Safe Patient Handling - Its Time!

Diane Matthew Brown, CET
Nurses Congress 2015
San Diego, CA
Disclaimer

• This presentation is intended strictly for educational purposes for the benefit of AFSCME members. It is not intended to provide medical advice or diagnosis. All images were found on public websites.
Discussion Question

How many here today have been injured or know someone who has been injured due to patient lifting or transferring?
### The Problem Facing Nurses and Direct Care Providers

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>38%</td>
<td>Suffer patient handling injuries</td>
</tr>
<tr>
<td>48%</td>
<td>Have chronic pain from patient handling injuries</td>
</tr>
<tr>
<td>70%</td>
<td>70% of injuries are lumbar spine</td>
</tr>
<tr>
<td>40%</td>
<td>#1 problem is physical demands of job</td>
</tr>
<tr>
<td>47%</td>
<td>Considered leaving because of physical demands</td>
</tr>
<tr>
<td>12%</td>
<td>Leave because of back injuries</td>
</tr>
</tbody>
</table>
Musculoskeletal Injury Rates For Selected Occupations In 2013

Nonfatal injuries and illnesses resulting in lost work days, per 10,000 full-time workers

- Orderlies
- Firefighters
- Nursing assistants
- Police and sheriff's patrol officers
- Correctional officers and jailers
- Construction laborers
- Personal care aides
- Registered nurses

Source: Bureau of Labor Statistics

Credit: NPR
Not A New Problem?

• *Nursing: Its Principles and Practice*, a textbook published in 1898, "that a nurse has injured her back ... in moving a patient."

• BLS surveys first revealed the high rate of injuries among nursing staff in 2006.

A nurse and an orderly move a patient from his bed to a bathtub with the aid of an "electric lift" in 1998.

Courtesy of the National Library of Medicine
Direct Care Is Physically Demanding

- A healthcare worker manually lifts 1.8 **tons** per 8 hour shifts-equal to a sedan
- *In one year, a healthcare worker can lift the equivalent of an airplane that is 50% loaded*
Manually Lifting Hurts Healthcare workers

- Nurses spent 20-30% of their time bent forward or with their trunk twisted
In this close-up screenshot from a simulation video, you can see the exact moment NPR correspondent Daniel Zwerdling endured dangerous levels of stress on his spine while re-creating the way nurses push their patients in a lift chair. The blue arrows show the high magnitude and distribution of forces from his muscles, while the red indicates the high level of forces on his disks.

"The bottom line is, there's no safe way to lift a patient manually," Marras says. "There's no safe way to do it with body mechanics."

Courtesy of the Spine Research Institute at The Ohio State University
SPH is Cost Effective

Costs of an Injury

• 2 back injury claims in Western NY cost over $1.1 million
• 1 back injury to a Tampa General ICU nurse cost over $1 million
• Average back injury cost $19,000
• Serious injuries requiring surgeries average $85,000
• Indirect costs: 4 -10 times higher than direct costs

Cost of Equipment

• Full mechanical lifts: $4,000 per 8 patients of need
• Sit to stand lifts: $3,100 per patients of need
• Non-friction sheets and other re-positioning devices: $38 -$3,000.00
No-Lift saves workers’ compensation premiums ...& backs

NIOSH longitudinal study of nursing home back strain injuries, before & after a safe mechanical lifting program, involving 6 facilities, 6 years and 2,646 nursing staff

51% Reduction in Workers' Compensation costs

Before

After

100
49
More Support for SPH

• Massachusetts Task Force Findings:
  – The Burden of Work-Related MSDs Associated with Patient Handling Is Significant
  – Safe Patient Handling Interventions Are Effective
  – States and Professional Organizations Have SPH Policy Initiatives

• Safe Patient Handling Laws
  • California
  • Illinois
  • Maryland
  • Minnesota
  • Missouri
  • New Jersey
  • New York
  • Rhode Island
  • Texas
  • Washington
The Truth About Safe Lifting Policies

• The purpose of the policy is to protect - not to punish
• Such policies may have some up front costs, but the money can be recouped in as little as 2 years*
• Reports have shown that such policies, as part of a comprehensive program, can decrease injury to nursing staff and also reduces the rate of patient injury due to falls, skin tears and bruising
Policies Alone Are Not Enough!

• A policy by itself will not control injuries

• Proper infrastructure MUST be in place:
  – Thorough patient assessment
    • Use of dependency codes
    • The patient needs to assist whenever possible
  – Sufficient amount of equipment, readily available, inspected and maintained
  – Adequate staffing, trained in applying safe patient handling techniques and use of equipment
  – Sufficient working space
  – Administration and supervisor commitment
# Controls

## Solutions According to Dependency Level

<table>
<thead>
<tr>
<th>Dependency Level</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Totally dependent patient</td>
<td>Full sling mechanical lift device</td>
</tr>
<tr>
<td>Extensive assistance level</td>
<td>Full sling or stand assist lift</td>
</tr>
<tr>
<td>Lifts from floor (dependent)</td>
<td>Full sling mechanical lift; if manual, specify # of employees needed</td>
</tr>
<tr>
<td>Lifts from floor (patient assists)</td>
<td>Transfer belt or gait belt</td>
</tr>
<tr>
<td>Limited patient assistance</td>
<td>Stand/assist lift; friction-reducing device</td>
</tr>
</tbody>
</table>
Interventions: Mechanical lifts

- Best for “total dependent” or “extensive dependent” patients

Reliant Plus 450 Hydraulic w/Low Base by Invacare (Model No. RHL450-1)

By Integracr (Own work) [CC BY-SA 3.0 (http://creativecommons.org/licenses/by-sa/3.0) or GFDL (http://www.gnu.org/copyleft/fdl.html)], via Wikimedia Commons
Engineered Beds
Retractable footrest allows patient to assist
Bed to Wheelchair
Joleen Beiley and Stephen Gafford lift patient David Eurey using a floating mattress called a HoverMatt, which uses air streams that lift the mattress, making it easy for nursing employees to move a patient from a bed to a gurney. Annie Tritt for NPR
Interventions-Friction: Reducing Sheets for Lateral Transfers
Intervention for Lateral Transfer - Hand Crank Device
Turn Assist Rotational Therapy
3. Bracing the patient’s feet, so he/she can assist in the move
Robear (left) was developed by the Riken-SRK Collaboration Center for Human-Interactive Robot Research in Nagoya, Japan. The 'Robear' has a cub-like face but packs enough strength to transfer patients from a wheelchair (pictured) or a floor-level bed to a bath, for example. It weighs 309lb (140kg) with extending legs that stop the 'bear' from falling over and it moves slowly and smoothly thanks to advance actuators in its mechanical arms.
Summary

• A safe patient handling policy is one part of a comprehensive program to reduce both HCW and patient injury
• An older, heavier population, along with an aging workforce make such changes a necessity
• Other countries have had success; some states in the US are taking there own initiatives
• Such policies are not too costly to implement – costs can be recouped by decreased lost work days, lower workers comp, better retention of staff, and less patient injuries
• Employee Involvement and Management Commitment are crucial to the success of any safe patient handling policy
Resources

• NPR Series:
  – http://www.npr.org/series/385540559/injured-nurses

• VA Safe Patient Handling:

• Massachusetts Task Force Report:

• NY No Lift Task Force:
  – http://www.zeroliftforny.org/

• NY State DOL video series:
  – http://labor.ny.gov/workerprotection/safetyhealth/safe-patient-handling.shtm