

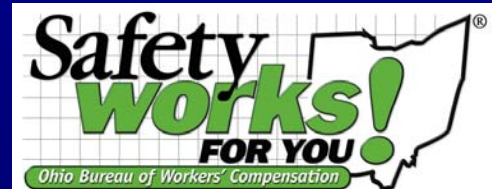
Overexertion injuries in long-term care

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Ohio BWC Nursing Home Stats

- 566 policies with manual #8829 with claims
- Average payroll about \$2.5 million
- Baserate for 8829: \$4.87 per \$100 payroll
- Approximate premium per half \$60,000
- Med only claims: 6922
- Lost time claims: 1155

For period of 7/1/2002 – 6/30/2003



Stats (cont)

- Average # claims per employer: 14
- Average days absent: 20
- Most frequent injuries: finger wound, low back sprains
- Most frequent positions injured: LPN, STNA
- Average medical cost: \$1500
- Average indemnity cost: \$4600

10 Leading Causes of workplace injuries

- Highway accidents
- Overexertion
- Falls on same level
- Repetitive motion
- Being struck by object
- Being caught in
- Being struck against
- Falls to lower level
- Assaults & Violent Acts
- Bodily reaction

Leading causes

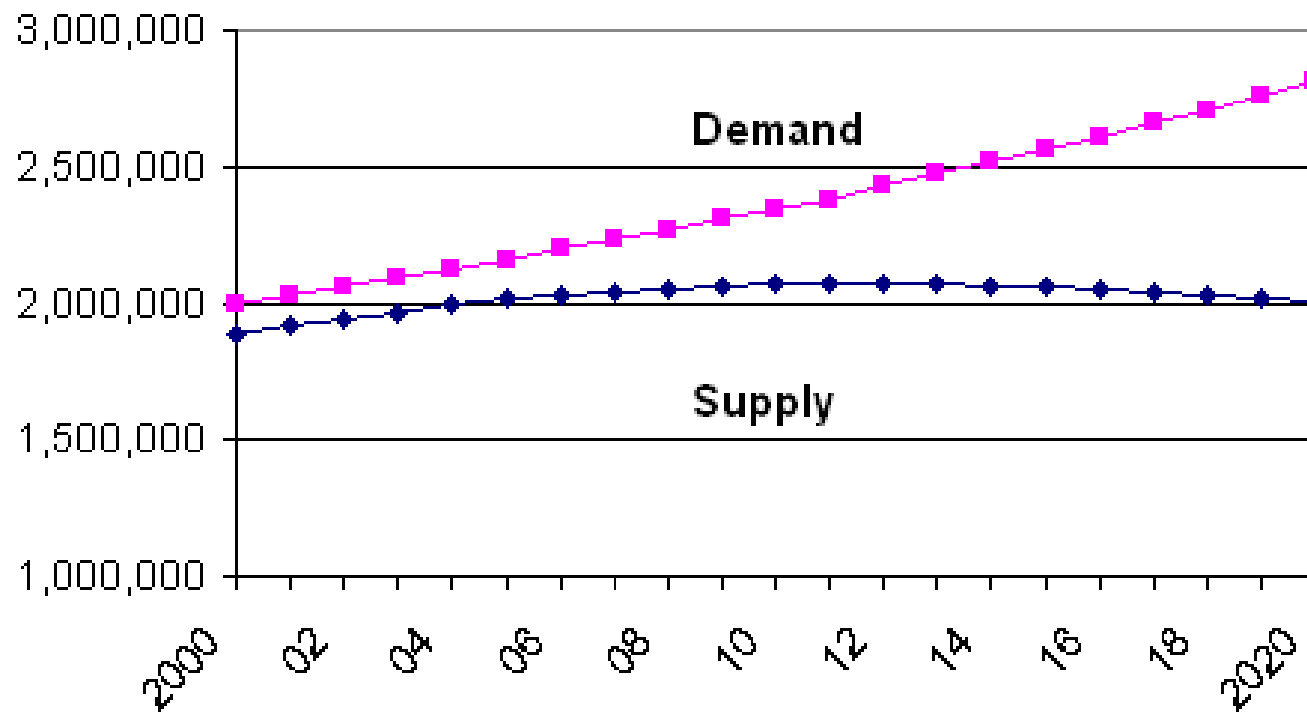
- 10. Assaults & Violent Acts
- 9. Being caught in equipment
- 8. Being struck against object
- 7. Highway accidents
- 6. Repetitive motion

Leading causes

- 5. Being struck by object
- 4. Falls to lower level
- 3. Bodily reaction
- 2. Falls on same level
- 1. Overexertion

U.S. Department of Health and Human Services Health Resources and Services Administration

Chart 1: National Supply and Demand Projections for FTE Registered Nurses: 2000 to 2020



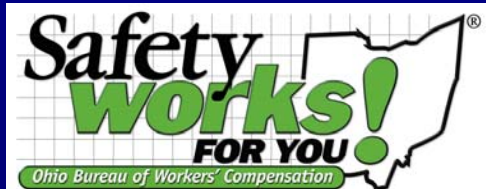
Source: Bureau of Health Professions, RN Supply and Demand Projections

Occupational Health & Safety

- To what degree do health & safety concerns influence retention/recruitment of nurses?

