Musculoskeletal Disorders (MSDs) continue to cost employers billions of dollars in workers compensation every year.

**USA**

It is estimated that this expense reaches $15-$20 billion annually, with the Bureau of Labor Statistics show that 626,000 lost work days are reported each year accounting for $1 of every $3 being spent on workers compensation claims. In healthcare, 12% of nurses leave the profession annually as the result of a MSD, with slips, trips, falls and back injuries accounting for the most common type of employee injury. The average MSD claim costs are $11,771 with the average cost of a back injury being $37,000.

Organizations, especially OSHA and The Joint Commission have taken great strides in establishing regulations and protocol to make the healthcare work environment “ergonomically safe.” Many US states are now passing “No-Lift” Laws to protect nurses from injuries resulting from unsafe patient handling and lifting. New laws require healthcare facilities to establish safe patient handling committees, programs, practices and zero-lift policies. Additionally, hospitals are implementing products, policies and procedures to reduce the number of slips, trips and falls that occur each year. Safe Patient Handling committees have been formed and ergonomic specialists have been put on staff. The SANDEL line of Ergonomic Workplace Safety product offerings are front line leaders in helping healthcare facilities meet their ergonomic safety goals.

**Europe**

Work-related musculoskeletal disorders are a cause of concern not only because of the health effects on individual workers, but also because of the economic impact on businesses. The true extent of MSDs costs within the workplace across Member States is difficult to assess and compare. This is due to the different organization of insurance systems, the lack of standardized assessment criteria and the fact that little is known of the validity of reported data. Certain studies have estimated the cost of work-related upper-limb musculoskeletal disorders (WRULD) at between 0.5% and 2% of Gross National Product (GNP).

More recent figures, for example from Austria, Germany or France, have demonstrated an increasing impact of musculoskeletal disorders on costs. In France, for example, in 2006, MSDs have led to seven million workdays lost and about 710 million EUR of cost.

**Asia Pacific**

Like other global regions, there is no standard method of tracking or reporting of manual handling/ergonomic related injuries. From 2009-2010, 17,430 serious workers’ claims were made by the healthcare sector. Of this, 52% were muscular-stress related due to manual handling or repetitive movement. While 18% of claims were for slips, trips and falls. It is estimated that these injuries cost the Australian healthcare industry around US$3.2 million annually.

In Singapore, the Ministry of Manpower (2010/11) reported 295 injuries reported per 100,000 employed persons in the healthcare industry. The International Journal of Occupational Safety and Ergonomics (JOSE) suggested that Korean (93.6%), Australian (92.6%) and Japan (78.4%) incur a very high MSD burden when compared internationally. There are basically 3 primary problems that cause musculoskeletal injuries and Ansell has developed products to help in all three areas: moving patients; slips, trips and falls; and fatigue.
The SANDEL Z-Slider Patient Transfer Sheet was developed after receiving a submission centered on reducing the friction when a patient is laterally transferred or being repositioned or boosted in bed. Using a trash bag between the draw sheet and the bed, the submitter found that this dramatically reduced the friction for an easy transfer, and since there was no lifting but only lateral movement the chances of injuring ones back were greatly reduced. The SANDEL Z-Slider then took on the repositioning or boosting patients in bed.

The effectiveness of the SANDEL Z-Slider in this application proved to be just as effective in helping reduce the possible musculoskeletal injury. Availability outside of the Operating Room dramatically increased the call points for the product. Departments where the need for the SANDEL Z-Slider is apparent are: Operating Room, Labor and Delivery, Emergency Department, every Unit on the floors, Transportation Department, and Clinical Resource Manager.

Obviously, the department heads in these areas are key contacts. Risk Managers, Safety Coordinators, Human Resource Managers, and Safe Patient Handling Coordinators (note these titles may change pending region) are also key contacts for the Z-Slider. Each of these individuals is very aware of the back injury rate in their facility and what those injuries are costing them each day.

Key features and benefits of the SANDEL Z-Slider are:

- Open-ended tube that allows the SANDEL Z-Slider to slide on itself, similar to a conveyor belt movement
- No weight limitation, since there is no lifting involved any size patient can be moved with the SANDEL Z-Slider
- Reduces the chance for cross contamination, since the SANDEL Z-Slider is used on one patient and one patient only, then disposed of, cross contamination possibilities are greatly reduced
- Economical, the SANDEL Z-Slider can be used multiple times on the same patient so the cost is pennies per use
- Instructions printed on each individual SANDEL Z-Slider product, you never need to question how the product is to be used
- Multiple delivery options, different size packaging for different areas of the hospital
- Wall Mounting Brackets making the product readily available to the end user
Since 2002, the awareness of the musculoskeletal problem has dramatically increased and a number of competitors have appeared, yet the number one competitor in the Operating Room remains the reusable roller boards.

