

Bed Systems to Improve Resident Care and Caregiver Satisfaction

Resident and patient beds are not just commodities; they are the foundation of care in any long-term care facility. Just think about the amount of time residents spend in their beds – up to a third of their day. The bed systems you implement at your facility can affect several areas of patient safety, including wound management and fall prevention. Furthermore, proper bed technology can lead to a reduction in occupational injuries among your caregivers. With this in mind, it is necessary to put a good deal of thought into the purchase of these furnishings that are at the core of care.

Traditionally, long-term care facilities have purchased bed frames and surfaces with the best intentions, but without enough input from the frontline caregivers who have the most insight into the features and functions needed to provide better care and easier access to patients and residents. At the outset of your bed purchasing process, establish a multi-disciplinary group – including caregivers, purchasing, and management – to ensure the beds you select for your facility will deliver optimal results. Your ultimate goal is to provide higher-quality care to residents, while providing a better work environment for your caregivers. With careful planning built into your bed frame and surface purchases, you are in a better position to accomplish those goals.

Resident Assessment

Using dependency classifications, conduct a thorough evaluation of your residents' varying ambulatory and cognitive abilities. Then use that information to determine which type of bed system will provide the safest, highest-quality care environment for each type of resident. For instance, just about every resident will require a frame capable of achieving different heights and positions. If you have fall-prone residents, you will want to look for a bed that can achieve low heights. For residents with little ambulatory ability, you may want to select beds that can achieve comfortable chair-like positions. You can then drill down into even greater detail, going beyond dependency classifications to tailor bed systems to specific residents based on individual assessments. In addition to dependency levels, you should assess a resident's risk of developing a pressure wound. By proactively placing an at-risk resident on a proper surface, you may prevent pressure wounds from occurring. The more detailed your resident assessment, the more effective your bed systems purchase and the more positive the impact your new beds will have on resident care.

Cost Issues

Naturally, facility administrators assume that high-quality, sophisticated bed systems can be a costly purchase, and therefore, may be tempted to investigate systems with fewer "bells and whistles." However, I would urge you to reconsider this position. In fact, purchasing high-quality equipment may end up saving your facility money. Think of it this way: If you buy equipment that will quickly become obsolete or that requires a good deal of upgrades in order to achieve the functionality your residents and caregivers require, replacing or retrofitting that equipment can be more costly than the initial purchase of more sophisticated bed systems. It is important to remember that there is a difference between the price of a bed system and its ultimate cost. Upfront spending may save you costs in the long run.



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Photo courtesy of Joerns Healthcare

Facilities have the option to purchase or rent bed systems. For specialty populations, like bariatric residents, it may make sense to rent because of the potential for change in those populations. A good vendor will partner with you to help you find financial solutions to your bed system needs.

Frames and Surfaces

The two major components of a bed system are the frame and the surface, and each has functions and features that offer certain benefits to the resident and caregiver. During your purchase, think about both the frame and surface to design a system with the most benefits to your stakeholders. Surfaces, such as pressure-relief mattresses, will likely need to be replaced more often than frames, so when purchasing new surfaces, be sure they are compatible with the frames already in place in your facility. Of course, you need not purchase frames and surfaces simul-

taneously, but it makes sense to do so if you are outfitting a new facility.

Height Adjustability

In terms of the frame, first decide if you want an electronically height-adjustable frame. Electronic frames can aid caregivers in easily accomplishing a variety of height and resident positioning adjustments. In today's long-term care facilities, manually adjusted frames are becoming obsolete, and electronic beds are becoming more and more affordable and can be manually adjusted in the event of a power outage. Because they require less physical exertion on the part of the caregiver, electronic frames can improve working conditions for your frontline staff and prevent worker injury.

Range of Motion

Your bed frame should have a relatively wide range of motion. In its lowest position, it should be 7 to 9 inches from the floor to minimize the risks associated with resident falls from bed. On the other hand, a higher bed height can aid staff in performing care activities and assisting residents with bed ingress and egress. With this in mind, look for a frame that can achieve a height of 30 inches – a good working height for caregivers.

