

# The Aging Workforce

**Mark M. Jansen**  
**Vice President**  
**Corporate Safety & Health**  
**Zenith Insurance Company**

# Disclaimer

Zenith Insurance Company (Zenith) assists employers in evaluating workplace safety exposures. Surveys and related services may not reveal every hazard, exposure and/or violation of safety practices. Inspections by Zenith do not result in any warranty that the workplace, operations, machinery, appliances or equipment are safe or in compliance with applicable regulations. Any recommendations and related services are not and should not be construed as legal advice or be used as a substitute for legal advice. Employee protection is ultimately the responsibility of the employer. Policy coverage is not contingent upon the provision, efficacy or sufficiency of these services.

# Objectives

- To understand the impact of the aging workforce on business
- To recognize the common effects of aging and how to minimize their impact
- To examine existing programs and the modifications that can benefit all employees
- To understand the value in accommodating older workers

# Workforce is Getting Older

- The 76 million Baby Boomers are getting older
- By 2010, the number of US workers
  - age 45-54 will grow by 20%\*
  - age 55-64 will grow by 52%\*
- Adults are leading active, healthier lifestyles
- Healthier lifestyles lead to longer life
- Likely to be a higher percentage of older workers in the workforce as time goes on

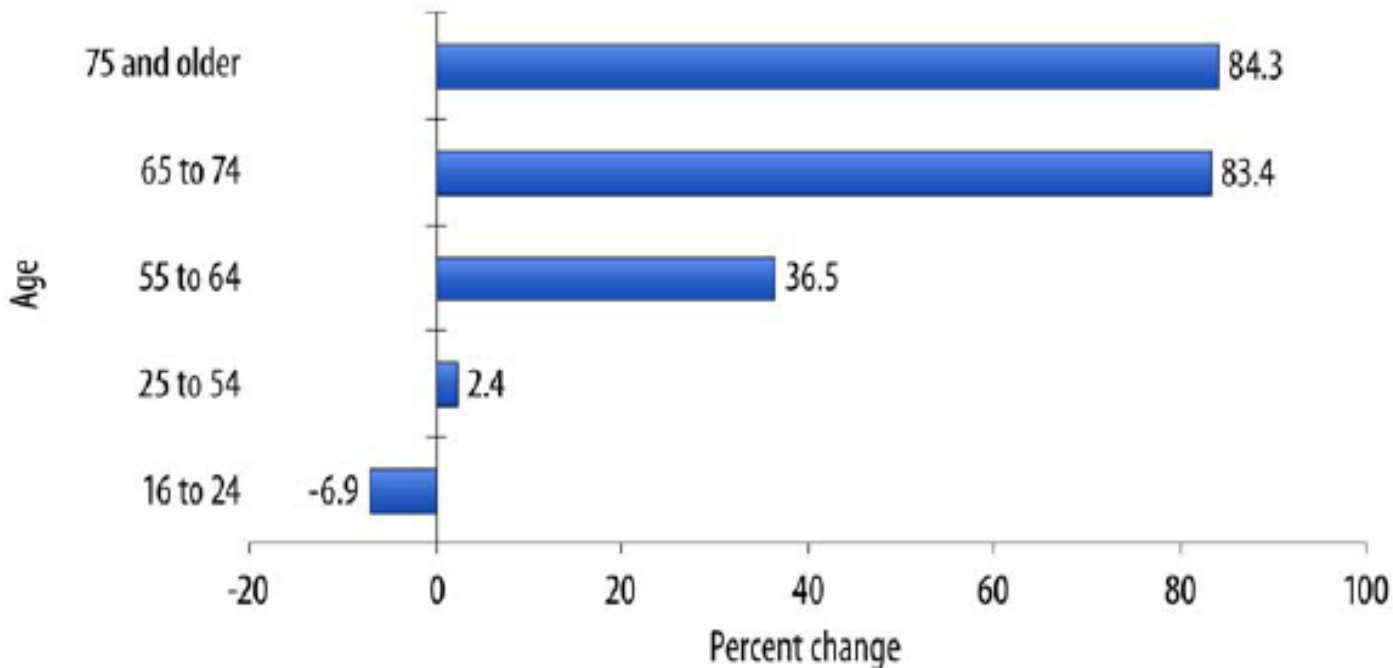
Source: The Conference Board 2005

# Workforce is Working Longer

- Delaying retirements due to economics
  - Need for medical benefits
  - Insufficient resources to retire
- Age 65 is no longer the “normal retirement age”
- Many choose to work longer because they find their jobs interesting or fulfilling
- Many plan to work or start a new career after age 65
- According to AARP, 80% of baby boomers plan to work after retirement age

