Reducing Risk Through Effective Safe Patient Handling

Why it is Critical for Hospitals to have a Program

- Preventing Patient Falls
- Preventing Pressure Injuries
- Reducing Risk of Musculoskeletal Injuries to Caregivers
- Improving Patient Outcomes

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Historical Foundation

- Insurance Work, Corporate Systems, and Academia
- Operational Healthcare Safety
- JCAHO, OSHA and NIOSH
- Safe Patient Handling Pioneering
- Important Project- the Beverly Settlement
- Patient Safety Center
- Current – Applying Ergonomics in Healthcare to Create Safer Environments

Objective: Create Safer Environments Within Healthcare Facilities

- Enhance the Quality of Care for Patients
- Provide a Higher Quality of Work Life for Staff
- Reduce Costs Related to Workers' Compensation and Liability Insurance
- Integrate safe patient handling into developing programs for early mobilization
- Promote the Value of Investing in Prevention
- Huge Amounts are Spent on Reaction Saving Can be Achieved by Investing in Prevention
- Funds are Available in Capital Budgets
- Create and/or improve safety cultures within organizations

Big Problem in Need of Solutions

- Caregiver Back Injuries

Musculoskeletal disorders among healthcare workers delivering direct care to patients a major problem

This requires attention and effective solutions

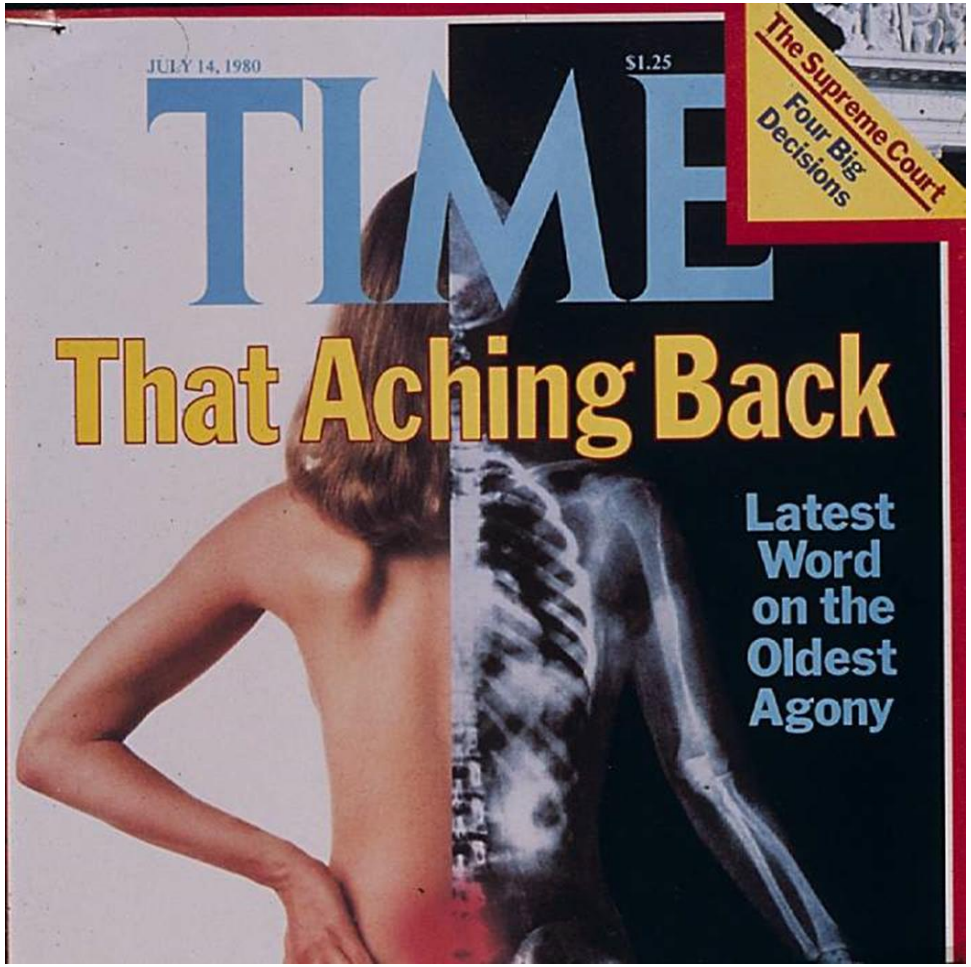
Caregivers Continue as Most at Risk Group for Musculoskeletal Injuries

- MSD incidence rate for nursing assistants was 171.0 cases per 10,000 full-time workers in most recent BLS data
- For workers across all industries the incidence rate was 29.8
- The rate for nursing assistants was more than 5.7 times the rate for all workers
- The rate for nursing assistants far exceeds the rate for laborers and freight, stock, and material movers
- These caregivers have the highest incidence rate among all occupations.