Resident Positioning

Particularly for residents that spend a majority of their time in bed, you need a frame that can achieve a variety of postures and positions. Frames that allow adjustment of both the bed's head and foot are solid investments. In addition, chair-like positions can be beneficial to residents. Ultimately, you should select a frame that can position residents in ways that facilitate care activities and allow caregivers access to various parts of the resident's lower and upper body. Some long-term care bed frames can also achieve the Trendelenburg position, in which the resident's head is lower than the pelvis. When in this position, residents can be more easily repositioned in bed. Having a bed frame capable of achieving the Trendelenburg position will also expand the functionality of the frame, making it more suitable to a wider range of resident and patient populations.

Control Panels

The bed frame's electronic control panel

CONVENIENCE FOR YOUR STAFF. SAFETY FOR YOUR RESIDENTS.



7"– 26" Range



All New Features!

SOFT TOUCH RAILS

Soft Touch Vinyl coated steel skeleton side rails. Our new side rails are made softer to the touch and safer for the residents. The vinyl coating protects the residents from accidental bruises and the steel skeleton provides a rigid hand hold for ingress/egress and repositioning. Entrapment Compliant with properly sized mattress.

FOOTBOARD CONTROLS

The all new footboard control is mounted flush to the surface of the footboard for protection. It is available with or without a lockout feature and overrides the resident handset. The control panel lights make it readily apparent which features are activated.

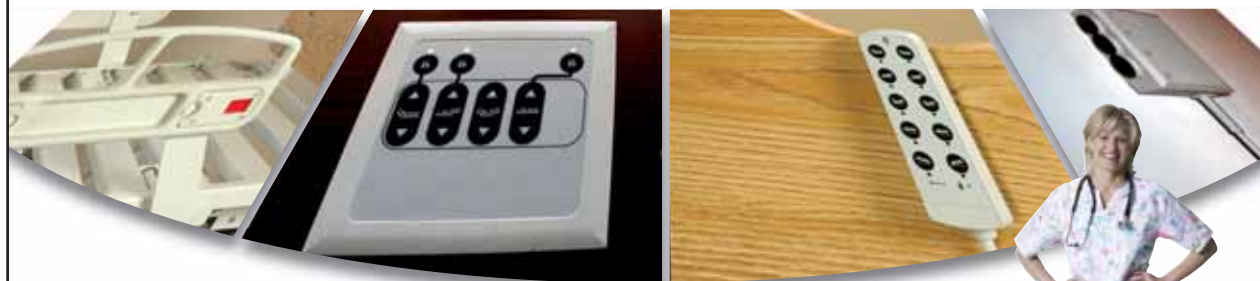
LOCKOUT HANDSET

More durable, more ergonomic, easier to handle, and easier to keep in place. New convenient magnetic lockout with a fail safe feature that shuts off the high/low motors or T/RT after 45 seconds of non-use. Handset may be plugged in on either side of the bed for added convenience.

BATTERY BACKUP

The new battery backup is a unit consisting of three off-the-shelf 9 volt batteries. It may be easily plugged into the side of the bed or into the control box. The battery pack is small and very portable allowing for use in any room or situation.

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BED SYSTEMS



Electronic frames can aid caregivers in easily accomplishing a variety of height and resident positioning adjustments.

Photo courtesy of NOA Medical Industries

should be simple to use and allow caregivers to easily achieve certain positions. Some control panels allow caregivers to program customized, resident-specific positions, thereby enabling them to easily and quickly achieve a particular resident's preferred position. That is a very desirable feature. Controls might be on a pendant or conveniently located in areas such as the foot panel of the bed frame. Control functions should be in high-contrast, easy-to-read graphics.

Side Rails and Resident Assists

Because bed frame side rails are now considered to be somewhat of a restraint, many bed manufacturers are reconstructing them to serve as an assistive device for residents to use during bed egress. One of the goals of any long-term care facility is to encourage resident activity, and a resident-assist device can encourage residents to get out of bed, as well as aid caregivers in helping residents out of bed. These devices can also enable residents to more easily reposition themselves in bed by giving them something firm to grip. Assists should be easy to grip and should detach from the frame as necessary. It is also desirable to have assist devices capable of achieving different positions in relation to the bed frame. For instance, you can choose an assist device that can pivot at the attachment point, allowing it to achieve more than one position to better suit the resident's needs. In addition, the ability to mount the device along different sections of the bed frame can provide even greater flexibility.