# Age Distribution of Civilian Labor Force Projected Changes

## Projected percentage change in labor force by age, 2006-2016



Source: U.S. Bureau of Labor Statistics

[www.bls.gov](http://www.bls.gov)

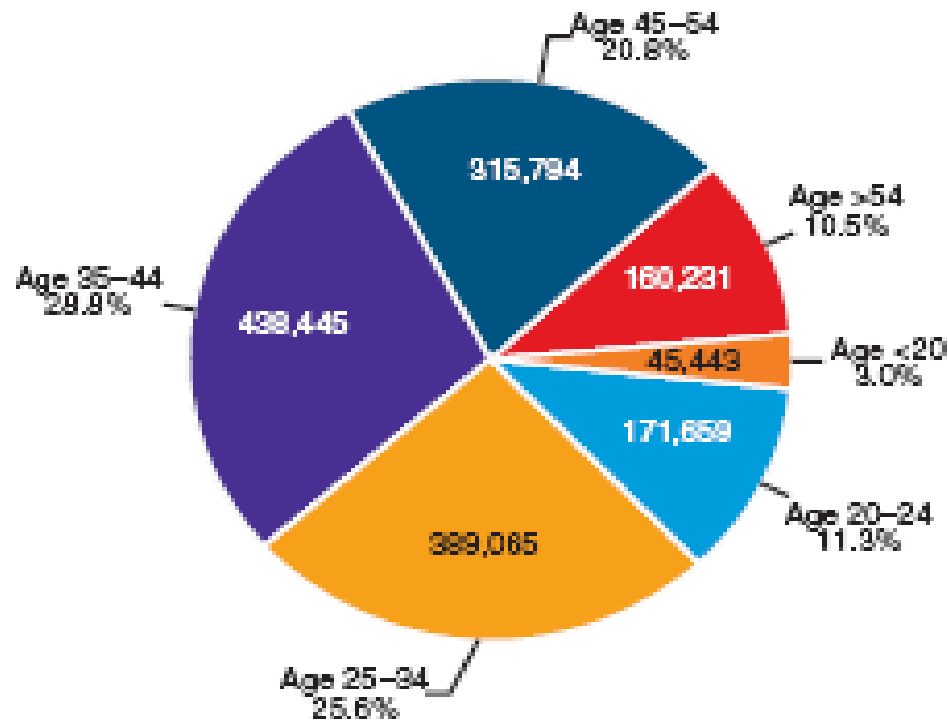
Source: *Employment Projections*

# Impact on Accident Rate and Workers Compensation Costs

- Older workers tend to have fewer accidents
- Injuries tend to be more severe
- Recovery time may be prolonged, resulting in more days away from work
- Chronic pre-existing conditions can make treatment more complex and difficult

**Lower frequency but higher severity**

# Frequency by Age



Number and distribution of nonfatal injuries and illnesses involving days away from work in private industry by age of worker, 2001.

