Lifting, Pushing and Pulling: Safe Limits for Healthcare Workers

Workers' compensation data show that **overexertion is the number one cause of injuries for home care workers.** Given this and the fact that we have an aging female workforce providing most of the care, the following question is often posed, "How much force can a home care worker use without placing themselves at risk for injury?" Here are some guidelines:

General Lifting

Recent research using the revised NIOSH lift equation has shown that **caregivers can safely lift forces up to 35 pounds** under ideal conditions (no sudden movements, no twisting, etc.)[1] This applies to lifting a patient's limbs as well as lifting patients themselves.

Push/Pull

The problem with the above guideline is that **most client-handling tasks involve pushing and pulling, not lifting**. In a stand/pivot transfer, you pull on the gait belt to move patients from sitting to standing. When you move your clients back to the head of their bed, you pull them rather than lift them. You push or pull on their compression stockings, etc. Recent research shows that **you can safely push up to 20% of your body weight and pull up to 30% of your body weight**.[2] That means a 140-pound female can safely push up to 28 pounds and pull up to 42 pounds.

Gauging Weight in the Real World

You don't have to measure everything in your work environment to know whether you're within the recommended push, pull and lift limits. Research has demonstrated that using a force gauge, a group of individuals can accurately (within 5%) reproduce the average grip forces experienced during tool use and lift/carry tasks.[3] Similar findings have been shown with laborers who were able to accurately associate median weights to word descriptors, e.g., light = 11 pounds, moderate = 27.5 pounds and heavy = 46.2 pounds.[4] **In other words, people are fairly good at judging weight and force values.**

If this is the case, we could expect that most individuals would be able to sense the 35-pound lift limit as feeling like a medium/heavy lift. If the weight feels like more than that or "heavy," lift equipment should be used for the activity. When training new employees, we recommend having employees lift a box weighing 35 pounds. The same can be done for push/pull forces with the use of a fish scale. Once employees feel what the push/pull limit is, they should be able to have a better indication of when a task is above safe limits.

Numbers Aren't Everything

Weights and forces aren't the only things that dictate the use of lift equipment and repositioning devices over manual handling. If you're going to manually transfer clients between their bed, wheelchair, toilet, couch or any other surface, they must also be able to:

- Follow directions
- Sit unsupported to demonstrate good balance
- Show leg and trunk strength by demonstrating the ability to extend both knees and perform a bridging maneuver
- Take a step once standing

If your client can't do the above during all parts of the day or is combative, then mechanical lift equipment and friction reducing devices for pushing and pulling should be used. You can find more specifics in our caregiver video series located on the dedicated home care web page at www.silverstonegroup.com/risk-management/industry-specialization/in-home-care/loss-control-resources/.

References

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