Bed Surface Technologies

Bed surfaces are available in a variety of materials, from basic foam mattresses to those with pressure-reducing air bladders. Foam surfaces can be constructed in different densities to reduce pressure and address the needs of specific patient populations. For instance, a mattress with less dense foam at the foot is well suited for residents with leg conditions. There are approximately six to seven different types of foam available for bed surfaces, each with its own features. When investigating foam mattresses, consider whether you need a single-ply or multi-ply therapeutic surface. For pressure relief, you will want to consider the surface cut of the foam. With a proper surface cut, you can achieve pressure-reducing characteristics. For greater patient and resident comfort, you can invest in memory foams, which will envelop the body. For patients with changing clinical conditions in varying parts of their bodies, foam mattresses that allow for additional inserts are a good option.

Specialized surfaces are available for residents that spend a good deal of time in

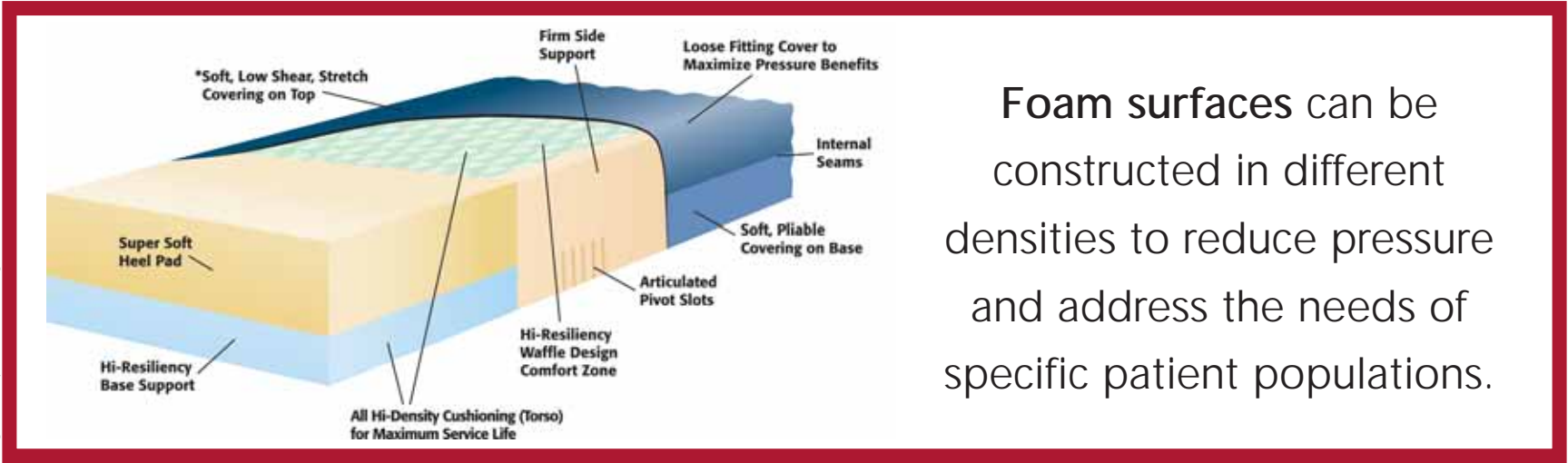


Air mattresses offer some degree of pressure relief, as well as aid in resident repositioning.

