Are You Sitting Down?

Active workstations—active workstations an alternative for sedentary workers, but not a substitute for consistent exercise program

By Karen O'Hara

If you feel as if your backside is adhered to your chair, you might want stand up while you read this.

Sedentary lifestyles have serious health and safety consequences. Physical inactivity is linked to obesity, diabetes, cardiovascular disease and cancer, as well as increased stress levels and risk of injury or illness due to de-conditioning.

By necessity, many employees spend the majority of their work day sitting down. In general, American workers sit far longer than they did prior to the advent of “cubicle farms,” the internet and electronic recordkeeping. As a result, employers are looking for ways to encourage movement and promote good health without diminishing productivity.

Active Workstations

Many companies offer employee wellness programs and sponsor fitness challenges. Other solutions designed to counteract sedentary effects on mental and physical well-being include open-plan offices, cordless headsets, flexible work schedules, job rotation and micro-breaks.

Active workstations—including sit-stand desks and treadmills, cycles or elliptical trainers fitted with keyboards and work surfaces—are also cropping up in U.S. workplaces. As relative newcomers, these workstations are the subject of research and debate.

As part of its mission to protect workers from harm, the Total Worker Health office of the National Institute for Occupational Safety and Health (NIOSH) recently invited an expert panel to offer insights on active workstations during a session on Sedentary Work: Implications and Interventions for Worker Safety and Health.
The panel’s general consensus: Active workstations appear to be a viable alternative in certain situations, but they should not be considered a substitute for rigorous exercise, nor are they suitable for all workplaces or populations.

Experts on the panel agreed that more longitudinal field research involving large numbers of workers in study and control groups are needed to evaluate:

- anticipated positive outcomes such as improved cardiovascular health, fewer musculoskeletal complaints and weight loss
- associations with lower medical and insurance costs over time
- risks for developing or aggravating physical complaints
- safety hazards such as slips and falls
- effects on productivity
- psychological aspects such as job satisfaction, commitment and sense of control
- return on investment in equipment and maintenance
- space and scheduling challenges

**Workstation Considerations**

“Worker health and safety is a foundational tenet for NIOSH,” said L. Casey Chosewood, M.D., director, Total Worker Health. “The safety of interventions should be first and foremost. Hearing from these panelists, I have the sense that some level of employee control over the use of (active workstations) is important. One size would not fit all; these interventions are not for everybody.”

That’s not to say he isn’t receptive to the concept. Dr. Chosewood is among employees in his office at the Centers for Disease Control and Prevention who use a treadmill workstation a few hours a week as part of a voluntary pilot program. He also makes a conscious effort to stand at meetings and during conference calls.

In addition to safety considerations, employers are advised to apply sound ergonomic principles when selecting and setting up active workstations. For example, height and arm rests should be adjusted to fit the individual employee.

It’s also important to ensure employees receive equipment training, that workstations do not impede access and there are no electrical or trip hazards. Rolling carts and chairs, desk accessories and personal items need to be kept separate from moving equipment.

The University of Kentucky’s **treadmill workstation guidelines** recommend an at-work speed of no more than 2 miles per hour and a grade of less than 3 percent. New users are advised to confer with a health care professional before beginning and gradually increasing activity. A treadmill should be equipped to handle the maximum weight of the heaviest user and have an emergency shut-off system. Appropriate footwear, clothing and office temperature for a slow pace also should be considered.

From a legal perspective, attorneys advise employers to evaluate liability risk in the event of injury and the potential for discrimination claims if active workstations are not available across the enterprise. Employees may be asked to sign a waiver before using an active workstation.

**Health Benefits**

During the Total Worker Health session, panelist Nathan Fethke, Ph.D., an associate professor in the Department of Occupational and Environmental Health at the University of Iowa, and deputy director, Total Worker Health on the U of I campus, said workstation design research often focuses on musculoskeletal and cardio-metabolic benefits.
For example, a review of small-group studies suggests standing for part of the day may help relieve physical discomfort that could be a symptom of a preventable musculoskeletal disorder (MSD). Meanwhile, limited research shows sit-stand stations do not measurably diminish productivity, said Fethke, who frequently stands while reviewing student papers.