Research on RN Retention

- 12% (n=1008) of nurses “leaving for good” because of back pain as main contributory factor
- 20% (n=189) transferred to a different unit, position, or employment because of LBP, 12% considering leaving profession
- 38% (n=503) suffered occupational-related back pain severe enough to require leave from work
- 6%, 8%, & 11% of RNs (n=1163) reported ever changing jobs for neck, shoulder, & back problem respectively



Top 10 "Back Breaker" List

Patient Handling Task

- #10 Repositioning a patient in a chair
- #9 Repositioning a patient in bed side to side
- #8 Lifting a patient up in bed
- #7 Weighing the patient
- #6 Transferring patient from chair lift to chair

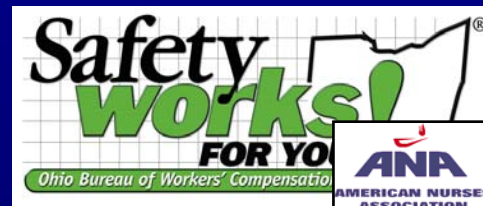
- #5 Transferring patient from bathtub to chair
- #4 Transferring patient from bed to chair
- #3 Transferring patient from chair to bed
- #2 Transferring patient from chair to toilet

- #1 Transferring patient from toilet to chair

Occupations at Risk for Strains & Sprains

<u>Rank</u>	<u>Occupation</u>
#1	Nursing Aids, Orderlies & Attendants
#2	Truck Drivers
#3	Laborers, Non-Construction
#4	Assemblers
#5	Janitors and Cleaners
#6	Registered Nurses
#7	Stock Handlers and Baggers
#8	Construction Laborers
#9	Cashiers
#10	Carpenters

Bureau of Labor Statistics, April 2002

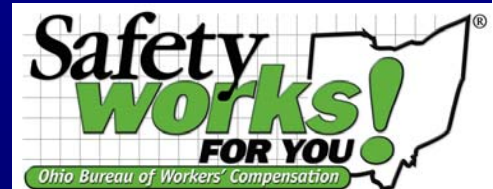


Average Amount of Money Spent on Health Care in the United States, Per Person



*Estimated

Source: Men's Health, May 2003



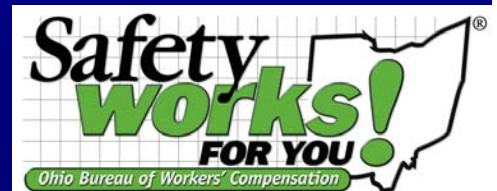
High Risk Activities

Percentage of low-back compensation claims associated with each activity

Manual handling task	63%
Lifting	49%
Twisting	18%
Bending	12%
Falling	10%

Other risk factors: Prolonged sitting, vibration, smoking, obesity.

Source: Stover H. Snook



Facility Studied

- Wyandot County Nursing Home (Upper Sandusky, Ohio)
- Administrator: Joe Jolliff
- 100 Beds, 90 employees
- Non-union

Bureau of Labor Statistics (2000)

- Nursing Home Injury & Illness Rate (14.2 per 100 full-time).
- 51.2% of injuries from handling residents.
- Back injuries account for 42% in nursing homes compared to 27% in all industries.

Why are there injuries?

- There are many tasks in nursing homes that are physically exceeding the capabilities of nursing staff.
 - Ex. Two person lift of a totally dependent person.

Two-person lift: Physical capability exceeded?



Guideline for Lifts of +/- 30 Degrees of Origin Asymmetry

Horizontal Reach Distance from Spine

← 12 in →

← 24 in →

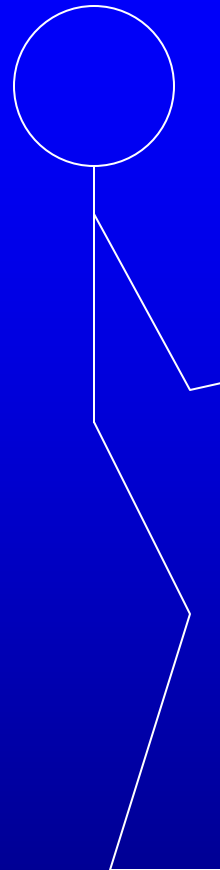
Low Risk



Medium Risk



High Risk



Weight of Lift (pounds)

10
15
20
25
10
15
20
25
10
15
20
25
10
15
20
25


	Normal	LBD	Normal	LBD	
Shoulder	Maximum safe load 35 lbs	Low Risk (10-25 lbs), Medium Risk (25-30 lbs)	Unacceptable	Unacceptable	Vertical Lift Origin
Waist	Maximum safe load 70 lbs	Low Risk (10-25 lbs), Medium Risk (25-30 lbs)	Maximum safe load 35 lbs	Low Risk (10-25 lbs), Medium Risk (25-30 lbs)	
Knee	Maximum safe load 40 lbs	Low Risk (10-25 lbs), Medium Risk (25-30 lbs)	Low Risk (10-25 lbs), Medium Risk (25-30 lbs)	Medium Risk (10-25 lbs), High Risk (25-30 lbs)	
Floor	High Risk (10-25 lbs), Medium Risk (25-30 lbs)	High Risk (10-25 lbs), Medium Risk (25-30 lbs)	Unacceptable	Unacceptable	

