

THE AGING WORKFORCE: OLDER WORKER SAFETY

Introduction

Many organizations are finding themselves at risk for talent shortage or significant knowledge loss as their more experienced workers leave the work force. Employers are faced with the need to retain older workers who may be critical to operations. Talent shortage in the labor force is working its way through various industries – such as health care, energy, manufacturing, transportation, education and the government – affecting the competitiveness and business strategies of the organizations within each group. The impending knowledge drain has been identified as a primary concern of a majority of employers today.

Many workers are willing and able to continue working beyond the traditional retirement age. In light of current economic conditions, some may need to stay in the work force. Yet, these workers can be expected to experience some physical and cognitive changes that may or may not affect safety and quality. We encourage businesses to look at the demographics of the current workforce, to assess their future needs relative to older workers, and to make informed decisions regarding task redesign and facility changes to support an older workforce, maximizing older worker performance while minimizing injuries and operating problems.

The Challenges

The challenges reflect the fact that as people age, there appears to be an intuitive deterioration in functional abilities such as eyesight (acuity, peripheral vision, depth/color perception), hearing, strength,

flexibility, reaction time and mental processes (slower recall rates and less effective short-term memory). As might be expected this raises operational concerns about productivity, quality and safety. However Bureau of Labor Statistics (BLS) data does not support these concerns in the 55-64 age groups. In fact, the injury frequency rate per man hours worked is lower for this age group than for other age groups. Depending on the job requirements, the deterioration may or may not be a significant concern at all. In some instances, retaining older workers may offer distinct advantages. Some of the changes that typically occur with age are listed here:

- Balance is affected. One third of all compensable injuries to employees over the age of 65 are falls. Twenty per cent of the falls to employees over 55 are fatal. Many of these falls involve ladders.
- Reduction in muscle strength can result in fatigue and loss of flexibility. Persons age 50-60 may have lost 15% to 25% of their strength compared to age 25-35. If not addressed, reduced strength can be associated with back and shoulder strains.
- Severity is affected. The median numbers of days lost due to injury increase with age; 6 days for all workers, 10 days for workers age 55-64 and 14 days for workers over 65.
- Vision is affected. A decline in static visual acuity begins at age 60. A decline in dynamic visual acuity can begin at age 45. Night time legibility distances of highway signs for drivers over age 60 are 23-35% less than the legibility distance of younger drivers.



Vision, reaction time and reflexes combine to affect safe driving. Highway accidents account for 18% of the fatalities to employees over the age of 55. Drivers 65 years of age or older are twice as likely to be killed as the result of a vehicle accident.

So what can you as an employer do to keep your older workers safe and productive?

Workplace Design

An ergonomically well designed work place benefits everyone, not just older workers. Whether or not your organization is planning to accommodate older workers specifically, it is good business to reduce ergonomic stressors by evaluating the tasks to improve comfort and productivity and to identify transitional duty tasks that allow skilled employees to return to work promptly. Your Hartford Loss Control Consultant may be able to offer additional ergonomic assistance. For more information, including reference to The Hartford’s Technical Information Papers Series, visit www.thehartford.com/losscontrol.

The Choices

Some companies are testing innovative recruitment, retention, workforce planning, and flexible work solutions in an effort to attract and retain the talent needed to maintain productivity. Giving older employees options in work schedules and performance requirements can encourage retention and attendance. Telecommuting may be an answer if the employee does not have to be at the employer’s work place all the time.

Accommodations

The following tables provide suggestions for mostly simple modifications to support optimal and safe performance of job tasks by older workers. As indicated above, many of these modifications can benefit all workers.