Vendors of motorized, adjustable-height desks report that sit-stand features improve blood circulation, reduce MSD discomfort, improve mental acuity and mood, and may even increase one’s life span.

In examining potential disease-prevention benefits associated with moving workstations in comparison to static workstations, panelist Dinesh John, Ph.D., an assistant professor in the Department of Health Sciences at Northeastern University, said even slow-paced treadmills increase blood flow and energy. The more dynamic the activity, the greater the chance of health benefits such as weight loss and improved control over blood sugar levels. However, there is less evidence that sit-stand workstations promote cardio-metabolic improvements.

In a study, A Physiological Perspective on Treadmill and Sit-to-Stand Workstations, (see Ergonomics in Design special issue under references), John and co-authors Kate Lyden and David Bassett report: “Compared with sitting, walking and/or standing accumulated during the workday, using these workstations will increase muscle contractions, which may influence blood flow, energy expenditure, metabolism, musculoskeletal health and brain function. Physiological responses when using treadmill and sit-to-stand workstations may vary due to differences in muscle contraction type (dynamic vs. static) and may thus affect cardio-metabolic and musculoskeletal health and brain function in different ways.”

John, who uses a sit-stand desk at Northeastern, and other experts strongly caution that moving workstations should not be considered a substitute for a consistent exercise program.

Other Influencing Factors

“There is still a lot to learn about how these workstations will be able to improve chronic disease outcomes,” he said. “One of the problems in studies is sustaining behavior change. Since it is possible that it will take longer for these interventions to demonstrate an improvement in cardio-metabolic outcomes, we may need to strategize about options and the role of sustainability in their use.”

In studying active workstations, panelist Manuel Cifuentes, M.D., M.P.H., a senior biostatistician in the Center for Health Policy and Research at the University of Massachusetts Medical School, found productivity is higher when an employee is standing or sitting rather than walking.

“There are a lot of jobs that require prolonged standing, walking, bending or stooping. Where is the happy medium? It’s very important to consider mechanisms beyond moving or not moving,” said Dr. Cifuentes, who uses a sit-stand desk. “We shouldn’t rush to invest in these changes until we understand these factors and their impact on health. We need to look at it from a broad perspective.”

In addition, he noted: “Those most affected by sedentary lifestyle-related diseases tend to have low job autonomy and are in middle-to-lower socioeconomic classes. If you have job control, you have a much higher chance of using an active workstation.”

“Federal physical fitness guidelines recommend at least 150 minutes per week of moderate-to-vigorous aerobic activity and muscle-strengthening activities at least two days a week; resistance training two days a week plus 75 minutes of vigorous aerobic activity per week; or a combination of these.”
In any given situation, barriers to use may include:

- Equipment noise (some employees find it disruptive)
- Office configuration and privacy constraints
- Workstation height (some users say they feel uncomfortable about being elevated above or looking down on co-workers)
- Perceived lack of personal willpower to be consistent
- Peer pressure
- Potential development or exacerbation of physical complaints
- Investment in appropriate footwear
- Risk of overdoing it
- Not altering diet to match fitness goals

**Psychological Well-Being**

Panelist Michael T. Sliter, Ph.D., a senior consultant with FurstPerson, Inc., a talent assessment software firm, said the nation’s “obesity epidemic” is a key driver of interest in active workstations. As a psychologist, he is intrigued by both the physical and mental health implications of active workstations.

In 2014, Sliter and other researchers in the Psychology Department at Indiana University-Purdue University Indianapolis, reported findings from a study in which 180 participants were evaluated on levels of boredom, task satisfaction, stress, arousal and performance while completing work-related computer tasks at four randomly assigned workstations: seated, standing, cycling or walking.

“We found that participants in walking and cycling conditions tended to report higher levels of arousal and lower levels of boredom compared to seated and standing conditions,” Sliter reported. “Additionally, those in the walking condition had lower feelings of stress and higher feelings of satisfaction. Performance was comparable between walking, seated and standing conditions, and lower for those in the cycling condition.”

