

THERAPISTS, REHABILITATION, and SAFE PATIENT HANDLING

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PROBLEM

- **MUSCULOSKELETAL DISORDERS ARE A MAJOR SOURCE OF WORK-RELATED DISABILITY AMONG HEALTHCARE WORKERS**
- **Countries**
 - US, Canada, UK, Australia, China, Holland, Sweden
- **Settings**
 - Extended care, acute care, home care, etc.
- **Until recently, nursing profession most studied**

Why Focus on Patient Handling?

- **Tasks most associated w/ musculoskeletal disorders**
- **Dose-response relationship**
- **Issues unique to health care environment**



EPIDEMIOLOGY & PATIENT HANDLING

- **Exposure to handling (lifting)**
 - Jensen, RC. Back injuries to nursing personnel related to exposure. *Applied Occupational and Environmental Hygiene*, 5(1):38-45, 1990.
 - Pheasant & Stubbs. Back pain in nurses: epidemiology and risk assessment. *Applied Ergonomics*, 23(4):226-232, 1992.



EPIDEMIOLOGY & PATIENT HANDLING

- **Exposure to awkward postures**
 - Ljungberg, Kilbom & Hagg. Occupational lifting by nursing aides and warehouse workers. *Ergonomics*, 32(1):59-78, 1989.
 - Estryng-Behar, et al. Strenuous working conditions and musculoskeletal disorders among female hospital workers. *International Archives of Occupational and Environmental Health*, 62(1):47-57, 1990.

RECOMMENDATIONS

- **Manual handling (lifting) be minimized & eliminated where feasible**
- **Safe patient handling & movement program be implemented**
 - **Key elements**
 - Equipment
 - Policies, procedures
 - Training
 - Management commitment & employee involvement
 - Medical case management

***Code of Practice for Handling Patients:
Royal College of Nursing 1996***

“The aim is to eliminate hazardous manual lifting in all but exceptional or life-threatening situations. **Patients should be encouraged to assist in their own transfers**, and handling aids must be used whenever they can reduce the risk of injury. Handling patients manually may continue only if it does not involve lifting most or all of the patient’s weight...Staff should assess the capabilities of a patient to decide on which, if any, handling aids are suitable.”

British Columbia Canada 2001

- “The parties agree to establish a goal of eliminating all unsafe manual lifts of patients/residents through the use of mechanical equipment, except where the use of mechanical lifting equipment would be a risk to the well-being of the patients/residents.”
- Funded by the Ministry of Health and Workers’ Compensation Board
- Managed by the Occupational Health and Safety Agency for Healthcare in British Columbia

***American Nurses Association
(ANA) 2003***

- “Handle with Care” Campaign
- Position Statement on “Elimination of Manual Patient Handling to Prevent Work-Related Musculoskeletal Disorders”
- Background
- Fact Sheet
- Tip Sheet
- Web Site:
www.nursingworld.org/handlewithcare/bbltr.htm

***VHA Safe Patient Handling
Program***

- System-wide implementation evidence-based initiative for safe patient handling (2008)
- Over \$200 million allocated over 3 years to implement nationally
- All patient care settings (inpatient, outpatient, diagnostic, therapy, radiology, morgue, long term care)
- Concurrent evaluation outcomes & process

***Strategies to Improve Patient and
Health Care Provider Safety in
Patient Handling & Movement
Tasks:***

**A Collaborative Effort of the
American Physical Therapy
Association, Association of
Rehabilitation Nurses and
Veterans Health Administration**

***PURPOSE OF NATIONAL
TASK FORCE***

- To develop a position paper, balancing the needs of all three organizations into a workable solution. Our goal was to find a way to effectively incorporate the most recent evidence on safe patient handling and movement into rehabilitation settings.

RECOMMENDATIONS

1. Implement *Ergonomics for the Prevention of Musculoskeletal Disorders: Guidelines for Nursing Homes* (OSHA).
2. Build and support a culture of safety in rehabilitation settings that protects staff as well as patients.
3. Improve communication channels between nurses and physical therapists to facilitate safe patient handling and movement tasks.

RECOMMENDATIONS

4. Develop policies and procedures for the therapeutic use of patient handling equipment.
5. Develop competency-based assessments that demonstrate proficiency in use of all equipment.
6. Encourage research that supports the improvement of patient and staff safety while maximizing patient rehabilitation potential.

MYTHS

Safe Patient Handling in Rehabilitation Settings

“Unlike nurses, who have one of the highest occupational injury rates in the country, therapists rarely sustain injuries during patient handling.”



