

11-11-24 Weekly Clinical Update

Based on recent surveys, the subject this week is the appropriate use of low air-loss mattresses in facilities. Let's start with the benefits because there are a lot of them. Often low air-loss mattresses are a vital tool for the prevention and management of pressure ulcers in addition to provide and enhance resident comfort.

Key benefits include:

- Pressure redistribution
- Enhanced air circulation
- Comfort and pain relief
- Reduction of skin shear and friction

In other words, according to "Wound Care Solutions", Low air-loss mattresses represent a significant advancement in the care of bedridden and immobile patients. By reducing the risk of pressure ulcers, enhancing comfort, and promoting better overall skin health, these mattresses play a vital role in improving the quality of life for nursing home residents. Investing in this technology is a step towards providing compassionate and effective care for those who need it most."

Now, on to the risks, and there are also several of those.

- Infection Control issues because of worn or damaged mattresses creating an environment conducive to bacteria & other pathogens leading to infections
- Equipment malfunction. Low air-loss mattresses rely on a system of inflatable air tubes that can malfunction. If/when those tubes fail, the mattress may not provide the necessary pressure redistribution, leading to INCREASED risk of pressure ulcers
- Maintenance and replacement. Regular maintenance and timely replacement of these mattresses are crucial. Over time, mattresses can develop visible holes, tears, and thinning, which compromise their effectiveness. Mattresses should be checked and documented daily for function and for appropriate settings based on the resident's weight. Failure to replace them can result in inadequate pressure relief and increased risk of pressure injuries.
- Cost and Accessibility. Low air-loss mattresses are often, if not always, more expensive than standard mattresses. This can be a financial burden for facilities. That being said, if the resident is receiving hospice benefits, the hospice provider will often provide the low air-loss mattress as part of the hospice services.
- Training and Education. Proper use of low air-loss mattresses requires training and education for nursing home staff. Without adequate training, staff may not use the mattresses correctly, reducing their effectiveness and potentially causing harm to patients. So if the facility is using low air-loss mattress(es), documentation is required in training records.

- Resident Comfort. While these mattresses are designed to prevent pressure ulcers, some patients may find them uncomfortable. The constant inflation and deflation of air tubes can be disruptive, leading to sleep disturbances and discomfort.
- False Sense of Security. There is a risk that the use of low air-loss mattresses may lead to a false sense of security among staff. Relying solely on these mattresses without implementing a comprehensive pressure ulcer prevention program can result in neglect of other important preventive measures.

WARNING! Entrapment and Fall Risks Medical experts and governmental entities ... have determined that the use of side rails on beds may present a life-threatening entrapment danger to the patient. However, the use of side rails may be clinically indicated for certain residents. The decision whether to use side rails should be based upon applicable laws and regulations and based on a case-by-case assessment by clinicians and/or caregivers actively involved in the resident's care, based upon each resident's individual condition and needs. Such an assessment may include, but not be limited to the patient's physique, overall condition, level of confusion or cognitive impairment (with or without medication), mobility (or lack thereof) history of falls, combativeness, attempts to get out of bed, uncontrolled body movement, and the patient's frustration when confined. In the event a decision is made to use side rails, knowledgeable and properly trained caregivers should ensure that any identified risks associated with the resident becoming entrapped in the side rails are identified and steps are taken to minimize such risks. In the event a decision is made to not use side rails, knowledgeable and properly trained caregivers should ensure that any identified risks associated with the patient falling out of bed are identified and steps are taken to minimize such risks. Use of side rails on any bed required a signed Informed Consent form. Whether or not side rails are used with a mattress product, properly trained and knowledgeable caregivers should determine whether to use pads, bolsters, alarms, high-low beds, or other positioning aids and safety devices that are available on the market to reduce the risk of entrapment or falls.

Proper Inflation: When using the low air-loss mattress, make sure the product is properly inflated, such that the resident will be immersed into the mattress. Proper inflation offers the maximum therapeutic benefit to the resident and also reduces the risk of the resident inadvertently rolling off the mattress. Over-inflation increases the likelihood that a resident will roll off a mattress replacement or overlay. For these reasons, it is important that the product be set up by knowledgeable caregivers properly trained in the use of this product.

Weight distribution varies from resident to resident and from mattress to mattress. The facility must use each manufacturer's recommendations for inflation settings based on the resident's weight, and resident's desired comfort level.