# Reasons For Lower Accident Frequency

## Older workers may act differently

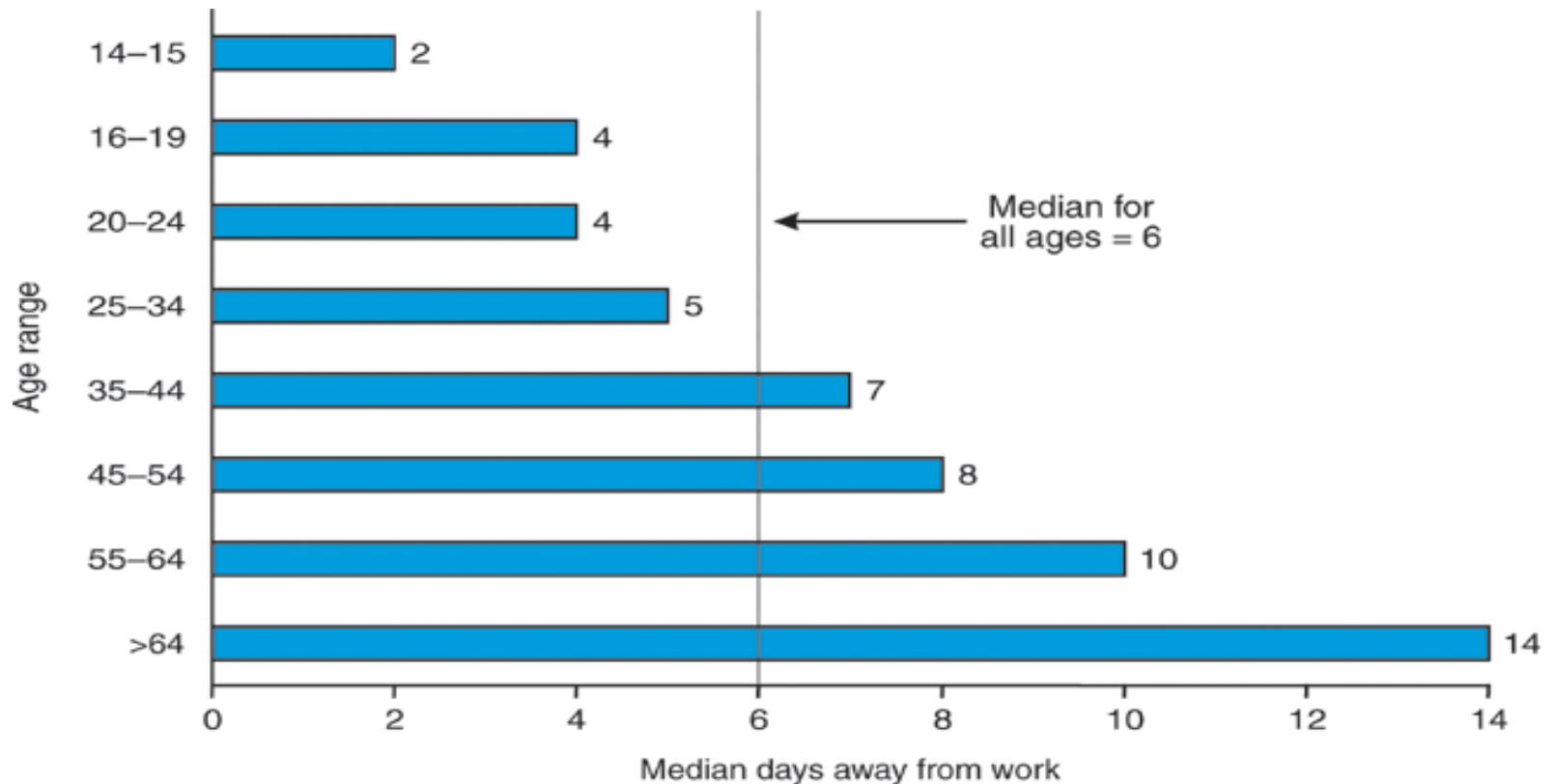
- Engage in fewer risk taking activities
- Less prone to traumatic events
- May minimize or not report injury (“work through the pain”)
- May have altered their work styles
  - Lower physical stress in a more efficient manner
  - Tend to work at a slower speed
  - Focus on a single task at a time
  - Takes longer to learn a task but better retention

# Reasons For Lower Accident Frequency

## Older workers may have different jobs

- Underrepresented in high risk jobs
- Many are in supervisory positions
- More likely to be self-employed

# Severity by Age



Median days away from work due to occupational injuries and illnesses in private industry by age of worker, 2001.