Work-Related Musculoskeletal Disorders & Physical Therapy

- Therapy not specific job category captured by BLS data
- “Offices & clinics of health practitioners”
- New NAICS definitions
- Peer-reviewed literature
 - Limited # studies; cross-sectional
 - Questionnaire/survey data
 - Self report exposure & outcome

STUDIES

- 1996 Bork et al.
- 1999 Holder et al.
- 2000 Cromie, Robertson, & Best
- 2001 West & Gardner
- 2002 Cromie, Robertson, & Best
 - » Qualitative study
- 2005 Glover et al.
- 2008 Campo et al.

Bork	U Iowa PT grads; alumni records	928	80%
Holder	APTA member list; random sample PTs & PTAs (500/500)	623	67%
W&G	Queensland Australia registration list	217	53%
CRB	¼ PTs registered in Victoria, Australia; random start	536	68%
Glover	10% member random sample CSP	2886	73%
Campo	APTA member list; random	Baseline	952 66%
		12 mo follow-up	882 93%

CASE DEFINITIONS

- Ever experienced work-related LBP?
- During the last 12 months, have you had a job-related ache, pain, discomfort, & so on (in any of 9 body segments)?
- Ever sustained a musculoskeletal injury due to work?
- Ever experienced work-related ache, pain or discomfort?
- In past 12 months, have you experienced work-related symptoms (in 10 different anatomical areas)?
- Pain lasting more than 3 days you felt was caused by work as a physiotherapist?

SUMMARY

- Therapists DO report WRMSDs
- Low back, upper back & neck, wrist & hand (thumb)
- Survivor effect?
- Practice setting
 - Neurological rehab, acute care, geriatrics, pediatrics
- Lifting, transferring, working w/ dependent patients
- Very few report injury or file claims

How do therapists cope?

- Consult colleague
 - Self-treatment
 - Take time off
 - Work w/ discomfort
 - Modify patient treatment
 - Patient outcomes?
 - Awareness “body mechanics” & posture
 - Strength & endurance training
 - Change setting or job
 - Leave profession
- Few consult physician
- Even fewer reported injury, filed claim

“Education on lifting techniques & training in body mechanics are effective in reducing injuries”

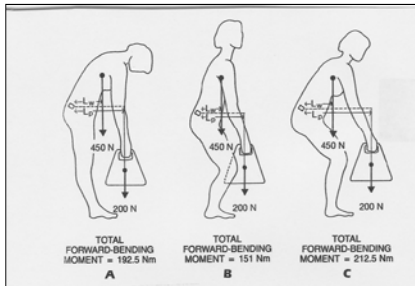
PHYSICS



- “Obey gravity, it’s the law”



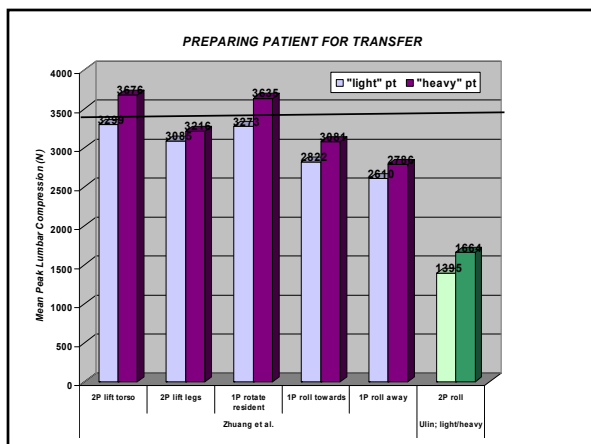
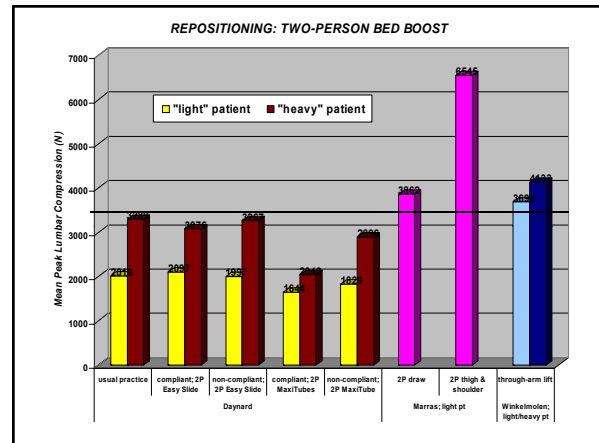
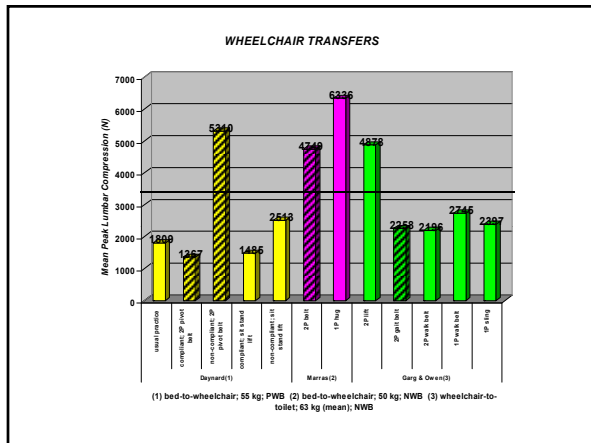
FORCES ON THE LUMBAR SPINE