The results suggest people using walking workstations are more likely to experience psychological benefits without performance decrements. People cycling had trouble stabilizing their arms, which impacted their ability to type.

“We found that walking workstations, regardless of a person’s exercise habits or body mass index, had significant physical and psychological benefits,” said Sliter, who routinely uses a walking workstation.

The degree to which physiological and psychological responses to active workstations will persist or carry over into other life domains awaits future study.

**Functional Fitness**

Another panelist, Jennifer Hess, D.C., Ph.D., M.P.H., a chiropractor and ergonomist affiliated with the Labor Education and Research Center at the University of Oregon, studies connections between functional fitness and sedentary work.

According to Dr. Hess, people develop muscle asymmetries—right to left, front to back, top to bottom—from prolonged postures and activities such as repeated bending or sitting 40 hours a week. For example, when gluteal muscles are weakened by sitting, low back muscles compensate, increasing injury risk. Weak buttocks muscles are also associated with asymmetrical muscle control at the hip joint. This could partly account for a dramatic increase in hip surgeries among healthy U.S. adults since 2000.

“Sedentary workers need exercise programs to improve muscle symmetry, coordination, timing and control to better handle real-life physical activity,” said Dr. Hess. “Dynamic, functional fitness exercises train muscles to work efficiently and decrease injury risk.”

Core fitness is part of a comprehensive solution, not a substitute for ergonomic solutions, she added.
Low-Tech Options

While empirical evidence from field research is lacking, it is generally believed that frequent, short breaks can help sedentary workers reduce injury risk and improve concentration. Micro-breaks of no more than one minute may be used to perform simple rhythmic movements, stretch, adjust one’s gaze or breathe deeply.

It’s also advisable to periodically disengage from the workstation. Suggestions include getting a drink of water in the break room, delivering a message to a colleague in person, standing at meetings and using a cordless headset to move around during phone calls.

When sitting at your desk, check your posture: straight back, upper arms parallel to the spine, elbows bent at keyboard height, monitor positioned so the gaze is centered. Thighs should be parallel to the floor with feet planted on the ground or on an adjustable foot rest.

When using the phone, the receiver should not be cradled on the shoulder; a headset or speaker-phone function will help prevent poor posture. Exercise professionals say substituting a chair with a stability ball also may help improve posture, balance and core strength, but there are potential disadvantages associated with prolonged use including lack of arm and back support, non-adjustable height (too low), fatigue and slippage.

During the work day, many people feel it is particularly beneficial to use the stairs and go outside. Those who need a reminder to take a break can try setting a timer.

Resources and References

1. Workout at work: Laboratory test of psychological and performance outcomes of active workstations; walking workstations might have psychological benefits to individuals, regardless of weight and exercise habits; MT Sliter and Z Yuan; Journal of Occupational Health Psychology, Vol. 20(2), 259-271, April 2015.


3. Facilitators and barriers to using treadmill workstations under real working conditions; a qualitative study in female office workers; removal of barriers (setup, noise, disruption, peer pressure) likely needs to be considered when offering these workstations to workers with low job autonomy; M Cifuentes, et al.; American Journal of Health Promotion, Online First, 2015 (in press).


5. Active workstations make fitness part of the job; USA Today, July 6, 2015.

Treadmill Workstation Helps Induce Healthy Muscle Activity, Study Shows

Julie Côté, Ph.D., an associate professor in the Department of Kinesiology and Physical Education at McGill University, Quebec, Canada, is studying ways to reduce or eliminate musculoskeletal complaints that affect one in ten office workers at some point in their careers.

One of her research projects involves the use of treadmill workstations.

“These workstations may be good for getting people moving and losing weight, but no one has looked into how this kind of posture affects the muscles in the neck, shoulders and lower back,” she said. “Even though office workers may not naturally see it that way, their body is basically their work instrument, just as it is for an athlete. It can get injured in similar ways and for similar reasons: overuse of certain muscles.”

At the Occupational Biomechanics and Ergonomics Lab at Jewish Rehabilitation Hospital in Laval, Quebec, she and her fellow researchers measured muscle activity in the neck, shoulders, forearms, wrists and lower back of experiment subjects while they completed a 90-minute typing task. The subjects were either walking on a treadmill or sitting.