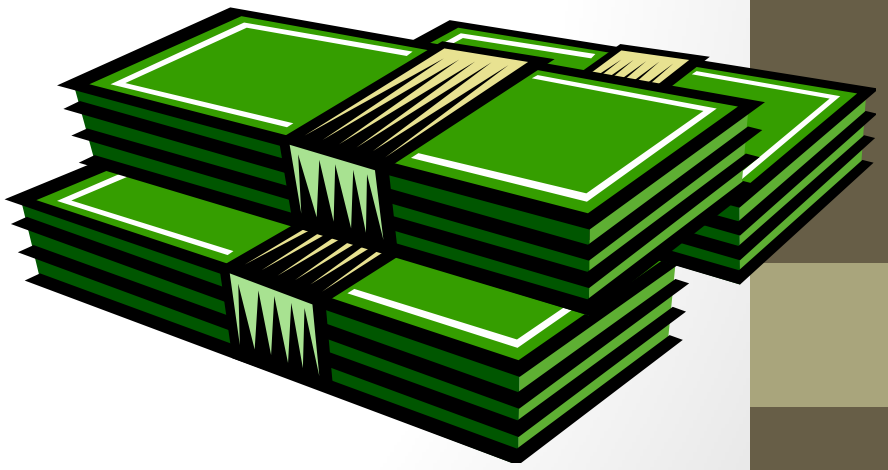
(Bureau of Labor Statistics 2016)