# Reasons For Higher Severity

**Injuries may be directly related to the aging process or pre-existing conditions**

- Joint and bone disease, including osteoporosis, may lead to fracture or severe strain
- Prior injuries related to sports, accidents, etc.
- Hearing loss may change a minor incident into a more severe one
- Reduced vision, especially night vision leads to increased severity in accidents

# Reasons For Higher Severity

## Injuries heal more slowly

- May be complicated by conditions such as diabetes and circulatory problems, in addition to heart disease and cancer

# Farm Workers

- Lack of retirement planning/funding
- Access to healthcare
  - Routine health exams
  - Physical stress at work
- Underreporting of injuries
  - Pain is “just getting older”
  - Don’t want to tell anyone

# Farm Workers

- Vision
  - Regular eye exams
- Night Harvest
  - Vision issues
  - Temperature shifts
  - Cold susceptibility
- Working around livestock
  - Reaction times
  - Physical abilities

# Farm Workers

- Balance
  - Use of ladders
  - Slippery, uneven terrain
  - Climbing on and off equipment
- Reluctancy to admit aging
  - Must keep up with younger counterparts

# Management Issues

- Understanding the changing demographics
- Older workers vs. younger workers
- Strategies for optimizing the use of older workers
- Understanding the tasks which increase risk of accidents
  - Transportation and driving
  - Heavy manual material handling
  - Machine operation
  - Repetitive motions
  - Farming
- Utilizing effective workspace design

# Dealing With The Changing Demographics

- Become aware of the physical and cognitive issues of an aging workforce
- Consider how these may impact tasks that need to be done at your facility.
  - Identify ways to reduce accident exposure
- Encourage employees to improve overall health
  - Diet – important for prevention of many diseases
  - Physical activity – preserve bone mass, build muscles
  - Flexibility and balance training
  - Annual physicals

# Common Effects of Aging

- Muscle loss resulting in reduced strength
- Increased stiffness and reduced flexibility
  - affects range of motion
- Visual challenges (most people over 50 need corrective lenses – near or far - peripheral vision reduced)
- Hearing limitations (30% of people over 65 have high frequency loss)
- Decreased response time and action
- Slower decision making and mental processing
- Reduce lung capacity
- Reduced sensation of pain, vibration, cold, heat, pressure and touch

# Common Effects of Aging

- Slower decision making and mental processing
- Tiring more quickly with slower recovery
- Increased sensitivity to temperatures
- Metabolism slows down, often resulting in weight gain vs. loss of sense of taste with weight loss
- Chronic illnesses
  - High blood pressure, diabetes, arthritis, cataracts, cancer

# Impact of Chronic Disorders and Diseases

- Increased absenteeism due to escalation in health care needs
- Work hours may be limited and/or need to be flexible
- Side effects of medications
  - Decline in balance and coordination
  - Reduced reaction capability
- Willing to “work through the pain” coupled with decreased sensation of pain

# Effects of Aging on Vision

- Eyes lose ability to change shape and focus quickly
- Decreasing speed of eye reaction to dark/light conditions
  - Night vision more difficult
- Overall decrease in vision quality
  - Nearsightedness increases after age 40
  - Medical ailments increase after age 50
    - i.e., cataracts, glaucoma and macular degeneration

# Effects of Aging on Vision

- More difficulty with
  - Motion perception
  - Contrast perception
  - Distinguishing color, especially blue/green
- Greater problems with “dry eyes”

# Accommodating Vision Issues

## Modify the environment

- Provide sufficient lighting in all areas
  - Add task lighting where additional light is needed
- Decrease glare
- Increase font size on computer screen and printed materials
- Use pastel colors in areas requiring high level of concentration
- Use bright or contrasting colors on ramps, stairs and surfaces

# Accommodating Vision Issues

## Modify equipment and tasks

- Use magnifiers to improve seeing small objects
- Use equipment with audio or tactile cues
  - Sound notifications
  - Speech recognition features and software
- Limit driving to daytime hours

# Accommodating Vision Issues for Computers and Video Displays

## Modify the environment

- Decrease glare on monitors, computer screens or other equipment
- Adjust equipment displays and computer settings to enhance visual communication
  - Brightness and contrast
  - Color
  - Font size