Reusable Roller Boards in the Operating Room:
- WyEast with the Pink Slip (disposable)
- Sloan Medical with EZGlide (disposable)
- Arjo with Maxi Slide Sheet (reusable)
- Medline (disposable)
- FlexiSlide, single-use lateral transfer slide sheet (disposable)
- Marlin Medical; air-transfer system mattress (reusable)

Haines Medical Australia – Haines Medical Australia distribute a range of slide sheets (Slippery Sally), tubes (Sally Tubes), transfer boards (Sally Boards) as well as air-assisted lateral transfer devices (AirPal).
Step stools can be found in every Hospital and Surgery Center you visit. There are a number of uses for a step stool, but the SANDEL product offering was brought out with the Operating Room in mind. In the O.R., the purpose of step stools is to make everyone working around that O.R. table the same height. If you have a 6'3" surgeon, they will put the patient at a height they can work from. If the Scrub Tech is 5'8" the step stool can bring them up to the surgeon's height. Step stools, also known as steps or risers, have traditionally been made of metal. They are heavy, difficult to clean and a real ergonomic risk when they have to be moved. A light weight step stool could be the solution to the step stool problems people have been living with forever.

The reusable SANDEL Ergo-Step Stool has the following features and benefits:

- Light Weight, each weighs approximately 7 lbs. (~3.2 kg)
- Stackable, distinctive tops and bottoms allow for stable stack ability
- Weight capacity of 500 lbs (~276 kg)
- Interlocking hooks that allow for a stable platform to be constructed
- Cushioned top, gives additional comfort and support during the case
- Economical, acquisition cost is a fraction of metal step stools
- Cart Washer friendly – can be washed through a cart washing process with water and air-dried; temperature cannot exceed 140 degrees F (60 C)
- A 4-wheeled cart is also available; the cart holds 6 Step Stools for ease of moving steps to various locations

**Competition**

The primary competitors for step stools are the metal step stools and they are made available through capital equipment companies. There are no light weight/plastic competitors to the SANDEL Ergo-Step Stool. In Asia Pacific, made-to-order or store-bought wooden stools can be found.
SANDEL Anti-Fatigue Mats

One of the hazards of working in the operating room is to have to stand on one's feet, on hard tile floors, for hours at a time. The stress and strain that occurs to a person's lower back, knees, ankles and feet is incredible. A simple cushioned mat or an Anti-Fatigue Mat will greatly reduce the possibility of acute and chronic back, leg, and foot pain occurring from standing during long procedures.

Ansell offers 2 types of reusable Anti Fatigue Mats. These mats are currently used in NA but have not become popular as yet in EMEA.

SANDEL ErgoPlus Anti-Fatigue Mat

To meet the ever growing market demand for anti-fatigue mats Ansell has available a family of reusable SANDEL ErgoPlus Anti-Fatigue Mats. This top quality line of mats provides extreme comfort to the user and is available in 3 distinct sizes to meet the O.R. as well as other hospital departments' needs.

Features and benefits of SANDEL ErgoPlus Anti-Fatigue Mats:

• Premium padding for additional comfort
• Antimicrobial to help eliminate cross contamination issues- claim depends on regulatory requirements per country; please check with your marketing team
• Fluid resistant
• Stain resistant
• Can be cleaned using existing disinfectants
• Beveled edges to help eliminate tripping
• Various sizes available: 13” x 17” (33 cm x 43 cm), 20” x 32” (50.8 cm x 81.3 cm), 20” x 40” (50.8 cm x 122 cm)

SANDEL Solo Ergo-Stand EZ™ Anti-Fatigue Mat

This 13” x 17” (33 cm x 43 cm) mat is made for one individual to stand on. Since movement is kept at a minimum during a surgical procedure, the SANDEL Solo Mat provides that individual comfort space for any member of the surgical team that requires it. The Solo Mat is beveled on all sides to prevent tripping, can be cleaned with the existing disinfectant being used today in the Operating Room. A disposable cover for the Solo Mat is also available. The cover protects the Solo Mat during use and is disposed of once the procedure is completed.

Competition

Most competitors for this product are in America. In Europe some Industrial anti-fatigue mats are entering the hospital.

• David Scott/Blue Diamond has a complete line of various anti fatigue mats for the medical market
• Flagship Surgical-a complete line of O.R. mats that contain an anti-microbial
• It should be noted that there are a number of industrial mats that are used in the O.R. in NA and EMEA simply because of accounts not being aware of the SANDEL line.