1. Choose column indicating whether person has low back disorder (LBD) or not (Normal)
2. Determine region (zone) of the maximum horizontal reach distance from spine and vertical lift origin from the floor for each lift
3. Color in each zone indicates degree of risk for LBD (green = low, yellow = med, red = high)
4. Select weights corresponding to green shading within each zone to minimize risk of recurrent LBD

Normal group averages 84% LMM probability, LBD group averages 13% LMM probability



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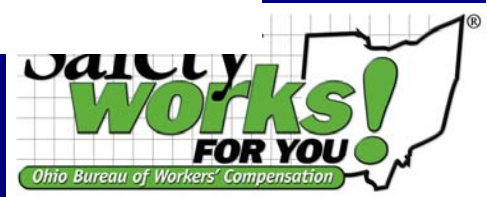
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Governor, Bob Taft

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1997 Injury Descriptions at Wyandot

- Acute low back pain
- Sprain of abdomen w/ vaginal bleeding
- Hit on head by resident
- Sprain to left shoulder
- Sprain lumbar region
- Lumbosacral sprain
- Muscle spasm back
- Cervical strain neck

Wyandot's resolution & challenges

- In 1995 there was only a partial commitment from the home to try using mechanical lifts. A resident actually donated some money.
- A vendor brought in some lifting devices to try out. At first, no one would even try them.
- Nursing staff had been taught that if they used good lifting techniques they would not get hurt.

Wyandot's resolution & challenges

- In 1997 an “employee-involved” committee selected lifting devices that were needed.
- The committee selected different types and had one available for each nurse aid working a shift.
- The lifts still were only typically used by members of the committee.

Wyandot's Resolution

- In April 2000 crank-style beds were replaced by fast electric beds (< 20 seconds travel time).
- Everyone liked the beds and this also seemed to help with acceptance of lifting devices.
- In October 2001 ceiling lifts were implemented in some rooms and a mandatory no-lift policy was implemented at request of the staff.

Different types of equipment

- Fast Electric beds (travel time <20 seconds)
- Ceiling lifts
- Walking lifts
- Bed positioning slings
- Sit/stand lifts
- Total lifts (portable)

Electric Bed



Ceiling Lift



Walking Lift



Bed positioning sling



Bed Positioning

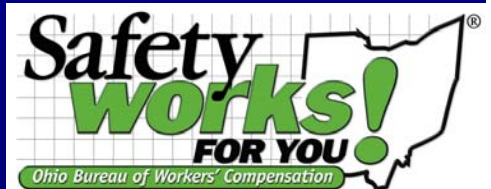


Sit/Stand Lift



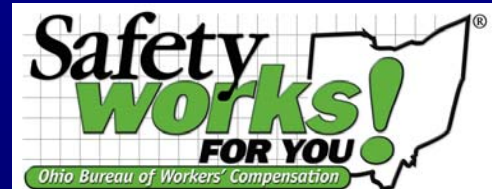
What have the results been?

- Lowered injuries (less than half national rate)
- Lowered turnover (less than 10%)
- Lowered absenteeism
- Increased safety and privacy for residents
- Increased employee satisfaction
- Lowered claims costs (>\$200,000 1997, <\$12,000 since)



Surprising results

- Increased resident satisfaction. Typically the residents are meeting one-on-one with the nursing staff as opposed to two staff members that may talk to each other.
- Saved \$55,000 in 2001 in payroll because of less turnover, less overtime, and less absenteeism.
- Total investment was \$116,000, which can be less than one severe back injury.



What the nursing staff says

- “I didn’t like it at first but now realize I couldn’t do without it. My husband likes it, too. He is so pleased that I come home happy and with energy left that he came up and thanked our administrator.”
- “I was about to become a cashier or something else, because I just couldn’t do it anymore.”

What the nursing staff says

- “I wouldn’t leave to go to another nursing home for \$10 more per hour.”
- “If staff was doubled it would not have helped as much as with the equipment purchased.”

Ohio Nursing Homes study (n=73)

- 1. The Cumulative Trauma Disorder (CTD) incidence rate has gone from 18.5 CTDs per 200,000 hours to 11.4 CTDs per 200,000 hours worked -- a 38% improvement.
- 2. The Days Lost due to CTDs went from 95.9 per 200,000 hours worked to 55.1 per 200,000 hours worked -- a 41% improvement.
- 3. The Restricted Days due to CTDs changed from 80.2 per 200,000 hours worked to 58.1 per 200,000 hours worked -- a 28% improvement.
- 4. The Employee Turnover Rate changed from 94.7 per 200,000 hours worked to 77.4 per 200,000 hours worked, an 18% improvement.

Questions? / Websites

- <http://www.osha.gov/>
- <http://www.ohiobwc.com/>
- <http://www.patientsafetycenter.com/>