They found lower and more variable neck and shoulder muscle activity when subjects were walking compared with sitting. The results suggest that walking while performing computer work may be effective in inducing healthier muscular patterns, possibly explaining reports of lower levels of discomfort while walking compared to sitting.

Côté’s low-tech solution to reducing muscle pain among office workers is simple: minor movements and adjustments of position every few minutes.

References:


The following edited excerpt from the panel discussion features:

- Darrell Brown, Chief Claims Officer, Sedgwick Claims Management Services, Inc. (above left)
- Karen Casserly, Director of Client Services, Safety National, an alternative risk funding company (above center)
- Patti Colwell, Manager, Workers’ Compensation Program, Southwest Airlines (above right)

The session was moderated by Kimberly George of Sedgwick and Mark Walls of Safety National.

**Q: How can we be sure our workers’ compensation claims handling process is effective?**

**Brown:** You need to be sure that examiners and nurses are doing their jobs by measuring their performance. The conversation needs to shift from, “Did you make contact with the claimant within 24 hours?” to “Did you make contact and help the injured employee with the return-to-work process?” Someone has to take the injured employee through the process and explain what is going to happen. If you don’t walk them through it at the outset, the outcome will be poor.

**Colwell:** Darrell is correct. There are some traditional metrics that are still very important; you have to make sure certain tasks are done. But if you don’t look at the overall claims picture, specific reports don’t mean anything. We want our (claims partners) to help us cull data to figure out what we need to do to get that injured employee as well as possible. It’s a team effort.

**Q: What are some examples of actionable items?**

**Colwell:** There are some very specific reports that we have worked with our partners to develop, such as physician dispensing reports. We delve into the details to identify costs and fluctuations, and in states where we can, we contact prescribers and advise them to use our vendor partner.

**Casserly:** We work with employers to determine what safety managers and teams should know. When you start talking to employees, they may not even be aware that their employer is self-insured. They need to understand the implications of that. When we train all the supervisors, we assume they get it, but many of us work in very large organizations, and that knowledge can quickly go away. Knowledge assessment helps us determine what we need to focus on and where we need to be as an organization.

**Q: What type of benchmarking should occur?**

**Brown:** When measuring outcomes, it’s critical to understand where you are today before you can identify opportunities for improvement. You have to start somewhere. You can benchmark against peers, business data and yourselves. Are you an outlier? Succeeding in a big way? If you do a micro-focused analysis, the data will tell you. You also have to set realistic goals. For example, if you want to reduce duration by 10 percent within one year, is that a feasible goal for your organization? If the answer is yes, then you need to find the resources to reach that goal.

**Colwell:** First and foremost, we benchmark against ourselves. We want to see how we are improving
Q: How can employers develop meaningful key performance indicators (KPIs)?

Casserly: Once again, you have to get back to your audience. For example, if a municipality has a 3 percent tax rate and a $20,000 claim, how much revenue does the city have to generate to pay for that claim? If it’s a grocery store, how many pieces of produce does that store have to sell to compensate for that claim? It’s always nice to give the big KPI to senior management, but driving down to the departmental level helps with holding people accountable.

Q: How do you set goals for your vendor partners?

Colwell: We sit down with them and look at key focus areas for the next year—goals for the company, as a department, as a team. We use the data to implement contracts with our vendors, not to be punitive in nature but to all be on the same page.

Q: Do you recommend establishing performance guarantees for vendors?

Colwell: We don’t want to cause financial hardship for our vendors, but we want them to take notice. We definitely use the carrot approach. We have a managed care performance goal based on percentage of savings. We have a goal related to contact... instead of contact within 24 hours, it’s meaningful contact. People can be difficult to reach. How hard did the examiner try? We also measure overall satisfaction. It’s important that people are happy with the services.

Q: What is the most effective way to get examiners or nurses to look at KPIs?