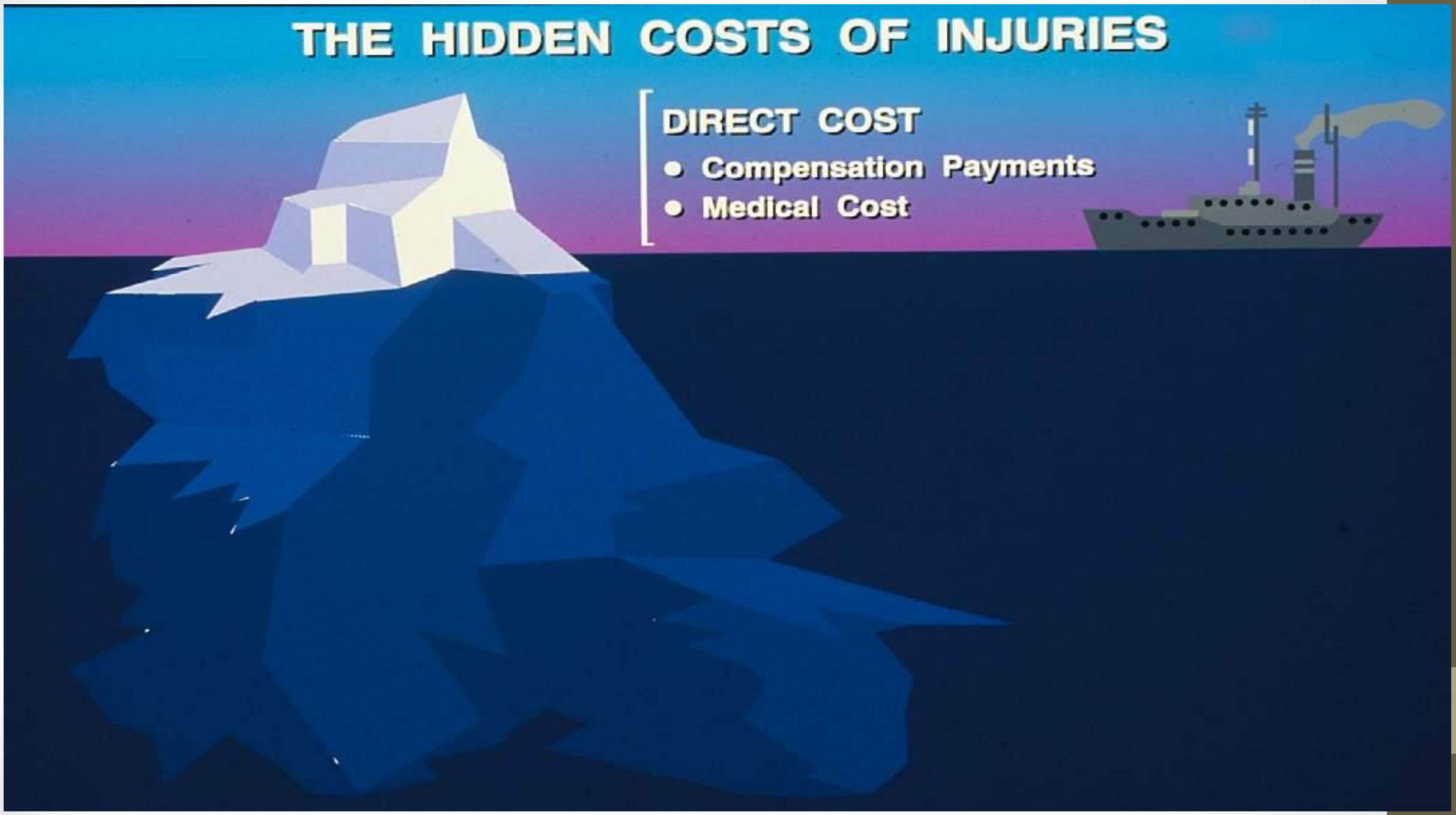
Impact of Back Injuries

- Pain
- Lost time
- Disability
- Expense
- Inconvenience



The Financial Impact
to the
Healthcare Industry
and to
Individual Facilities




THE HIDDEN COSTS OF INJURIES
DIRECT COST
• Compensation Payments
• Medical Cost

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DIRECT COST

- Compensation Payments
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INDIRECT AND HIDDEN COSTS OF INJURIES

- Replacing Employees
- Investigation Time
- Supervision Time
- Training
- Staff Moral
- Possible Patient Injury
- Break-up Work Team
- Administrative Time
- Overtime Paid
- All Other Costs

Beyond the Cost to the Industry What is the Personal Impact?

The Aging Nursing Work Force

Today 40 percent of nurses are over 50.

What happens to the body as we age?

Assisting Patients With Movement and Mobility Puts Caregivers at Risk

Job Demands can Exceed Physical Capabilities of the Caregiver

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The Evidence on Early Mobilization

Conclusion: Instituting a planned, structured ICU early mobility quality improvement project can result in improved outcomes and reduced costs for ICU patients across healthcare systems.

(Crit Care Med 2013; 41:S69–S80)

Short-Term Adverse Patient Outcomes From Immobility

- Ventilator-associated pneumonia
- Hospital-acquired pneumonia
- Delayed weaning from mechanical ventilation due to weakness
- Pressure ulcers and other adverse skin conditions

Long-Term Complication From Immobility

- Diminished quality of life after discharge
- Deterioration of bodily functions with continued immobility
- Due to the physical deconditioning from the patient's stay in the intensive care unit

Early and Progressive Mobility

- Early mobility-more than changing position. Preventative form of physical and cognitive rehabilitation, assists with recovery of the cardiopulmonary system, prevents muscle deterioration and joint contractures.

- Progressive mobility-series of planned movements in a sequential manner beginning at a patient's current mobility status with a goal of returning to his/her baseline.

Reducing Length of Stay

A financial model was developed using data from existing studies and from the actual
implementation of early mobilization in the MICU at Johns Hopkins Hospital. Data from this
study of early mobilization in the ICU indicated a 22% reduction in stay with an average of 5.4
days before intervention and 3.9 days post intervention

Ref: Lord R, Mayhew C, Korupolu R, Mantheiy E, Friedman M, Palmer J, et al. ICU early physical rehabilitation programs: financial modeling of cost savings. *Crit Care Med.* 2013;41(3):1-8.

Reducing Healthcare Cost

Based on an analysis of data from prior publications and the early rehabilitation program in the Johns Hopkins Medical ICU, the report authors developed a conservative model for net financial savings and costs. This analysis demonstrated that most ICUs with between 200 and 2000 annual admissions would generate a net savings of up to 3.76 million dollars by reducing patient ICU length of stays.

Reference: Lord RK, Mayhew CR, Korupolu R, et al. ICU early physical rehabilitation programs: Financial modeling of cost savings. *Crit Care Med*. 2013;41:717-724.