# Accommodating Vision Issues for Computers and Video Displays

## Utilize aids and other equipment

- Use software that includes audio or tactile cues
  - Sound notifications
  - Speech recognition features and software
  - Windows Accessibility Wizard to set optimal appearance
- Wear “computer glasses” – single lens vs. bifocals
  - If bifocals, lower monitor to avoid raising chin

# Effects of Aging on Hearing

- Sounds seem less clear and lower in volume
- Tinnitus (ringing, hissing, roaring sound) may occur with aging or be induced by some medications
- High frequencies and low frequencies disappear first, affecting understanding of speech
- Normal part of aging process, even if not occupationally induced
- Hobbies may have contributed to the problem
  - woodworking, hunting, auto repair, listening to loud music

# Accommodating Hearing and Sound Level Issues

## Modify the environment

- Reduce noise levels to lower demand on auditory system
  - background noise
  - high frequency noises
- Relocate, enclose or replace excessively noisy or loud equipment
- Consider noise levels in room design
  - Use sound absorbing construction materials
  - Avoid room designs that create echoes

# Accommodating Hearing and Sound Level Issues

## Utilize aids and other equipment

- Provide communications equipment with volume control
- Address sound related employee complaints
- Use visual or tactile feedback for controls that are hard to hear
  - On computers, use Windows Accessibility Wizard to set audible signals
- Ensure alarms are audible

# Effects of Aging on Cognitive Ability

- Short-term memory may decrease
  - May make memorizing more difficult
  - May increase time to make decisions, more difficult under pressure
  - Impacts ability to multitask
  - Slower response time with complex or unfamiliar tasks
  - Ability to retrieve or transfer information is reduced

# Effects of Aging on Cognitive Ability

- Given adequate time there is little decline in the ability to store new information
- Older adults make fewer mistakes in decisions but take longer
- Some medications may impact cognitive abilities

# Accommodating Cognitive Ability Issues

## Modify the tasks and environment

- Minimize complexity of tasks
- Consider automating certain processes
- Lengthen time requirement between steps in tasks
- Reduce need for multitasking
- Increase decision making time
- Eliminate clutter on computer screens and work areas
- Take advantage of experience

# Accommodating Cognitive Ability Issues

## Provide training and time for practice

- Use frequent and short hands-on refreshers
- Provide separate training classes incorporating different learning techniques for older and younger workers
- Provide opportunity to practice tasks

# Cognitive Ability

## Teaching for the Adult Learner

- Provide no more than 3 critical issues to be learned per session
- Highlight items that must be learned at the beginning, middle and end of session
- Adults remember concepts and place technical points in storage

# Effects of Aging on Physical Ability

- Range of motion may become limited due to deterioration of joints and bones
- Bone mass decreases
- Muscles decrease in mass and elasticity
  - Results in slower response time
  - Stiffer muscle tissue handling stress more difficult
- Physical activity may increase worker fatigue and lead to shortcuts

# Effects of Aging on Physical Ability

- Physical strength and manual dexterity degrade
  - Handgrip strength decreases
  - Fine motor skills decline
- Some medications may impact physical abilities

# Accommodating Physical Limitations

## Modify the task

- Reduce or eliminate heavy lifts through use of manual material handling aids
  - carts, patient lifts, dollies etc.
- Review tasks and process to reduce back, shoulder, knee strains
- Assure tasks have a comfortable range of motion

# Accommodating Physical Limitations

## Modify the environment

- Utilize job rotation to reduce repetitive motion exposures
- Communicate with process and design engineers regarding layout and configuration of production lines

# Accommodating Physical Limitations

## Modify the environment

Make ergonomic changes in equipment and controls using easier methods

- Lever or push button controls vs. knob controls
- On computers, use Windows Accessibility Wizard for alternatives to keyboard and mouse
- Create opportunities for strength training and balance exercise
- Remember walking – distance rather than speed counts

# Effects of Aging Slips and Falls

- Loss of postural stability begins at age 50
- Increased incidence of falls
  - Cause and effect - did the hip fracture because of the fall or did the fracture cause the fall
- Falls account for 16% of fatalities age 55 – 64\*
- Decrease in muscle elasticity causes a shorter stride or shuffle
- Trips more likely in areas where surface changes
- Vision issues may lead to falls down or up stairs