From Nordin & Frankel, Basic Biomechanics of the Musculoskeletal System, 2nd ed: Lea & Febiger, 1989.

LESSONS FROM BIOMECHANICS STUDIES

- Force ↑ size of patient
- Force ↑ as % patient weight bearing ↓
- One person tasks generally more risk
- Repositioning activities risky
- Lift component or moment involved with risk



“All patient-handling equipment is the same.”

- Remember “Hoyer” Lifts?
- Kept in the closet
- Scary to look at & be moved in
- Pumped by hand
- Hard to move



But all we had for quite some time

Technology Resource Guide

www.visn8.med.va.gov/visn8/patient_safetycenter/safePt_Handling/default.asp

EQUIPMENT



- Ceiling lifts

EQUIPMENT

- Mobile "total lift" device
 - Manual (hand-operated)
 - Mechanical (battery)
 - Might include scale



EQUIPMENT

Sit-to-stand lifts



- Partial weight bearing
- Instead of pivot transfer?

EQUIPMENT FOR LATERAL TRANSFERS & REPOSITIONING

- Lateral
 - Low friction
 - Air assisted
- Mechanical
- Transfer chairs
- Ceiling lifts
- Trapeze



"If a patient can perform a function in therapy, he or she can do it anywhere, anytime."



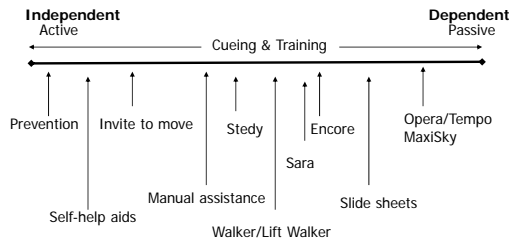
- FIM Scores
 - Use most dependent score in a 24-hour period



Patients require different levels & amounts of assistance at different times



Continuum of Mobility/Transfers*



*Adapted from work of Nico Knibbe, LOCOmotion, NL

“The use of patient handling equipment interferes with the therapeutic value of therapy and can contribute to functional decline or loss of patient independence.”



• WHERE'S THE EVIDENCE?

Nelson, et al. (2008) Link between safe patient handling and patient outcomes in long term care. *Rehabilitation Nursing*, 33(1):33-43.

Does this facilitate goals of rehabilitation???



“The use of patient-handling equipment reduces functional status scores.”

• Again, where's the evidence?



“The use of patient-handling equipment is impersonal.”

• How “personal” is this?



“Patient-handling equipment is too expensive for rehabilitation settings.”



- Cost-benefit analysis suggests that costs offset by ↓ WC claims & associated costs
- Return-on-investment
- Anecdotal evidence
- Case studies

***“Knowing is not enough;
we must apply.
Willing is not enough; we
must do.”***

--- Goethe

THE PROBLEM AND THE CHALLENGE

- **GOALS:**
 - To protect care-givers from exposure to risk factors for work-related musculoskeletal disorders AND
 - To facilitate rehabilitation, functional status and independence for patients
- **CAN WE DO BOTH AT THE SAME TIME?**

Safe Patient Handling Conference

- **March 31- April 2, 2009**
Buena Vista Palace
Hotel & Spa
Lake Buena Vista, FL
- **For Registration
Information**
Contact: The University
of South Florida
813-974-4296 or 800-
852-5362
<http://www.cme.hsc.usf.edu/sphm/>
- APTA is co-sponsor