Patient Care is ...Difficult and Demanding

How can we make improvements?

Remember to Balance…

Work Demands

Worker Capacity

Patient Handling Tasks

- Transferring patient from bathtub to chair
- Transferring patient from chair to bed
- Weighing patient
- Transferring patient from toilet to chair
- Making bed with patient in it
- Transferring patient from bed to chair
- Transferring patient from chair to toilet
- Undressing patient
- Repositioning patient in chair
- Making bed when patient is not in it
- Lifting patient up in bed
- Feeding bed-ridden patient
- Changing absorbent pad
- Repositioning patient in bed

Repositioning Patients a Difficult Task

Repositioning Patients a High Risk Activity

- **Highest occupational risk job task determined in biomechanics laboratory study of 50 job tasks investigated**
- **In a study where more than 2300 nurses were surveyed 50% of the nurses required to do more than five repositioning tasks in a shift suffered back pain**

- (Smedley 1995) (Marras 1999)

Facilitating Bed Egress to Regain and Sustain Mobility and Independence

- What can be done to facilitate bed egress
- Assisted Bed Egress
- Independent Bed Egress

Does Traditional Training Reduce Back Injuries

Research over several decades has been unable to demonstrate any evidence that training healthcare workers in lifting techniques is effective in preventing back injuries.

Why Have Traditional Training Programs Failed?

- Difficult to modify behavior
- Lack of follow-up monitoring
- Difficult to apply optimum principles in real work environment
- There are not optimum techniques applicable to all people
- A proper technique does not remove the risk to the healthcare worker because of the loads and exertion required.

Ergonomics is the Solution

Move Ergonomics Beyond the Office Environment

Apply Concepts of Ergonomics in the Patient Care Environment

Ergonomics or Human Factors Engineering

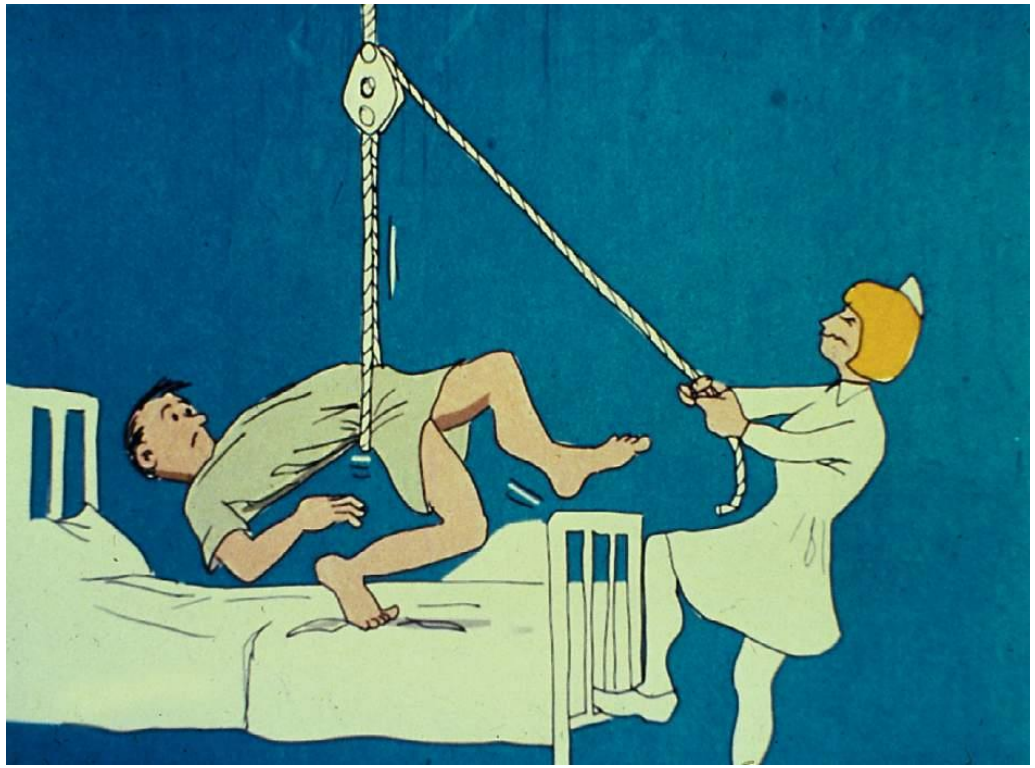
Design to match the capabilities of the person required to do the job

