Comorbidities and Workers’ Compensation
Claim Durations And Costs
Panel

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Comorbidities
Objectives

1. Comorbidities Defined
2. Top 6 Comorbidities
3. Scope of the Problem
4. Cost to Workers’ Compensation
5. Claims Example
6. Prevention
7. Questions
**Comorbidity**: The simultaneous presence of two (or more) chronic diseases or conditions in a patient

1. Hypertension
2. Substance Abuse
3. Diabetes
4. COPD
5. Obesity
6. Depression

*The Oxford Dictionary*
Comorbidities

- hypertension
- pernicious anemia
- schizophrenia
- OCD
- cancer
- celiac disease
- depression
- bipolar diseases
- anxiety
- cardiac disease
- allergies
- obesity
- osteoporosis
- COPD
- psoriasisis
- diabetes
- parkinson’s disease
- chronic fatigue syndrome
- fibromyalgia
- multiple sclerosis
- arthritis
- drug abuse
- anxiety
- asthma
- Guillain-Barre
- alzheimer’s and dementia
- Inflammatory bowel disease
- vitiligo
- multiple chemical sensitivity
- lupus
- arthritis
- anorexia
- OCD
- Guillain-Barre
- spirometry
Workers’ Compensation Complications:

- Complicates the safe completion of surgical procedures by decreasing cardiovascular stability and increasing the risk of a hypertensive emergency
- Surgery may be delayed due to hypertension
- Pharmaceutical treatment with one or more medications can complicate treatment with multiple providers
- Five or more medications increase the risk of drug interactions and side effects
- Results in additional drug therapy

Hypertension is the highest cost comorbidity:
1. Unspecified Complications
2. Contusion
3. Sprains & Strains
4. Burns

- 8% of U.S. adults have a substance abuse disorder
- Rx at high risk for abuse: opiates, stimulants, anxiolytics
- Complicates:
  - Recovery – i.e. tobacco use increasing healing time
  - Alcohol use increase side effects of drugs
  - Over-use of opiates, stimulants...
- A comorbidity in 20% of claims for sprains, strains, musculoskeletal diseases (NCCI Study)
- Can contribute to increased cost and claim duration
- Complications:
  - Changes in blood supply inhibits healing
  - Nerve pain can delay recovery

Diabetes
Highest Cost Comorbidities are:
1. Contusion
2. Medical Care Complications
3. Nerve / Spinal Cord Injuries
4. Sprains / Strains
Chronic Obstructive Pulmonary Disease (COPD)

- Affects 5-10% of the population and is the third leading cause of death in the U.S.
- Requires supplemental oxygen and smoking cessation
- Caused by tobacco smoking, various chemical inhalants
  - Mining
  - Construction
  - Public works – iron, steel, textiles and grain

Comorbidities are:
1. Injury to Nerves / Spinal Cord
2. Contusion
3. Open Wound
4. Other Effects
"I like to mix up my exercise routine. Sometimes I right click. Sometimes I double click..."
By 2018 – 21% of all health care spending will be due to obesity

Costs of $78.5 billion in 1998 compared to $147 billion in 2008 (+87%)

27% of increased medical costs directly related to obesity (Per WCIRB, average cost is $42,341, with obesity comorbid, it increases to $53,773)

Approximately 1/3 of all Americans are obese (>72 million)

$62.7 billion direct costs (medical)

$56.3 billion indirect costs (includes lost work days)
- Healthcare Solutions Annual “Drug Trends Report” shows heavy antidepressant use in workers’ compensation claims

- Association between work related injury and development of clinical depression
  - 18% develop depression within 1 year of a minor injury
  - 2.3 times less likely to return to prior work status or function
  - Chronic pain claims increase antidepressant
  - Increases risk for disease and worsens disease outcome
1. Illness rates are increasing in general population
2. Workers’ Compensation increasing with a Comorbidity diagnosis
3. Claims are more expensive with comorbidities
4. Aging workforce increases the likelihood of comorbid diagnoses
Illness Rates in the General Population Are Increasing

Highest Illness Rates (CDC):
1. Obesity
2. Hypertension
3. Diabetes

Source: NCCI Research Brief October 2012
Scope of the Problem
Nature of Injury with Comorbidity Diagnosis

**Distribution of Claims With A Comorbidity Diagnosis By Nature of Injury**

Obesity & Hypertension are most common comorbidities with Musculoskeletal and Sprains / Strains

Source: NCCI Research Brief October 2012
Scope of the Problem
Claims with a Comorbidity Diagnosis are Increasing