Brown: What makes or breaks a claim is prescription costs and litigation rates, so it’s important to measure those parameters. Examiners have to understand the client’s goals and how those goals will be measured and rewarded. It’s not about claims management, per se, it’s about helping injured employees in a way that is efficient and effective. It’s a matter of following progress, taking remedial steps, tracking and measuring, and understanding how resources come into play.

Q: What are some key elements of success in the claims process?

Casserly: We focus so much on the TPA and risk manager relationship that we forget about communicating to supervisors, coaching and explaining the importance of empathy. We can talk all we want at a higher level, but we need to explain goals to supervisors so they understand why we want the employee back to work and how that absence affects their bottom line. If the supervisor assumes a claim is bogus, it creates a barrier to getting the employee back on the job.

George: It’s all about collaboration. Key stakeholders recognize that we have to be advocates for the claims team, the people in the field and the injured worker. This is an exciting time. We are getting away from an adversarial approach and really take caring of people.

Walls: We keep hearing about the need to evolve from being combative to being more customer-service oriented toward the injured worker.

Colwell: I love our collaborative claim reviews. In the old days we would go down the list and say, “Here’s the history, here’s the status, here are the reserves.” I can read that for myself. We need to know, “Where are we, where do we need to go and how do we get there?” We have a lot of people and perspectives at the table. We talk about what is best for this employee and how to get him or her back to work. It takes all of us to do it.

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Program to Mediate Work-Family Conflict Pays Off

Interventions designed to help employees equalize family and work life balance can help reduce turnover and reduce costs for employers, according to findings from an 18-month field study at a U.S. information technology company.

While previous studies have shown that work-family conflict interventions can positively affect the health and well-being of workers and families, the field study is the first to estimate related return on investment (ROI). “We found an intervention to reduce work-family conflict can enhance both employees’ health and employers’ business,” said lead researcher Carolina Barbosa, Ph.D., a health economist with RTI International, Chicago.

Researchers evaluated ROI associated with the Support, Transform, Achieve, Results (STAR) program, a workplace intervention process developed by the federally funded Work, Family & Health Network. For example, the program promotes employee control over scheduling and supervisor support for personal and family life.

The study showed program costs were “more than offset by cost savings.” At an estimated cost of $690 per employee, the STAR program yielded savings of $1,850 per employee (in 2011 dollars). The program had a positive ROI of 1.68: for every $1 spent on STAR, average organizational costs fell by $1.68.

The greatest savings were achieved by reducing the rate of voluntary termination, leading to reduced employee turnover. The intervention was also linked to reduced presenteeism (being less than optimally productive while at work) and lower health care use and costs.

The findings provide “further evidence to policy makers who are interested in aligning the social welfare objective of improving workers’ health and well-being with the need to make the business case to employers,” researchers concluded.


Work-Life Balance Connected to Improved Safety Compliance

In a randomized, controlled trial, researchers tested the effects of the Work, Family & Health Network’s work-family conflict intervention on employee reports of safety compliance and organizational citizenship behaviors in 30 health care facilities. Survey data from 1,524 employees at baseline, 6-month and 12-month post-intervention follow-up was analyzed on multiple levels. Significant intervention effects were observed for safety compliance at six months and for organizational citizenship behaviors at 12 months for the intervention group as compared to the control group.

New Nurses at Increased Risk of Injury

Overtime and night shift work were significantly associated with increased injury risk among newly licensed nurses, according to a study published in the International Journal of Nursing Studies. The findings warrant further research given related effects on personal well-being, treatment costs and productivity loss, researchers said.

The findings are based on an analysis of 1,744 newly licensed registered nurses from 34 states and the District of Columbia who were working in a hospital and within 6 to 18 months of passing their state licensure exam. Overall, 79 percent of study participants worked 12-hour shifts, 61 percent worked overtime (mandatory or voluntary) on a weekly basis and 44 percent worked the night shift.

New nurses working weekly overtime were associated with a 32 percent increase in the risk of a needle stick and nurses working night shift were associated with a 16 percent increase in the risk of a sprain or strain injury.

“New nurses experience many stressors, both physical and psychological, in their new professional roles,” said principal investigator Christine Kovner, Ph.D., R.N. “Interventions that reduce those stressors not only increase nurses’ safety but also improve quality of care.”