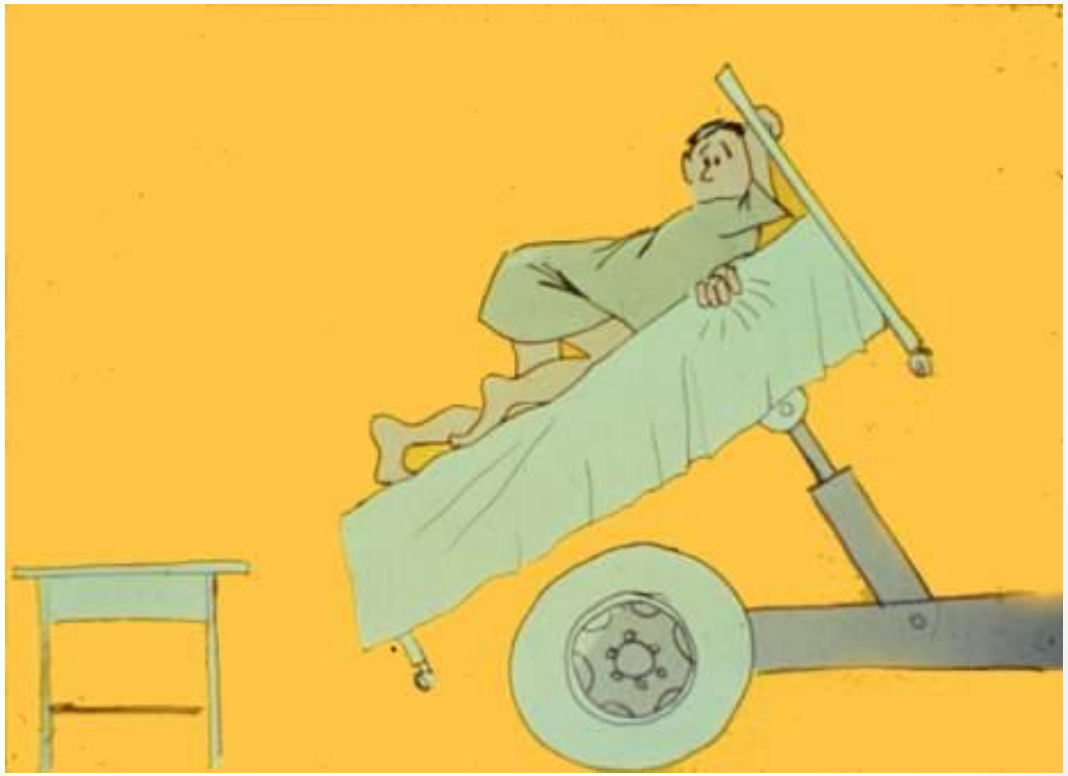
Do not expect the person to adapt to poor design

Single Most Important Factor to Reduce Exposure to Back Injury

ELIMINATE THE LIFT!

