



Laundry Cart And Bin Modifications

Background

OHSAH collaborated with staff and management of Pleasant View Care Home to modify laundry carts and bins in order to reduce the risk of musculoskeletal injury (MSI) to laundry staff. Laundry staff perceived the existing carts and bins as large, heavy, and hard to maneuver, and several of the laundry staff had experienced discomfort which they attributed to cart and bin usage.

Methods

OHSAH performed an ergonomic assessment of the tasks performed by the laundry staff and the laundry area including detailed measurements of current laundry carts and bins. Based on this data, modifications were made to the laundry carts and bins. Injury records were also reviewed. Laundry staff were interviewed six months after modifications were made to the existing equipment.

Results

The assessment revealed awkward postures, repetitive motions, and forceful exertions in many tasks. The primary areas of concern were the shoulders and lower back. Six different types of carts and one type of bin were being used by staff to pick up and distribute laundry

throughout the facility. Issues included difficulty pushing and maneuvering the carts and bins, as well as inappropriate cart and bin handle heights and cart shelf height. The size and configuration of the original castors made pushing and maneuvering the carts and bins difficult.

Based on information from the assessment, human body measurements, and feedback from staff, new design specifications were generated. The modifications focused on reducing awkward postures, pushing forces, difficult maneuvers, and poor visibility.

Cart modifications included:

- Raising the bottom shelf and lowering the top shelf to heights that were more suitable for the staff
- Installing handles to reduce awkward postures when pushing carts from behind or from the side
- Removing the metal bar running along the bottom of carts to allow laundry staff to stand closer to the cart
- Increasing the size of wheels to make pushing and maneuvering easier



One of the original carts



One of the modified carts

Bin modifications included:

- Cutting out one side of each laundry bin to allow easy access when retrieving laundry
- New castors with directional locking at the front and full swivelling at the rear; directional locking helps keep bins moving straight and reduces the effort required to control them
- Increasing wheel size to make pushing and maneuvering easier
- Adding a rear handle to make pushing and maneuvering easier

Six months after making modifications to the carts and bins at Pleasant View Care Home, staff interviews were conducted to evaluate the effectiveness of the carts and bins. Overall, staff were happy with the changes and felt that the modifications to the carts and bins improved maneuverability, visibility, and ability to push.

Conclusion

This project demonstrated that low cost modifications to existing laundry carts and bins can help reduce ergonomic risk factors. Prior to purchasing new carts or bins, facilities should consider if simple modifications can be made to their existing carts and bins. For more information on the specific modifications that were made to these carts and bins, please contact OHSAH.



Original bin



Modified bin

Cart and Bin Design Tips

Carts and bins are important pieces of equipment used in healthcare to transport supplies and equipment. Staff often find themselves pushing or pulling carts and bins that are heavy or awkward to use. Unfortunately, carts and bins are not always designed the way we would like, but with some simple changes, they can be made easier to use.

“I am happy with the way the alterations turned out on the laundry carts and bins. The improvements make the task easier and are sure to reduce injuries in the long run.”

– Joyce Jones, laundry worker

Handles: All carts and bins should have handles. Make sure the carts and bins you are using allow you to comfortably push with your elbows bent at approximately 90° and your back straight. The handle should ideally be between waist and chest height.

Castors and Wheels: Castors and wheels need to be maintained and cleaned on a regular basis. Dirt and grit can get into castors, making them difficult to push. If castors are really worn out, consider replacing them with new ones—this can make a world of difference!

Shelf Height: Shelves should be between knee and shoulder height. Place the most frequently used and heaviest items at waist height.