COMMON AFFECTS OF AGING AND METHODS OF ACCOMMODATION

AFFECTS OF AGING ON VISION	ACCOMMODATIONS FOR VISION CHANGES
<ul style="list-style-type: none"> • Eyes lose the ability to change shape and to focus quickly • Decreasing time for eye reactions to light/dark changes makes night vision more difficult • Overall decrease in vision quality. Nearsightedness can begin at age 40 Medial ailments increase after age 50 (cataracts, glaucoma and macular degeneration) • More difficulty with motion perception, contrast perception and distinguishing color (especially green and blue) • Greater problem with “dry eyes” 	<p>Modify equipment and tasks</p> <ul style="list-style-type: none"> • Use magnifiers to improve seeing small objects • Use equipment with audio or tactile cues, such as sound notification or speech recognition software • Reduce night driving • Use computer glasses with single lens. If wearing bifocals lower the monitor to avoid raising the chin.



COMMON AFFECTS OF AGING AND METHODS OF ACCOMMODATION

AFFECTS OF AGING ON HEARING	ACCOMMODATIONS FOR HEARING CHANGES
<ul style="list-style-type: none"> • Sounds seem less clear and lower in volume • High frequencies and low frequencies disappear first, affecting understanding of speech • Tinnitus (ringing, hissing, roaring) may occur with aging or be induced by some medications • Normal part of the aging process even if not occupationally induced • Hobbies may have contributed, such as listening to loud music, woodworking, auto repair or shooting 	<p>Modify the work environment</p> <ul style="list-style-type: none"> • Reduce background and high frequency noise to lower the demand on the auditory system • Relocate, enclose or replace excessively noisy equipment • Consider noise levels in room design. Use sound absorbing construction materials and avoid rooms designs that create echoes <p>Modify equipment and tasks</p> <ul style="list-style-type: none"> • Provide communications equipment with volume control • Address sound related employee complaints • Use visual or tactile feedback for controls that are hard to hear. Use Windows Accessibility Wizard to set audible signals • Ensure that all alarms are audible
AFFECTS OF AGING ON COGNITIVE ABILITY	ACCOMMODATIONS FOR CHANGES IN COGNITIVE ABILITY
<ul style="list-style-type: none"> • Given time there is little or no decline in the ability to store new information • Intelligence is not effected until the 8th decade unless there are nutritional or other deficiencies • Older adults make fewer mistakes in decisions, but take longer • Some medications may impact cognitive ability • Short term memory may decrease. This may make memorizing more difficult, may increase time for decision making, make decisions more difficult under pressure, impact ability for multi-tasking, slow down response time for unfamiliar tasks, reduce ability to retrieve and transfer information • Response time increases • Older workers are more effected by temperature extremes • Older workers can feel disengaged from the organization 	<p>Modify the work environment</p> <ul style="list-style-type: none"> • Minimize complexity of tasks • Consider automating certain processes • Lengthen time requirements between steps • Reduce the need for multi-tasking • Increase decision making time • Eliminate clutter on computer screens and work areas • Reduce extremes of temperature <p>Provide time for training and practice</p> <ul style="list-style-type: none"> • Adults learn best through hands on experience and repetition of new things in short sessions • Provide separate training classes incorporating different learning techniques for older and younger workers • Provide opportunity to practice tasks • Experience in motor tasks decreases the need for attention capacity <p>Teaching the adult learner</p> <ul style="list-style-type: none"> • Provide no more than 3 critical issues to be learned per session • Highlight key points at the beginning, middle and end of the session • Adults remember concepts and place technical points in storage • Recognize the experience and value of institutional knowledge by rewards and recognition and adjust expectations