How is Lifting Equipment Perceived by Many in the Healthcare Industry

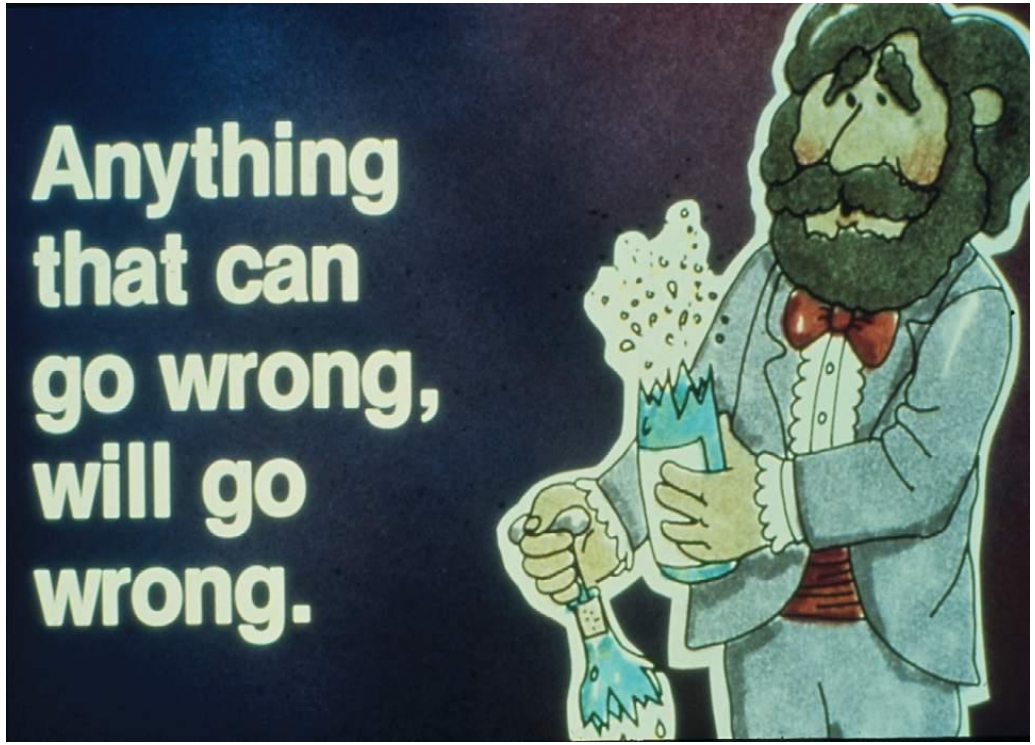


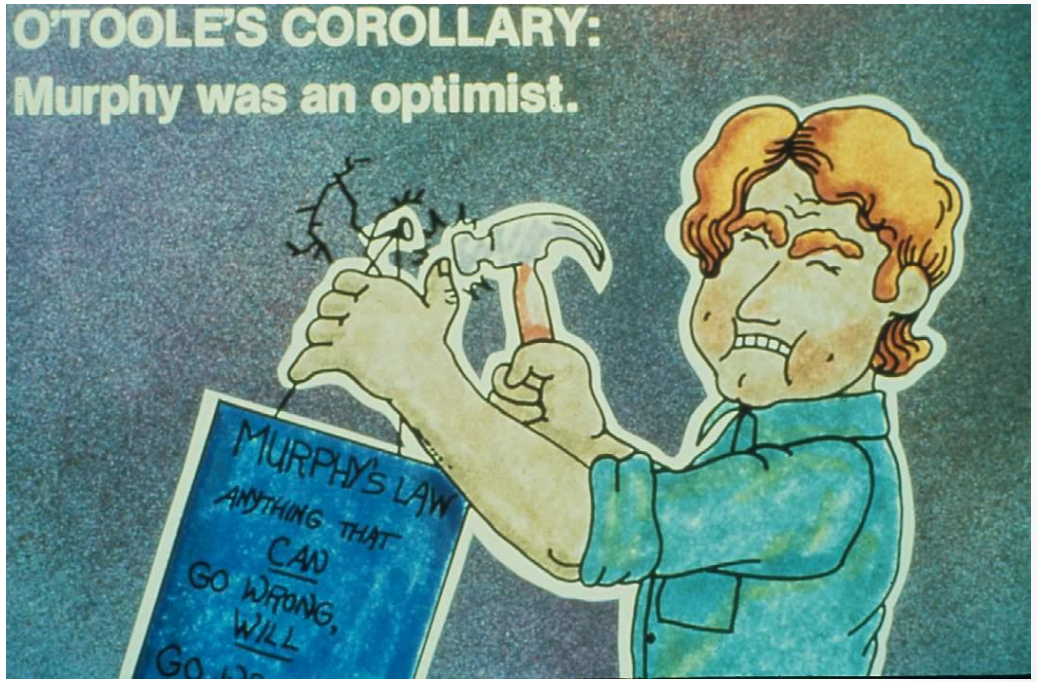


Problems with Early Lifting Equipment

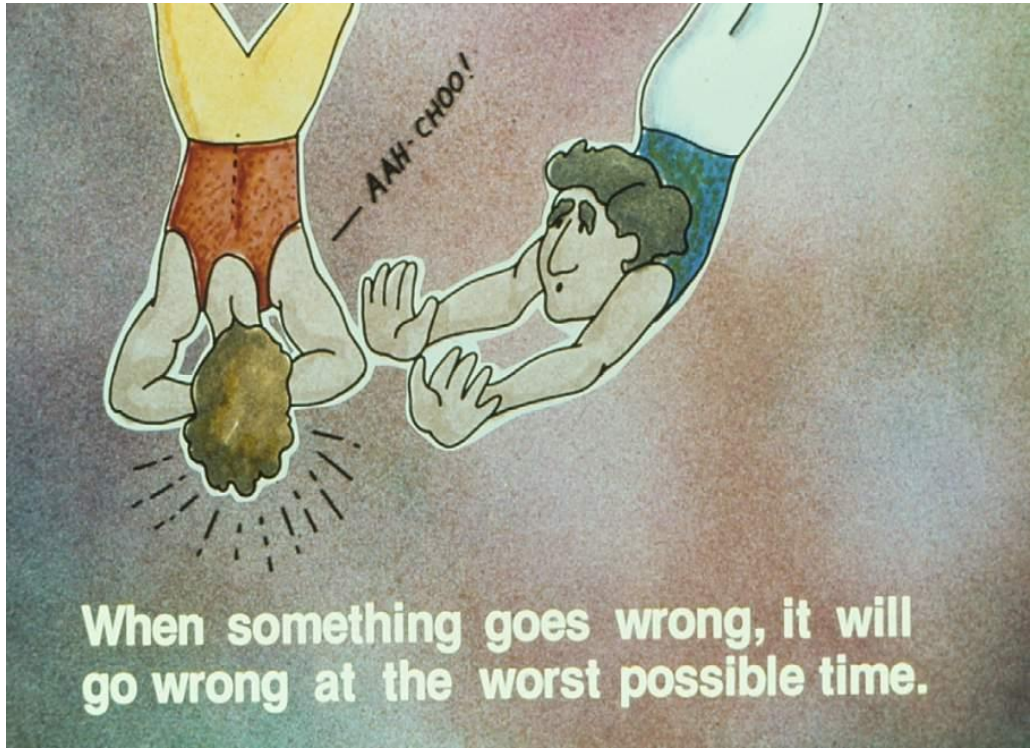
- Poor design
- Not available
- Not maintained
- Improper use
- Time

Preparing for the Unexpected

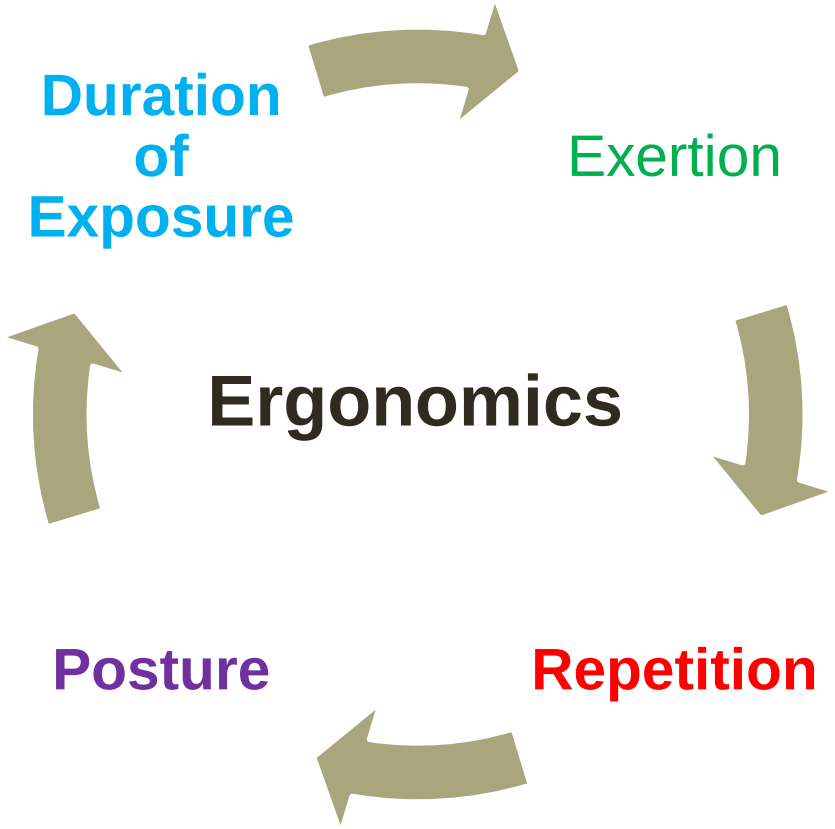




Think About Prevention



Minimize Impact of Risk Factors




Reduced Loss and Improved Outcomes
The Ergonomic Management Process
Good Engineering Solutions
Good Management Program

A 5 Step Process

STEP 1 - Risk Identification and Assessment

STEP 2 - Risk Analysis

STEP 3 - Develop Recommendations

STEP 4 - Program Implementation

STEP 5 - Measurement and Results