Ergonomic Safety

Take care of yourself, so you can care for others
What is Ergonomics?

“an applied science concerned with designing and arranging things people use so that the people and things interact most efficiently and safely---called also biotechnology, human engineering, human factors”

(Mirriam-Webster, 2011)
Risk factors for injury

- **Force** - the amount of physical exertion required to perform a task
- **Repetition** - performing the same motion, or series of motions, frequently or continuously
- **Awkward positions** - positions that put unnecessary stress on parts of the body

*(Occupational Safety & Health Administrations [OSHA], 2009)*
Most common causes of injuries for nurses

- Overexertion
- Cumulative trauma disorder
- Poor posture
- Improper technique
- Overweight
- Out of shape
- Advanced age

(Premier, 2011)
Muscloskeletal Disorders (MSD)

MSDs’ are the most common type of injury sustained by nurses and ancillary staff and include:

- Low back pain
- Sciatica
- Rotator cuff injuries
- Epicondylitis
- Carpal Tunnel Syndrome

(OSHA, 2009)
Incidence of MSD

- In 2009; nurses aides, orderlies, and attendants ranked #1 in the U.S. for these types of injuries
- Registered Nurses ranked 6th
- In 2009; over 46,000 reports of injuries were made
- More then 1/3 of back injuries were a direct result of patient handling

(American Nurses Association [ANA], 2011)
Cost of MSD in Healthcare

- In 2008, the estimated cost was $7.4 billion in direct and indirect costs for worker compensation claims, medical bills, and staff replacements.
- Injured Nurses make up 1/4 of all claims
- Injured Nurses make up 1/3 of total compensation costs

(ANA, 2011)
High risk activities

- Repositioning in bed
- Lateral transfers
- Bed to chair
- Floor to bed
- Reaching
- Patient transport
- Performing tasks alone
- Bathing

(Nelson & Baptiste, 2004)
Types of Assist Devices

- Draw sheets
- Slide boards
- Gait belts
- Shower-toilet chairs
- Hoyer lifts
- “Slippery sheet” with handles
- Stand assist devices
- Adjustable height beds/gurnies

(OSHA, 1997)
Barriers to assist devices

- Patient aversion
- Time constraints
- Unstable equipment
- Poor maintenance of equipment/cleaning
- Weight limitations
- Inadequate space/storage
- Lack of training

(Nelson & Baptiste, 2004)
Techniques for manual patient handling

If you must manually move a patient:

- Adjust height of bed to waist height
- Assure bed/gurney is locked
- Do not twist, pivot your whole body
- Bend your legs, not your back
- Neutral spine
- Know your own limitations
- Get help

(OSHA, 1997)
Manual patient handling

- Most techniques are not evidenced based
- Can be harmful to nurse and patient
- Training in body mechanics and body mechanics have been shown to be ineffective at reducing injury rates

(Nelson & Baptiste, 2004)
Important body mechanics

- Keep feet flat on the floor
- Wear slip resistant shoes
- Lower your body to get close to an object
- Bend from hips and knees, not back
- Get help if the person or object is too heavy
- Do not reach above head, use a stool or ladder for high objects

(Nursing fundamentals, 2007)
Alternative solutions

- Lift teams
- Peer leaders with ergonomic specific training that work as educators/coaches
- Assessment tools for utilizing proper equipment
- Implementing algorithms based on the assessment
- Education and training on equipment
- No-lift policies

(Nelson & Baptiste, 2004)
No-lift policies

- An administrative control
- Assist devices must be used when indicated
- Does not mean nurses will never move/assist a patient
- Patients should be encouraged to assist in their own transfers and repositioning
- Manual lifting may only be continued if it does not involve lifting most or all of a patient's weight.

(Nelson & Baptiste, 2004)
Important Considerations

- Manual lifting of patients should be minimized or eliminated
- Ask for help
- Training and evaluation for competence
- Make suggestions to management for areas of improvement
- Evaluate/inspect equipment prior to use
- ALWAYS report injuries

(OSHA, 2009)
References


References Continued