OSHA Issues Guidance for Hospital & Nursing Home Inspections

In June, the Occupational Safety and Health Administration issued Inspection Guidance for Inpatient Healthcare Settings, which applies to hospitals, nursing homes and residential care facilities under the agency’s health care National Emphasis Program. All inspections, programmed and unprogrammed, will include reviews of policies, procedures and experiences related to:

- Musculoskeletal disorders in connection with patient or resident handling
- Workplace violence
- Bloodborne pathogen exposures
- Tuberculosis prevention
- Slips, trips and falls

In addition, hazards that may be subject to inspection include, but are not limited to, exposure to multi-drug resistant organisms such as Methicillin-resistant Staphylococcus aureus (MRSA) and exposure to hazardous chemicals such as sanitizers, disinfectants, anesthetic gases and chemotherapy drugs.

Exploring Health Effects of Artificial Light at Night

Exposure to artificial bright light at night suppresses melatonin secretion, delays sleep and heightens alertness. Shorter wavelengths of light may also disturb melatonin secretion and cause circadian phase shifts, even if the light is not bright.

To further investigate connections between exposure to artificial light at night (ALAN) and potential negative health effects, researchers reviewed 85 related scientific articles. They found:

- Several observational studies that showed outdoor ALAN levels are a risk factor for breast cancer.
- Indoor light intensity and individual lighting habits were also relevant to breast cancer risk.
- Circadian misalignment caused by chronic ALAN exposure may have negative effects on psychological, cardiovascular and/or metabolic functions.

The literature review suggests it is necessary to consider various characteristics of artificial light including intensity, wavelength and duration, researchers concluded.

Public health officials strongly encourage employers to start workplace flu campaigns in the fall and continue them throughout the season.

In combination with other prevention methods, vaccination is considered the first line of defense against the flu.

Flu vaccination is especially important for 2015-16: Last season severity indicators were among the highest experienced in the past decade—including the highest hospitalization rate for people older than 65, according to the Centers for Disease Control and Prevention (CDC).

In addition to annual vaccination, recommended flu prevention methods include:

- Frequent hand washing with soap and water (a minimum of 20 seconds) or using alcohol-based hand sanitizer
- Covering your mouth when coughing or sneezing and throwing tissues away
- Disinfecting surfaces such as countertops, phones and door handles
- Avoiding close contact with people who have symptoms (at least 3 feet away)
- Staying home from work when feeling ill (24 hours after fever is gone)
- Promoting a healthy immune system by getting adequate sleep, exercising, managing stress, staying well-hydrated and eating nutritious foods

Costly Consequences

According to the CDC, Partnership for Prevention and other sources, flu in the U.S. is annually associated with thousands of fatalities, diminished quality of life and:

- 200 million days of reduced productivity (presenteeism)
- 22 million days of work absence
- $6.2 billion in lost-time costs
- at least $10.4 billion in medical costs
- a total estimated economic burden exceeding $87 billion

Influenza Vaccine

Routine annual influenza vaccination is recommended for all children over 6 months old and adults who do not have contraindications.

The CDC, the Advisory Committee on Immunization Practices and the Healthcare Infection Control Practices Advisory Committee recommend that all U.S. health care workers get an annual flu vaccination. In previous seasons, compliance rates among health care personnel increased when employers required or recommended vaccination.

Flu Vaccination Helps...

- Keep you and those near you from getting sick
- Protect vulnerable populations such as the elderly, people with chronic health conditions, pregnant women and infants
- Build up immunity to viruses
- Lessen symptom severity if you get sick
- Reduce your risk of hospitalization and death
Flu vaccines are developed to protect against viruses expected to be the most common during the upcoming season. Some years the vaccine is more effective than others, depending on which flu strains predominate. The vaccine has traditionally offered protection against three viruses (trivalent). A vaccine with a fourth antigen (quadrivalent) also is available.

The vaccine is inactivated; it does not cause the flu. Nasal mist is an alternative for those who do not tolerate shots.