% Share of Claims with a Comorbidity Diagnosis

Accident Year

A claim is considered to be a comorbidity claim if its first comorbidity diagnosis occurs within 12 months after injury analysis based on sample data provided by carriers for all U.S. states and DC except ND, OH, WA, OH WV and WY

Source: NCCI Research Brief, October 2012, Comorbidities in Workers’ Compensation
Comorbid Claims Cost 2x Comparable Claims

Source: NCCI Research Brief October 2012
A claim is considered to be a comorbidity claim if its first comorbidity diagnosis occurs within 12 months after injury analysis based on sample data provided by carriers for all U.S. states and DC except ND, OH, WA, OH WV and WY Injury Years 1996 - 2007

Source: NCCI Research Brief, October 2012, Comorbidities in Workers’ Compensation
Scope of the Problem

Claims with a Comorbidity Diagnosis are Generally More Costly

A claim is considered to be a comorbidity claim if its first comorbidity diagnosis occurs within 12 months after injury analysis based on sample data provided by carriers for all U.S. states and DC except ND, OH, WA, OH WV and WY.

Source: NCCI Research Brief, October 2012, Comorbidities in Workers’ Compensation
Comorbidity Diagnosis and the Aging Population / Aging Workforce

Claimants with Comorbidity Diagnoses are Typically Older than Other Claimants

Aging workforce! Age 45-65 increase in:
- Obesity
- Chronic Pulmonary
- Hypertension

Source: NCCI Research Brief October 2012
The Majority of Claimants With Comorbidity Diagnosis are Male

Source: NCCI Research Brief October 2012
increased number of claims and increased cost

- Workers’ compensation claims with a comorbidity diagnosis increased from **2.4% in 2000 to 6.6% in 2009 – 175%**
- Claims with a comorbidity diagnosis have about **twice the medical costs** of comparable claims
- Hypertension comorbidity diagnoses are the most prevalent of those investigated
- Initial comorbidity diagnosis tends to occur early in the life of a claim

Source: NCCI Research Brief October 2012
Scope of the Problem Summarized

- Illness rates are increasing in general population
- Workers’ Compensation increasing with a Comorbidity diagnosis
- Claims are more expensive with comorbidities
- Aging workforce increases the likelihood of comorbid diagnoses
Male, Date of Hire: 1997
Date of Injury: 2004 (7 years with Employer, prior to injury)
Date of Birth: 1964 (40 years old at the time of injury, now 51 years old)
Occupation/Accident: Drywall – Throwing trash away.
Body Part / Injury: Low back (specific)
Height 5’7”, Weight 265 (Body Mass Index = 41.5)
Total Incurred: $1,299,875 (Compared to CA WCIRB Average for 2004 claim = $57,923, developed to ultimate)
Lost Time Days: 2,675 Days of TTD paid.
(Compared to Length of Disability, per Official Disability Guidelines of 292-365 Days)
Status: Post low back surgeries (fusions, revision) x 3

- Bladder incontinence due to spinal surgeries
- Sleep apnea due to high doses of opiates
- Depression
- Poor health maintenance (diet and lack of exercise)
- Obesity

- Diabetes - Borderline
- Smoker
- High cholesterol
- Thyroid disorders
- Erectile dysfunction

Due to Comorbidities, this claim is showing:
- 20x higher in Total Incurred
- 87% more Lost Time Days

How do we prevent this from happening?
What Can We Do?

- diabetes
- COPD
- obesity
- depression
- hypertension
- drug abuse
- cancer
- arthritis
- anxiety
- COPD
- psoriasis
- diabetes
- OCD
- schizophrenia
- multiple sclerosis
- fibromyalgia
- pernicious anemia
- COPD
- asthma
- anorexia
- vitiligo
- Guillain-Barre
- psoriasis
- asthma
- Alzheimer’s and dementia
- bipolar diseases
- sjogren’s
- Guillain-Barre
- osteoporosis
- asthma
- anorexia
- schizophrenia
- multiple sclerosis
- chronic fatigue syndrome
- osteoporosis
- psoriasis
- anorexia
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- Safety program
- Hazard analysis
- Ergonomic program
- Physical job demands (PJD)
- Post offer employment testing (POET)
- Aging workforce program
Well-implemented workplace health programs can lead to 25% savings each on absenteeism, health care costs, and workers’ compensation and disability management claims costs

- Executive support
- Wellness committee
- Data Analysis
- Operating plan with specific goals
- Interventions
- Supportive environment
- Measurement – return on investment

Source: http://www.cdc.gov/workplacehealthpromotion/businesscase/benefits/costs.html
Identify existing co-morbidity early in the life of a claim

