Chronic Health Conditions and Impacts on Work-Related Injuries

Rupali Das, MD, MPH, FACOEM
SVP, California Medical Director
Zenith Insurance Company

Roman Kownacki, MD, MPH, FACOEM
Kaiser Permanente
Occupational Health Medical Director

2018 California Division of Workers' Compensation Educational Conference

DISCLAIMER

- The information contained in this presentation is meant to provide the audience with a general understanding of certain aspects of workers' compensation and a general understanding of some of Zenith Insurance Company’s and Kaiser Permanente’s workers’ compensation services. The information contained in this presentation is not to be construed as legal advice and is not meant to be a substitute for legal advice.

- To the extent this presentation is based on data from outside sources, Zenith Insurance Company and Kaiser Permanente believe, but do not warrant, such data from outside sources to be accurate or complete. Neither Zenith Insurance Company or Kaiser Permanente shall be responsible or liable, directly or indirectly, for any damage or loss caused or alleged to be caused by or in connection with the use of or reliance on any such data.
Objectives

- Learn how health and chronic conditions (comorbidities) affect workers
- Understand how comorbidities impact recovery from injury
- Discuss strategies to manage comorbidities to promote injury recovery and RTW

“Healthy workers and their families are likely to incur lower medical costs and be more productive, while those with chronic health conditions generate higher costs in terms of health care use, absenteeism, disability and overall reduced productivity.”

Top 10 Health Conditions Affecting Medical Costs

Smoking, stress, lack of exercise and obesity together account for 20 percent of a company's overall medical costs.

Health-Related Productivity Measures
How Poor Health Shows Up At Work

- Absenteeism
  - Not showing up to work

- Presenteeism
  - Showing up to work in poor health and being less productive
Let's start with a case............

A 50 y/o Male, who works in a “Heavy” job class, has a Low Back Sprain
Our Case

A 50 y/o Male, who works in a “Heavy” job class, has a Low Back Sprain

Predicted Duration Sprain: Back, Lumbar Spine

24 Days

What happens to the Predicted RTW with health conditions?

**ABSENT OTHER CONDITIONS:** 24 Days
**DEPRESSION:** 54 Days
**OBESITY:** 35 Days
**HIGH BLOOD PRESSURE:** 44 Days
**DIABETES** 40 Days
**OBESITY, HIGH BP, DIABETES COMBINATION** 102 DAYS!!!!!
Comorbidity Diagnoses Increasing in Workers’ Compensation Claims!

- 3X increase in comorbidity diagnosis from 2000—2009
- Medical costs doubled in claims with comorbidity diagnosis

Hypertension most prevalent comorbidity

Comorbidities in Workers’ Compensation. NCCI Research Brief, October 2012
Hypertension:
Most common chronic condition in the US

http://www.cdc.gov/bloodpressure/infographic.htm, as of 6/27/16

Hypertension: What is it?

• Repeated blood pressure measurements higher than 130/80: 130 (systolic) or 80 (diastolic)
  – Normal: less than 120/80
  – Elevated: systolic 120-129/diastolic less than 80

• Primary hypertension
  – Risk factors: age, ethnicity, family history, sodium & alcohol intake, excess weight, inactivity

Impact of New Blood Pressure Guidance

Old: Greater than 140/90  
New: Greater than 130/80

Nearly half the US population will have hypertension, with greatest impact among younger people.

Hypertension Results in Lost Work Days

Lost work days for the 2169 with hypertension in Company C

Estimated Employees and Lost Work Days

- 31 and over: 199
- 11 - 30: 214
- 6 - 10: 417
- 0 - 6: 1,339

Nearly 10% with hypertension are absent more than 31 days/year


How Does Hypertension Impact Workers?