COMMON AFFECTS OF AGING AND METHODS OF ACCOMMODATION

AFFECTS OF AGING ON PHYSICAL ABILITY	ACCOMMODATIONS FOR CHANGES IN PHYSICAL ABILITY
<ul style="list-style-type: none"> • Range of motion may become limited due to deterioration of joints and bones • Bone mass decreases • Muscles decrease in mass and elasticity • Response time increases • Older workers are less tolerant to shift work • Stiffer muscle tissue makes handling muscular stress more difficult • Physical activity may increase fatigue and lead to short cuts • Physical strength and manual dexterity degrade • Hand grip strength decreases • Fine motor skills decline • Some medications may impact physical abilities 	<p>Modify the task</p> <ul style="list-style-type: none"> • Reduce or eliminate heavy lifts with material handling aids (carts, patient lifts, dollies, etc) • Schedule any physically demanding tasks early in the work shift after muscles are warmed up when workers are at their best • Review tasks to reduce back, shoulder and knee strains • Assure that tasks require a comfortable range of motion • Sit versus stand and use ergonomic seating • Provide adequate rest breaks <p>Modify the environment</p> <ul style="list-style-type: none"> • Utilize job rotation • Design material flow and processes to reduce reaching and foot travel • Make ergonomic changes to equipment to use lever or push button controls, rather than knob controls. Use Windows Accessibility Wizard for alternatives to keyboard and mouse • Create opportunities for stretching, strength training and balance exercise • When walking, distance over speed counts
AFFECTS OF AGING ON SLIPS AND FALLS	ACCOMMODATIONS FOR SLIPS AND FALLS
<ul style="list-style-type: none"> • Loss of postural stability begins at age 50 increasing incidence of falls • Cause and effect – did the fall cause the hip fracture or did the fracture cause the fall • Falls account for 16% of fatalities to employees between the ages of 55-64 (BLS 2007) • Decrease in muscle elasticity caused a shorter stride or shuffle • Slips are more likely in areas where surfaces change • Vision issues may lead to falls up or down stairs 	<ul style="list-style-type: none"> • Reduce the need for elevated work and the use of ladders • Assess the walkways for cracks and uneven surfaces • Reduce outside travel over unimproved ground • Use slip resistant floor coverings and encourage slip resistant footwear • Floor cushioning should balance the need for stability versus cushioning • Improve stairway conditions with proper lighting, non slip treads, handrails that do not rely on pinch grip and are at the proper height



COMMON AFFECTS OF AGING AND METHODS OF ACCOMMODATION

AFFECTS OF AGING ON DRIVING	ACCOMMODATIONS FOR DRIVING
<ul style="list-style-type: none"> • Night vision is more difficult • Decision time may be increased • Reaction time and reflexes are slower • Balance may be effected when getting in and out of vehicles and walking over curbs 	<ul style="list-style-type: none"> • Reduce night driving • Plan routes and provide GPS • Reduce driving on unfamiliar routes • Reduce the physical requirements for loading or unloading

Return to Work

Since severity and lost time is likely to be higher with older workers, transitional duty can be important to controlling indemnity costs. The physical and other challenges associated with aging may add to the difficulty of matching the individual to transitional duties. However, the diverse work experience and an array of capabilities of older workers can offer additional possibilities for value adding transitional duty tasks. Functional job descriptions and identification of tasks, projects and other opportunities for transition duty in each operating entity or department can be a good start. For more information, see The Hartford's TIPS paper *Return-to-Work a Win-Win Opportunity in Ten Easy Steps, and Return-to Work, Ability Management Program Guidelines*.

Retirement

Does your organization have a strategy to address the knowledge drain and the business implications of retirement?

- Start addressing knowledge transfer today. Cross training and using older workers in training and mentoring.
- Try to assess employee's intentions as a way to plan the future. Discuss and document career path and development goals with all employees.
- Determine if a phased retirement plan makes sense for your organization. For those employees who want

to stay engaged because they want the income, they want to continue to build retirement savings or they want the social and mental stimulation of work, consider offering job sharing, part-time or contract arrangements. Flexible work arrangements may support baby boomers who are pushed to the limit at home acting as caregivers for other members of their household. Familiarize yourself with applicable human resources legislation such as the Pension Protection Act and ERISA. Consult with your legal counsel as necessary.

- Consider providing retirement education to your work force. Employees have a growing appetite for advice and guidance to prepare for the costs of health care, prescription drugs, and long term care.

Watch for additional legislation on the use of phased retirement programs and always consult legal counsel to avoid age discrimination complaints.

References (Hartford Technical Papers)

- Alternative Work Schedules: Shiftwork, Rotating Shifts, and Overtime
- Shedding Some Light on /Lighting
- Telecommuting
- Return-to-Work: A Win-Win Opportunity in Ten Easy Steps
- Return-to-Work Ability Management Program Guidelines

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