The vaccine is considered a helpful deterrent because:

- people can be contagious up to 24 hours before they experience symptoms
- it provides protection when handling contaminated objects—some viruses can survive on surfaces up to eight hours
- a person can build up immunity to a range of flu strains

To learn more: Preventing and Controlling Seasonal Influenza 2015-16

Resources:
1. [www.cdc.gov/flu](http://www.cdc.gov/flu)
2. [www.flu.gov](http://www.flu.gov)
3. Partnership for Prevention: [www.prevent.org](http://www.prevent.org)

(Workers’ comp claims management, continued from Page 7)

**Brown:** Consistency is important. The real value comes when you consistently follow best practices and discuss qualitative elements, their role in helping someone return to work, reducing litigation, getting the person back to where they want to be in their life. Each claim is different. What does this person need?

**Q:** When you think about claims management program performance overall, what are the most important elements for success?

**Casserly:** Culture and not leaving anyone out of the process; that’s how you build a successful program. It depends on having a supportive culture from the top down. You can have a process, but if the culture isn’t built around it, that’s all it is...just a process.

**Brown:** The employer and their employees are the most important stakeholders. Costs need to be predictable and reasonable and the program sustainable. The injured employee’s experience needs to be favorable throughout the process. With all these elements, the overall outcome will be positive.

**Colwell:** At Southwest, our leadership is extremely supportive. They listen. They help us develop the program we feel is going to best serve our employees. We wrap our vendors into our culture. We have an open relationship; we communicate regularly. I talk to examiners every day and I am happy to do that. Sometimes it takes patience. We want everyone to be at the table.

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"With vaccination alone, physician encounters can be reduced by up to 44 percent and lost workdays decreased by up to 45 percent, the CDC reports. Using these percentages, a company with 100 employees would have an average of 40 fewer lost workdays annually if the entire workforce was vaccinated."
Successful, long-term workforce health and safety management depends on a deep understanding of demographic trends.

The following statistics highlight the need for workplace programs that are designed to:

- cultivate appreciation of cultural diversity
- prevent discrimination
- create receptivity to the exchange of knowledge and ideas among generations
- provide work-based language and skills training to improve employability and earning potential, particularly for those with lower than average literacy levels
- provide cost-effective, efficient translation services for medical care and other professional encounters
- develop benefits plans and employee assistance programs that provide support for employees with dependent family members

### Age

By 2016, a third of the U.S. labor force will be in the 50-plus age category, compared to 27 percent in 2007. Meanwhile, the percentage of workers who have retired has nearly doubled in the past five years. By 2020, adults born to baby boomers between 1981 and 2000 (referred to as millennials or “echo boomers”) will comprise half of the global workforce. By 2025, millennials will account for 75 percent of working-age people in the U.S.

#### Sources:
- Preparing for an Aging Workforce, Society for Human Resource Management, 2014
- Catalyst Quick Take: Generations in the Workplace, New York: Catalyst, 2015

### Diversity

By 2044, more than half of Americans are projected to belong to a minority group (any group other than non-Hispanic white alone). By 2060, nearly one in five of the nation’s total population is projected to be foreign born.

#### Source:
- Projections of the Size and Composition of the U.S. Population: 2014 to 2060

### Language and Literacy

In 2013, a record 61.8 million U.S. residents spoke a language other than English at home. The largest increases between 2010 and 2013 were for speakers of Spanish, Chinese, Arabic and Urdu, the national language of Pakistan. An estimated 25 percent of millennials speak a language other than English at home. In today’s knowledge-driven world, literacy, numeracy and the ability to use digital technology are foundational to socioeconomic success.

#### Source:
- American Community Survey data, 2013, reported by Center for Immigration Studies, Oct. 2014

### Dependency

By 2030, one in five Americans is projected to be 65 or older. Old-age dependency is the ratio of individuals 65 and older relative to the population aged 18 to 64, while youth dependency is the ratio of individuals under the age of 18 relative to the population aged 18 to 64. The old-age dependency ratio is projected to surpass the youth dependency ratio in 2033.

#### Source:
- Projections of the Size and Composition of the U.S. Population: 2014 to 2060