significantly, with many 'high end' systems now costing between £800 and £1,500.

These market conditions have resulted in an influx of cheap, no-frills, low-end, powered PAC support surfaces appearing in the marketplace. Many of these products are imported into the UK, self-certified as unregulated, Class I medical devices, CE marked and in some instances sold for as little as £300. At such a low purchase price it is understandable that many stakeholders within the tendering process will be keen to consider these new low-end, low-cost products.

Some of these devices are accompanied by expansive and impressive marketing claims around product performance, which only serves to make them an even more attractive proposition. (NB. It is important to remember that only Class IIa support surfaces will have their device safety and performance claims independently checked and audited by a Notified Body).

At first glance potentially saving £500+ per mattress allows providers to make significant savings whilst covering the same number of beds OR maintaining their spending levels and increasing their bed coverage with these medical devices. Either option is likely to be attractive to providers forced to work within certain financial constraints.

Balancing Budgets vs. Outcomes

With healthcare budget holders regularly looking to trim costs and reduce spend and healthcare policy makers looking to minimise risk, avoid harm and drive reductions in pressure ulcer incidence, Tissue Viability departments can often become stuck between a rock and a hard place when it comes to the provision of active therapy PAC support surfaces.

Although Tissue Viability are typically accountable for pressure ulcer incidence figures they do not always have the casting vote when it comes to the procurement of equipment such as powered pressure area care support surfaces. This can mean that they are often tasked with doing more (year on year PU incidence reduction) with less (fewer support surfaces or potentially having to use an unfamiliar, unproven, more basic

support surface). Striving to deliver year on year reductions in pressure ulcer incidence whilst simultaneously reducing spend or working with ongoing budget cuts makes a difficult job potentially impossible at times for Tissue Viability.

Balancing Cost vs. Quality vs. Risk

On paper, low-cost PAC products can deliver significant cost savings in the short term. However, opting for a low-cost mattress can be a high-risk, high-cost strategy in the longer term if the product in question;

- fails to match its stated (expected) performance in terms of tissue offloading
- fails to prevent pressure ulcers*
- requires frequent servicing
- breaks down regularly
- has spares that are costly or difficult/impossible to obtain
- requires replacing every 2-3 years

**NB. With one study estimating the cost of pressure ulcer healing to be between £1,064 for a Category I PU and £10,551 for a Category IV wound, ² and another reporting the average cost of a pressure ulcer being estimated at £5,672 per case, ³ any increase in PU incidence as a result of switching mattress provider will soon eat into the short term cost savings made by changing products.*

Providers can struggle to determine the full, whole-life impact and cost for PAC products because these 'hidden costs' often fall into different departmental budgets i.e. Tissue Viability is likely to be responsible and hold the budget for PU prevention and healing; EBME will potentially look after the budget for service, maintenance, repair and spares; Procurement will typically have responsibility for the initial product purchase/rental.

These budgetary silos can make it difficult for providers to obtain a clear perspective on the outcome of adopting a new PAC product into clinical practice.

By understanding which questions to ask manufacturers/distributors when going through the procurement process and which budgets to interrogate once the contract has been awarded it may enable tender groups to make a fully informed choice when awarding the contract and also a more accurate assessment of how the product performs both clinically and financially post adoption and implementation.

Determining Whole Life Impact and Costs

For providers to make a fully informed choice, and to determine PAC mattress whole life impact and costs manufacturers/distributors should work transparently with procurement teams on the following four areas (see Figure 1);

- 1. Product safety and performance claims (Class I vs. Class IIa support surfaces)** There is a clear and significant difference in the regulation applied to Class IIa medical devices and those which are Class I devices. All safety and performance claims of Class IIa devices are independently checked and verified by a designated Notified Body – therefore providers can be fully confident that brochure claims for Class IIa devices are accurate and translate into clinical use.
- 2. PU prevention (evidenced PU incidence reduction)** There are clear costs associated with pressure ulcer treatment and healing ^{2, 3} therefore any switch in PAC product which results in a rise in PU incidence will have a direct cost impact associated with the treatment and healing of these wounds. To allow providers to make a fully informed choice of PAC support surface, manufacturers should provide clinical data on the ability of their support surfaces to prevent PU in a range of patients and ideally PU incidence reduction in the clinical setting.
- 3. Quality/Reliability (costs for servicing, breakdowns, spare parts etc.)** Data on product quality/reliability/breakdowns/spare parts spend etc. is essential for providers as it allows them to plan their budget accurately for the contract duration. The costs of replacing the product also needs considering when adopting a new product into clinical practice. In addition, unreliable products pose further risks to patients as they can result in increased risk of

pressure related tissue injury if patients end up resting on a bedframe for prolonged periods of time due to a mattress failure.

- 4. Product life-expectancy** Understanding realistic life expectancy for a product enables providers to assess the longer term costs of product provision. Whilst low cost mattresses may offer a short term financial gain, if they only last half as long then they will need replacing twice as fast which will clearly have a major impact on budgets. Similarly a 'high cost' system which lasts for 10 years will have a very reasonable 'cost per day' when spreading the cost out over the product lifespan.

Conclusion

Since the provision of powered PAC support surfaces will always involve a balancing act between clinical needs, costs, quality, reliability, product safety, lifespan etc. there is no single PAC product which will meet every stakeholder need all of the time. With the overarching goal for all healthcare providers to deliver 'safe, effective harm free care' to patients it is important to look beyond short term budget constraints and financial gains and to consider all aspects of PAC mattress safety, performance and costs when putting a business case together as part of a PAC support surface tendering process. It is also essential to ensure that all stakeholders involved in the procurement process are fully informed of the wider implications relating to support surface provision.

Manufacturers must be prepared to be open with providers and to share their data on support surface safety, performance, PU incidence reduction, quality, reliability and realistic product life expectancy with the stakeholder groups when tendering. Having this information available to all PAC procurement stakeholders will enable healthcare providers to truly project and compare 'high-end/high-cost' vs. 'low-end/low-cost' PAC systems over the course of the contract and to determine the potential impact of these products on PU incidence and facility risks associated with either procurement strategy.

Only by fully understanding product cost/performance/safety/reliability/quality and life expectancy/longevity, is it possible to determine a true whole life impact and cost for any PAC product.

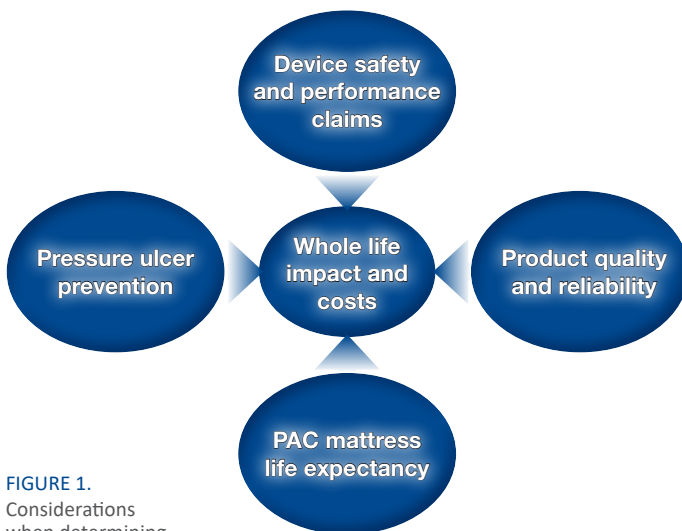


FIGURE 1. Considerations when determining whole life impact and costs for PAC mattresses

References

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