- Medications prescribed for treatment may result in drug interactions
- May limit use of NSAIDS
- May complicate surgical procedures

- Pain may temporarily increase in blood pressure, but does not cause hypertension
Diabetes: Common costly condition in US workers

Two Types of Diabetes
In Both Types, the Body Cannot Use Sugar for Energy

**TYPE 1** 5%
BODY DOES NOT MAKE ENOUGH INSULIN
- Can develop at any age
- No known way to prevent it

**TYPE 2** 95%
BODY CANNOT USE INSULIN PROPERLY
- Can develop at any age
- Most cases can be prevented

“Juvenile Diabetes”

Risk factors: ethnicity, genetics, obesity

Diabetes
- Fasting plasma glucose 126 mg/dL or higher
- Hemoglobin A1c (HbA1c) of 7 or higher

Complications of Diabetes

People who have diabetes are at higher risk of serious health complications:

- Blindness
- Kidney failure
- Heart disease
- Stroke
- Loss of toes, feet, or legs


Diabetes Can Impact Recovery From Work-Related Injuries

- Decreased circulation
  - Inhibits wound healing: cuts, burns, fractures, orthopedic surgery
- Nerve damage
  - May delay recovery due to
    - Pain—may prevent efforts at increased activity; drugs used to treat pain may cause side effects
  - Lack of sensation
    - May result in additional injury
Managing Type 2 Diabetes

Screening

Prevention and management

Source: CDC

Obesity
2016 Obesity Report Card
More than 1/3 of US adults (78.6 million) are obese!

Obesity is a Medical Diagnosis
Determined by Body Mass Index (BMI)

- BMI = \( \frac{\text{weight (kg)}}{[\text{height (m)}]^2} \)
- Indicator of body fat but not the health of an individual

BMI Index Chart: http://www.nhlbi.nih.gov/health/educational/lose_wt/BMI/bmi_tbl.htm, as of 6/27/16
Obesity: Common, Serious, Costly

Estimated annual healthcare cost: up to $210 billion
Related: stroke, heart disease, type 2 diabetes, obstructive sleep apnea
Possible increased risk of lumbar disc disease

http://www.cdc.gov/obesity/data/adult.html, as of 6/27/16

Obesity, Work, and Injury

• Health costs (medical and pharmacy) are up to 1½ times greater for obese individuals
  – Increased WC costs in obese workers with severe injuries

• Absenteeism and worker productivity are 40% to 82% worse compared to all employees

• Obese individuals are more likely to:
  – Have work-related injuries
  – Degenerative joint disease (OA, cartilage loss in knees)
  – Recover more slowly after injury and surgery

Moyer R. Longitudinal changes in MRI-based measures of femorotibial cartilage thickness as a function of alignment and obesity. Arthritis care Res 2016
Sitting is the New Smoking*

Workplace risk factors for obesity:
- Sedentary job
- Limited access to exercise
- Not eating a healthy diet

36% of transportation workers and 69% of long haul truck drivers are obese.

*Dr. James Levine, Mayo Clinic, 2014

Summary
Diabetes, Hypertension, Obesity

- Common comorbidities that may increase likelihood of injury, delay recovery
- Can be prevented, impacted by lifestyle
- You can have an impact on workers
  - Be alert for risk factors
  - Suggest screening if not yet diagnosed
  - Work with employee/physician on treatment plan

Wellness: Total Worker Health

https://www.cdc.gov/niosh/twh/totalhealth.html

https://wellness.ucr.edu/seven_dimensions.html

Opportunities to Collaborate with Employees

- Increase awareness of health
- Encourage healthy behaviors
  - Blood pressure control, smoking, cholesterol
  - Weight management, healthy diet
  - Exercise
- Encourage employees to take responsibility for health and wellness
What strategies are you using to minimize impact of comorbid conditions on claims?

- Wellness Initiatives
- Weight Management
- Nutritional Counseling
- Telephonic or Field Nurse Case Management
- Discounts / Incentives for Gym Memberships
- Targeted Safety Programs
Registration Opens: April 2018

20+ hours Continuing Medical Education through Plenary and Post Graduate Sessions:

- PowerOrtho: Shoulder/Knee
- Assessing Impairment
- Report Writing
- Disability/Neuro Evaluation
- Telehealth in Workers’ Comp
- ACOEM Standards

In association with the CA State Association of Occupational Health Nurses (CSAOHN)

www.woema.org