Safety and Health among Older Construction Workers in the United States

Xiuwen Sue Dong, DrPH
Xuanwen Wang, PhD
Rebecca Katz, MPH

CPWR-The Center for Construction Research and Training
Silver Spring, Maryland

May 8-11, 2018
Bethesda, MD
Disclosures

❖ This study was funded by the U.S. National Institute for Occupational Safety and Health (NIOSH) grant U60OH009762

❖ The contents of this presentation are solely the responsibility of the authors and do not necessarily represent the official views of NIOSH
Section 1

1. Trends of Aging Workforce

2

3

4
Between 1985 and 2016, the average age jumped 6.6 years in construction, and 4.9 years for all U.S. workers.

Probability of working full time after age 62 and 65 among older workers, by cohort

<table>
<thead>
<tr>
<th>Cohort (Birth year)</th>
<th>Working full time after 62</th>
<th>Working full time after 65</th>
</tr>
</thead>
<tbody>
<tr>
<td>HRS (1936-1941)</td>
<td>42.3%</td>
<td>22.8%</td>
</tr>
<tr>
<td>WB (1942-1947)</td>
<td>49.9%</td>
<td>31.6%</td>
</tr>
<tr>
<td>EBB (1948-1953)</td>
<td>52.0%</td>
<td>34.7%</td>
</tr>
<tr>
<td>MBB (1954-1959)</td>
<td>53.9%</td>
<td>40.7%</td>
</tr>
</tbody>
</table>

Probability of working full time after 65 among older workers, by cohort and occupation

- HRS (1936-1941): 23.8%
- EBB (1948-1953): 30.6% (Construction trades), 38.8% (Management occupations)
- MBB (1954-1959): 42.9% (Construction trades), 43.5% (Management occupations)

2. Patterns of Fatal & Nonfatal Injuries
The rate of fatal injuries for workers aged 55+ years doubled that for workers under age 35

Source: 2016 Census of Fatal Occupational Injuries (CFOI) and the Current Population Survey. Fatality numbers are from the CFOI online database. Calculations by The CPWR Data Center.
Risks of fatal falls increase with age

Risks of fatal struck by injuries increase with age

Risk of fatal caught-in/between injuries increased with age

Risks of fatal falls from ladders increase among older construction workers

Rates of nonfatal falls, slips, trips increase with age

Rates of MSDs, sprains / strains / tears, soreness / pain, and fractures increase with age

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Rate per 10,000 full-time workers</th>
</tr>
</thead>
<tbody>
<tr>
<td>16 to 19</td>
<td></td>
</tr>
<tr>
<td>20 to 24</td>
<td></td>
</tr>
<tr>
<td>25 to 34</td>
<td></td>
</tr>
<tr>
<td>35 to 44</td>
<td></td>
</tr>
<tr>
<td>45 to 54</td>
<td></td>
</tr>
<tr>
<td>55 to 64</td>
<td></td>
</tr>
</tbody>
</table>

Rates of injuries due to contact with / struck by / against object / equipment decrease with age

Older workers need longer recovery periods if injured.

Section 3

3. Health Status and Medical Costs
During the past 30 days, have you had any symptoms of pain, aching, or stiffness in or around a joint?

Source: 2015 National Health Interview Survey. Calculations by The CPWR Data Center.
WITHOUT the use of hearing aids or other listening devices, is your hearing a little trouble, moderate trouble, a lot of trouble, or are you deaf?

Source: 2015 National Health Interview Survey. Calculations by The CPWR Data Center.
Do you have trouble seeing, even when wearing glasses or contact lenses?

Source: 2015 National Health Interview Survey. Calculations by The CPWR Data Center.
Prevalence of obesity increased by 43% among U.S. workers from 2000 to 2015

Percentage of workers who were overweight/obese, 2015

Source: 2015 National Health Interview Survey. Calculations by The CPWR Data Center.
Current cigarette smokers declined by 40% among U.S. workers from 2000 to 2015

Older workers are more likely to be former cigarette smokers, but less likely to be current smokers.
Work limitations among construction workers aged 50+ years, by cigarette smoking status, BMI

Work limitations among construction workers aged 50+ years, by type of condition

- Lung diseases: 64.9%
- Stroke: 58.5%
- Back problems: 53.7%
- Heart problems: 52.1%
- Psych problems: 50.5%
- Diabetes: 47.3%
- Cancer: 45.0%
- Arthritis: 44.0%
- High blood pressure: 40.5%

Work limitations among construction workers aged 50+ years, by physical exercise

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Light</th>
<th>Moderate</th>
<th>Vigorous</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;1 per Week</td>
<td>21.4%</td>
<td>18.8%</td>
<td>13.7%</td>
</tr>
<tr>
<td>1 per Week</td>
<td>26.3%</td>
<td>23.7%</td>
<td>18.0%</td>
</tr>
<tr>
<td>1-3 per Month</td>
<td>39.0%</td>
<td>27.4%</td>
<td>15.5%</td>
</tr>
<tr>
<td>Never</td>
<td>56.1%</td>
<td>54.0%</td>
<td>38.6%</td>
</tr>
</tbody>
</table>

Health expenditures increase with age

Source: 2015 Medical Expenditure Panel Survey. Calculations by The CPWR Data Center.
Out-of-pocket expenditures for baby boomers in poor health nearly tripled that for those in excellent/very good health

<table>
<thead>
<tr>
<th>Self-reported physical health</th>
<th>Mean</th>
<th>Lower 95% CI</th>
<th>Upper 95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Excellent/Very good</td>
<td>$2,106</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Good</td>
<td>$2,786</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fair</td>
<td>$4,544</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poor</td>
<td>$5,966</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: 2014 Health and Retirement Study. Calculations by The CPWR Data Center.
Section 4

1  2  3  4. Conclusion / Discussion
Conclusion / Discussion

▪ **Older workers have:**
  – Declined work ability
  – Higher prevalence of chronic conditions
  – Higher fatality rates
  – Longer recovery periods (if injured)
  – Higher medical costs (however, age is less of a factor in health care costs than the presence of health conditions)

▪ **Healthy aging**
  – Promote Total Worker Health® (even light physical exercise can make a difference)
  – The value of older workers will overcome the negative effects of aging with appropriate management
Data Sources

- Census of Fatal Occupational Injuries (CFOI)
- Survey of Occupational Injuries and Illnesses (SOII)
- Current Population Survey (CPS)
- National Health Interview Survey (NHIS)
- Medical Expenditure Panel Survey (MEPS)
- Health and Retirement Study (HRS)
Thanks!

Contact: SDong@cpwr.com
http://www.cpwr.com