\* Bureau of Labor Statistics, Fatal occupational injuries by selected worker characteristics and selected event or exposure, 2007

# Accommodating Slip and Fall Risks

## Improve working/walking surfaces

- Assess walkways for uneven surfaces or cracks
- Increase importance on use of slip resistant flooring and foot wear to prevent injuries (injury severity is greater).
- Stairway condition
  - Anti-slip treads
  - Handrails available and at correct height
  - Lighting

# What Else Can be Done?

## **Develop a safety program geared toward older workers**

- Conduct more frequent refresher training
  - Can reduce accidents resulting from omission errors
- Utilize job safety analysis to identify risks
- Evaluate ergonomic risks
  - Implement solutions to accommodate aging workers

# What Else Can be Done?

- **Enhance injury prevention through health and wellness programs**
  - Weight management, health risk assessments, smoking cessation, fitness coaching, health club discounts
  - Annual Physical
  - Walking

# Employee Training

**Provide training to all employees on safety issues of particular importance to older employees**

- Safer lifting techniques can reduce back strain and tendonitis
- Slip, trip and fall prevention
- Use of manual material handling aids
- Emphasize job-specific safety guidelines
- Provide time to practice new tasks and develop familiarity

# Job Safety Analysis

## Conduct Job Safety Analysis (JSA)

- Breaks the job down by each basic step
- Identifies potential hazards
- Determines correct way to perform job to minimize risk
- Can be done on virtually any job

# Ergonomics

## Conduct ergonomic evaluation of workstations

- Fit the work environment and hours to the worker
- Identify repetitive motion exposures
- Reduce or eliminate designs that compromise grip, leverage or mechanical advantage
- Consider using the more senior staff to evaluate tasks and provide training
- Leverage experience

# Employee Wellness Program

## Establish an employee wellness program for injury prevention

- A healthier lifestyle can delay or reduce physical and mental effects of aging
- Regular exercise and stretching can prevent injuries
- A healthy diet can help prevent ill effects of weight gain and chronic diseases
- Provide appropriate health, sick and disability benefits

# Employee Wellness Programs

## Help employees to help themselves

- Provide programs for
  - Weight management
  - Health risk assessments
  - Smoking cessation
  - Fitness coaching
  - Health club discounts
  - Walking clubs

# Other Employer Considerations

## Consider employees' needs

- Communication and understanding between the production environment and Human Resources of issues facing older workers
- EAP programs should emphasize needs related to aging

# Other Employer Considerations

## Consider experience as a resource

- Use experience resource opportunities of older workers
  - Consider a mentoring program within the organization
  - Include older workers in job-specific orientation and training of new employees
  - Reach out to schools which could provide future employees

# Resistance to Change

- The more “experienced” worker may be more resistant to change
- Employees may perceive it costs them something to change
- Employees may be reluctant to engage in new skill learning
- Present good reasons why its in their best interest to take extra precautions

# Conclusions

- Accommodating older workers provides enhanced
  - Intellectual capital
  - Seasoned judgment
  - Flexibility
  - Creativity

# Conclusions

- Incorporate accommodations by
  - Including older workers in the design process
  - Fitting the task to the person
  - Adapting training to fit their style
  - Seeking outside professional help
  - Providing policy and procedures to fit their lifestyle
  - Job sharing

# What Does This Mean For Your Business?

## Consider the following:

- Impact of older workers on the business
- Advantages to having older workers
- Injuries to older workers that have already occurred
- Tasks and jobs that may increase risk to older workers
- Accommodations that can be made
- Modifications made for older workers contribute to increased safety and productivity for everyone

With the baby-boom generation about to start joining the ranks of those age 65 and over, the graying of the American workforce is only just beginning.

# Questions



## **Zenith Insurance Company**

Corporate Office: 21255 Califa Street Woodland Hills, CA 91367

© 2009 Zenith Insurance Company. All Rights Reserved.

® Zenith and TheZenith are registered U.S. service marks.

**TheZenith®**