Manual Material Handling: The Impact On CNA’s Retail Wholesale Book of Business

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Objectives

• To identify issues and obstacles CNA Risk Control encounters when servicing and prospecting our retail wholesale book of business.

• To better understand the emerging issues in Workers’ Compensation and how they will impact productivity, efficiency, and bottom line profitability of the retail wholesale business.

• To provide strategies and directions for changing the business “DNA” of retail wholesale and how it impacts profit and keeping workers healthy and on the job.
2008 - 2011 – Claim Severity by Incident Type

- MMH: 33%
- Slip/Trip: 18%
- Struck Against: 10%
2008 – 2011 - Claim Frequency by Incident Type

- MMH: 17%
- Struck By: 18%
- Slip/ Trip: 26%
2008 – 2011 MMH Claims Source - Severity

Box, Case, Tote: 33.4%, 27.3%, 21.6%, 20.1%, 20.0%, 27.4%
Materials Moveable: 13.0%, 16.8%, 20.1%, 16.4%, 16.3%
Machinery Equipment: 5.7%, 2.4%, 4.0%, 6.1%, 4.3%
2008 – 2011 MMH Claims by Nature - Severity

- Sprains: 6%
- Hernia: 30%
- Strains: 57%
2008 – 2011 MMH Claims by Nature - Frequency

- Strains: 73%
- Hernia: 10%
- Sprains: 9%
2008 – 2011 MMH Claims by Body Part - Frequency

- Lower Back: 42.0%
- Shoulder: 16%
- Abdomen: 7%
2008 – 2011 MMH Claims by Body Part - Severity

- Lower Back: 44%
- Shoulder: 22%
- Multiple Body Part: 7%
Emerging Issues

What are the two Emerging WC issues that will effect the Retail Wholesale sector?

– Aging Workforce

– Obesity
Current Worker Population

• In 1972, average age of a US worker was 28. Currently it is approximately 46.¹

• The number of workers aged 45 and older has doubled since 1950.²

• According to the American Association of Retired People (AARP), the number of people 55 years and older in the labor force – which stood at about 18.2 million in 2000 – is projected to rise to 25.2 million this year and 31.9 million by 2025.²

¹ Source Ergonomics ASSE Feb 2009 Vol 2, No2 – article Ronald Porter, PT, CEAS, Director, Back School Atlanta, Enhanced Ergonomics: What Works with the Aging Workforce
Baby Boomers

• Has your organization recognized the need to leverage an older workforce to produce in the warehouse or retail store?

• What about your competitors?

• These fundamental questions must be reviewed!
As We Age

- Maximal Strength
- Muscle Mass
- Bone density
- Visual and Auditory Acuity
- Fitness
- Aerobic Capacity
- Cognitive Speed/Function

- Obesity
- Arthritis
- High BP
- Diabetes
- Depression/Heart Disease
- Menopausal/Post Menopausal Issues
Areas for Management to Review

Demographic Analysis

• What is the age of the workforce?
• Total population
• By job type
• Is more than 10% over 50
• What type of injuries are occurring?
Areas for Management to Review

• What will change in the next 5 to 10 years?

• Profiling the future
Areas for Management to Review

• What are the risk factors creating the injuries?

• What are the ergonomic/biomechanical Issues?

• How do the risk factors impact aging?

• How is the aging work force impacting productivity?
Areas for Management to Review

• How can we begin to mitigate/reduce the risk factor?

• Does transitional/RTW take into consideration aging?

• Do long term plans include aging?
Definitions of Obesity

• Obesity: Body Mass Index (BMI) of 30 or higher.

• Body Mass Index (BMI): A measure of an adult’s weight in relation to his or her height, specifically the adult’s weight in kilograms divided by the square of his or her height in meters.
Definitions of Obesity

• Obese is generally defined as at least 30 to 40 pounds overweight.

• Severely obese is considered to be at least 60 pounds overweight.

• Morbidly obese is at least 100 pounds overweight.

• Super obese is considered at least 200 pounds overweight.
Scope of the Problem

- The most obese workers file twice as many WC claims as healthy weight workers.

- The most obese have 13 times more lost workdays than healthy weight workers.

- Workers Compensation medical claims cost are 6.8 times higher for the most obese workers.

Scope of the Problem

- Indemnity costs are 11 times higher for most obese workers than healthy weight workers.

- The body parts most prone to injury are: back, lower extremities, wrist, and hands.

- The most common causes of these injuries were lifting, lowering, and slipping.
Percent of Obese (BMI ≥ 30) in U.S. Adults

1999

No Data  <10%  10%-14%  15%-19%  20%-24%
Percent of Obese (BMI ≥ 30) in U.S. Adults
Percent of Obese (BMI $\geq 30$) in U.S. Adults
Percent of Obese (BMI ≥ 30) in U.S. Adults
Percent of Obese (BMI $\geq$ 30) in U.S. Adults
What Do CNA Consultants Encounter in the Field

Wholesale, Warehousing, and Retail operations:

• Everything on the floor! Why is the majority of material and stock on the floor or six inches off the floor?

• We have done it this way for 40 years and we have made a profit!

• Most accounts do not see manual material as a efficiency and productivity issue.

• Accounts do not know how and what to measure.
What Do CNA Consultants Encounter in the Field

- Strong emphasize on upper extremity at check out stands, little on MMH.

- Lay out of storage areas where MMH equipment could be used – Limited amount of thought given to layout in relation to MMH equipment for the employees.

- High fatigue level of employees in warehouse settings.
What Do CNA Consultants Encounter in the Field

- Very focused on OSHA regulations and inspections.
- Not focused on loss drivers for the location.
- Loss Prevention: Focused on shrinkage.
- Random placement of materials by weight and size in racking systems.
What Do CNA Consultants Encounter in the Field

• Not utilizing the equipment provided.

• Employees not trained on how to use equipment provided.

• Overloading of manual pallet jacks and carts.

• Stacking too high cannot see over load.
What Do CNA Consultants Encounter in the Field

• Utilization of lifting videos; Stop using lifting videos!!!

• Lifting videos do not reduce the forces on the body and they do not work!

• Bend your knees keep your back straight does not work most of the time.
Adapted from Park and Chaffin, 1974, Occupational Biomechanical, second edition
Metabolic Rate for Different Postures (Brown)

- Back Straight
- Free Style
- Back Bent

**ENERGY EXPENDITURE** (Cal/kg body wt/min) vs **LOAD (kg)**

0 10 20 30 40 50 60 70 80 90 100 110
What Do CNA Consultants Encounter in the Field

• Look Beyond “Bend Your Knees; Keep your Back Straight”

• Be Innovative; take the opportunity this conference allows you and let’s start developing and designing equipment that will reduce the exposure level.
Strategies and Controls

• Review your organizations safety and engineering requirements.

• Are there job limits? What are the physical capabilities?

• Work method techniques and organizational policies accommodating to the known and expected capability shifts of older workers.

• Design for the aging workforce.
Strategies and Controls

• Design to the Human Interface.

• Understand the force, body posture, and repetition an employee endures on a daily basis.

• Good design of equipment will enhance productivity, efficiency and risk factors.

• Understand how to measure on an annualized basis.
Strategies and Controls

• Instead of thinking out of the box; you are going to have to be “out of the box” on how your organization addresses manual material handling and how you do business on a daily basis.

• We have to change how the organization thinks about:
  – On time
  – On cost
  – On quality

• Let’s put our expertise and skills together and begin the process of developing manual material handling equipment that can change the culture, risk factors, productivity and efficiency of this industry.
QUESTIONS ?