Photo courtesy of Gaymar Industries

BED SYSTEMS

Image courtesy of Chestnut Ridge Foam



Foam surfaces can be constructed in different densities to reduce pressure and address the needs of specific patient populations.

bed, and relatively simple ideas can be applied to air surfaces to improve resident care. For example, air mattresses offer some degree of pressure relief, as well as aid in resident repositioning. Some air mattresses can be programmed to automatically increase and decrease the hardness of certain areas of the surface to protect the residents from pressure sores. For residents at risk for pressure sores, consider investing in advanced air mattress technologies that can alleviate constant pressure on any part of the body. Air surfaces can also decrease the amount of physical effort required of caregivers during resident repositioning. For instance, caregivers can inflate the mattress to its maximum capacity, creating a hard surface on which to reposition the resident. Once the resident is properly positioned, the caregiver can then deflate the mattress to create the optimum surface for that resident. In addition, air mattresses have sectioned bladders that allow you to design a surface that is higher along its edges. This design can prevent falls from bed, without creating entrapment issues.

With over 35 years' experience as an occupational safety and health professional, Guy Fragala, PhD, PE, CSP, holds a BS in engineering from the University of New Hampshire, and an MS in engineering, an MEd, and a PhD in engineering with a specialization in ergonomics from the University of Massachusetts. He is currently the senior advisor for ergonomics at the Patient Safety Center of Inquiry in Tampa, Florida, and the champion for the "Creating the Safer Environment" program for Joerns Healthcare. He recently served as director of compliance programs with Environmental Health and Engineering in Newton, Massachusetts, and is the former director of environmental health and safety for the University of Massachusetts Medical Center. Fragala has served as an advisor to OSHA regarding the development of the Proposed Ergonomics Standard, an advisor to the Joint Commission, and an injury-prevention and ergonomics consultant to many health care organizations, including the Department of Veteran Affairs. He has served on the faculty of a number of academic institutions, including Harvard University, the University of Wisconsin, the University of Southern California, and Worcester Polytechnic Institute.

What to Look for in Air Mattresses:

- A specialized quilted therapy pad to reduce friction, while providing moisture relief without drying the patient's skin
- "Autofirm" mode provides maximum air inflation designed to assist both the patient and caregiver during patient transfer and treatment
- Turning-therapy cells to reduce pressure on various parts of the body automatically
- Multiple turn-cycle times and therapy settings to maximize healing and lateral rotation
- A quick deflation feature
- A control panel lockout feature to avoid unwanted or accidental adjustments

Mitigating Risk

Your bed system purchase should be driven by your need to mitigate risk and provide a safer environment for your residents and caregivers. With the proper bed technology in place, you can improve safety at any facility. It is also important to effectively train your caregivers to make the best use of the bed technology provided to them. After all, it will do no good to implement systems that your caregivers use improperly. Training must be comprehensive and ongoing. Caregiver training should include hands-on sessions in which the staff will get an opportunity to work with new pieces of equipment before it is integrated into patient and resident care. When selecting a vendor look for someone who will help and provide support with the necessary training required. With a well-thought-out purchase and adequate training of your care staff, your bed systems can become a cornerstone of the quality care you provide to residents in your facility. ■

WHERE TO FIND Bed Frames and Surfaces:

Vendor	Website	Reader Service Number
AliiMed, Inc.	www.alimed.com	76
Aria Medical	www.ariamedical.com	11
Blue Chip Medical Products	www.bluechipmedical.com	12
Chestnut Ridge Foam	www.chestnutridgefoam.com	16
Direct Supply	www.directsupply.com	17
Encompass	www.encompassgroup.net	18
Gaymar Industries	www.gaymar.com	19
Gendron Inc.	www.gendroninc.com	37
Graham-Field Health Products	www.grahamfield.com	38
Hertz Supply	www.hertzsupply.com	40
Hill-Rom Company	www.hill-rom.com	41
Innovative Products Unlimited	www.ipu.com	42
Invacare Continuing Care Group	www.invacare-ccg.com	43
Joerns Healthcare	www.joerns.com	44
MC Healthcare Products Inc.	www.mchealthcare.com	45
MedaStat USA	www.medastat.com	46
Med-Mizer, Inc.	www.med-mizer.com	47
NOA Medical Industries	www.noamedical.com	48
RecoverCare LLC	www.recovercare.com	49
SPANAmerica	www.spanamerica.com	50
Tempur-Pedic North America Inc.	www.tempurmed.com	51