- Early intervention via nurse triage line or nurse case manager referral
- Onsite medical care
- Estimate expected recovery time using ODG Comorbidity Calculator
- Implement comprehensive drug formulary with prior authorization
- Medication therapy management program
- Record BMI to help determine targets
- Claims costs (Disability Guidelines)
Craft a transitional/return to work program

Identify transitional work assignments that take obesity and other comorbidities into consideration

Verify that long term plans include the comorbidity risk factors

Include “job fit” programs and ergonomic reviews
The UC San Francisco Experience
- Post-rehabilitation fitness program
- Overseen by campus trained fitness staff
- 73 employees were enrolled in the program
- 4 years later only 1 employee had filed a subsequent WC claim

Theorem: *Improving the health and fitness of your employees prevents future WC claims*
Recognizing the value of a systematic, customizable approach to overall health, the University introduced the UC WorkStrong program (http://www.ucop.edu/risk-services/risk-financing-claims/workers-compensation/workstrong-program.html)

WorkStrong is an occupational wellness initiative designed to promote recovery and prevent future workplace injuries. The program was developed with the expertise and collaborative support of UC staff in wellness programs, occupational health and recreational sports.
Eligibility

Original:
- Two injuries within a 24 month period
- Occupational Health Physicians

Current:
- All injuries for employees with co-morbidities who can benefit from the program
- Community Specialists
Program Components

- Fitness and Post Rehabilitation training with certified trainers and professionals designed to promote recovery from injury or promote better fitness, as well as coaching on injury prevention strategies, exercises, and fitness improvement.

- Nutrition and weight management training and consultation with a registered dietician to assess current diet and eating habits and offer suggestions and strategies for a healthy, balanced diet.

- Life balance and stress reduction strategies, modalities and activities to increase awareness about stress levels and managing stress.

- Workplace safety assessment and consultation to ensure a comfortable and safe work environment.

- Ergonomic assessments to ensure proper workplace setup.

- Behavior modification strategies and tools to integrate what you learn into your daily life.
Program Benefits

- Provides employees the extra care they may need for full recovery from a workplace injury
- Enables a quicker recovery from an injury or illness because the employee has access to a broader range of resources
- Explores improved lifestyle choices that may contribute to the employee’s better overall health
- Ensures the employee is being proactive about his or her overall health
- Helps prevent injuries from happening again and protects our employees
- Mitigates Workers’ Compensation costs, which helps the University lower the impact of risk and save vital funding for education, research, public service and patient care
Actual vs Projected Reporting Pattern of Subsequent Claims by Months
(# of Subsequent Claims per WorkStrong Referral Claim)
### University of California WorkStrong

#### Actual versus Expected Incurred Loss of Subsequent Claims by Months

<table>
<thead>
<tr>
<th>Months After Referral Claim</th>
<th>Actual</th>
<th>Expected</th>
<th>Percent Above (Below) Expected</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-3 Months</td>
<td>410,444</td>
<td>387,432</td>
<td>6%</td>
</tr>
<tr>
<td>3-6 Months</td>
<td>323,206</td>
<td>333,936</td>
<td>(3%)</td>
</tr>
<tr>
<td>6-9 Months</td>
<td>147,242</td>
<td>359,514</td>
<td>(59%)</td>
</tr>
<tr>
<td>9-12 Months</td>
<td>31,022</td>
<td>346,351</td>
<td>(91%)</td>
</tr>
<tr>
<td>12-15 Months</td>
<td>148,542</td>
<td>297,904</td>
<td>(50%)</td>
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<tr>
<td>15-18 Months</td>
<td>63,209</td>
<td>270,325</td>
<td>(77%)</td>
</tr>
<tr>
<td>18-21 Months</td>
<td>10,458</td>
<td>217,058</td>
<td>(95%)</td>
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<tr>
<td>21-24 Months</td>
<td>17,684</td>
<td>162,186</td>
<td>(89%)</td>
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<tr>
<td>24-27 Months</td>
<td>0</td>
<td>112,945</td>
<td>(100%)</td>
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<tr>
<td>27-30 Months</td>
<td>2,196</td>
<td>76,199</td>
<td>(97%)</td>
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<tr>
<td>30-33 Months</td>
<td>0</td>
<td>51,052</td>
<td>(100%)</td>
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<tr>
<td>33-36 Months</td>
<td>0</td>
<td>33,932</td>
<td>(100%)</td>
</tr>
<tr>
<td>Total all Months</td>
<td>1,154,004</td>
<td>2,648,833</td>
<td>(56%)</td>
</tr>
</tbody>
</table>

0-36 Months: 56% below Expected!
Questions?
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