

**SAFE PATIENT HANDLING AND LIFTING STANDARDS FOR A SAFER AMERICAN WORKFORCE**

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**HEARING**

BEFORE THE

SUBCOMMITTEE ON EMPLOYMENT AND WORKPLACE  
SAFETY

OF THE

COMMITTEE ON HEALTH, EDUCATION,  
LABOR, AND PENSIONS

UNITED STATES SENATE

ONE HUNDRED ELEVENTH CONGRESS

SECOND SESSION

ON

EXAMINING SAFE PATIENT HANDLING AND LIFTING STANDARDS FOR A SAFER AMERICAN WORKFORCE, INCLUDING S.1788, TO DIRECT THE SECRETARY OF LABOR TO ISSUE AN OCCUPATIONAL SAFETY AND HEALTH STANDARD TO REDUCE INJURIES TO PATIENTS, DIRECT-CARE REGISTERED NURSES, AND ALL OTHER HEALTH CARE WORKERS BY ESTABLISHING A SAFE PATIENT HANDLING AND INJURY PREVENTION STANDARD

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MAY 11, 2010

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**SAFE PATIENT HANDLING AND LIFTING  
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WORKFORCE**

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**TUESDAY, MAY 11, 2010**

U.S. SENATE,  
SUBCOMMITTEE ON EMPLOYMENT AND WORKPLACE SAFETY,  
COMMITTEE ON HEALTH, EDUCATION, LABOR, AND PENSIONS,  
*Washington, DC.*

The subcommittee met, pursuant to notice, at 2:32 p.m. in Room SD-430, Dirksen Senate Office Building, Hon. Patty Murray, chairman of the subcommittee, presiding.

Present: Senators Murray, Franken, and Isakson.

OPENING STATEMENT OF SENATOR MURRAY

Senator MURRAY. Good afternoon. This subcommittee will come to order.

I want to thank, first of all, Senator Isakson and his staff for being so collegial and courteous as we brought this hearing together, and really appreciate their work on the subcommittee.

Senator Isakson will be joining us shortly; he's on his way over from the floor right now.

I also want to thank all the witnesses who took the time to be here with us today. And I'm especially excited to have two witnesses from my home State of Washington. We'll hear from them shortly.

But, let me just start by saying, our country has had too many reminders recently about the critical importance of worker safety. We were reminded when 29 workers lost their lives in a coal mine in West Virginia, and when seven passed away in a tragic oil refinery fire in my home State of Washington. These were really tragic events, but we need to remember that no threats to worker safety are acceptable, whether they result in injury, or worse. And, unfortunately, these threats are occurring all too often. I believe that workers ought to be able to feel confident that, while they're working hard and doing their jobs, their employers are doing everything possible to keep them safe. This should be true for miners, it should be true for refinery workers, and, the area we're going to be focusing on today, should be true for healthcare employees.

As we all know, nurses are the backbone of our healthcare system, but too often they are overlooked in discussions of workplace safety, even though their jobs are consistently ranked as one of the most danger-prone in the country. In fact, on the list of workers facing workplace-related musculoskeletal disorders, nurses rank as

the leading victim, sustaining these injuries at a rate nearly seven times the national average.

Sadly, nearly half of the nurses on the job report chronic back pain, and more than 1 in 10 of them say they are planning to leave the field within the next year. This costs our hospitals and providers millions in worker compensation, overtime, replacement, and training costs, and it devastates workers and their families, moms and dads who can't pick up their children or grandchildren and cannot be physically active without constant pain. All of this is coming at a time when we need our nurses healthy and on the job more than ever.

The need for registered nurses in the United States could reach as high as 500,000 over the next 15 years, which would be especially devastating at the very time we are trying to bring millions of new patients into the healthcare system.

Today we are going to examine the impact of the injury rates our Nation's healthcare workers sustain due to lifting patients, and we're going to hear from witnesses about some solutions being developed to promote safer workplaces for our nurses.

It used to be the case that we didn't have the research and equipment available to prevent lifting injuries, but now we know how to implement safe patient lifting policies. It's just a matter of making sure that it does happen.

We know that, under ideal circumstances, a worker should only lift 50 pounds by his or herself, but there are few 50-pound patients, and they are rarely positioned in such a way as to make safe lifting easy. In fact, over the course of their average day, nurses often need to lift more total pounds than many truck drivers and construction workers. It's clear that we need to be proactive and cost-effective to make sure nurses have the training and resources to handle patients in a way that's safe for them and for the patient.

Our witnesses today will focus on safe patient handling, which has worked for the Veterans Administration, nine States, including my home State of Washington, and several hospital systems. There's no shortage of research or evidence about how this equipment works and how a program can be implemented, and there's no question it saves money, helps patients, and creates a safer work environment for patients.

The question remains, What does a Federal solution need to look like? I am looking forward to hearing from our witnesses about this important issue.

[The prepared statement of Senator Murray follows.]

#### PREPARED STATEMENT OF SENATOR MURRAY

This hearing of the subcommittee will come to order.

Today's hearing examines the impact of injury rates among our Nation's healthcare workers due to lifting patients and the various solutions that States, the Veterans Health Administration and several hospital systems have developed to promote safer workplaces in their hospitals.

I want to thank our witnesses for being here. I am especially excited to have two witnesses from my home State of Washington. I'd also like to thank Senator Isakson for working with me on a bipar-

tisan basis to hold this hearing. As always, I appreciate your work on this subcommittee.

We all know that nurses are the backbone of our healthcare system. And they will serve an even more vital part of our healthcare system under the reform law Congress recently passed. In fact, the Bureau of Labor Statistics projects that more than 581,500 new RN positions will be created through 2018, an increase of 22 percent. Employment of RNs is expected to grow much faster than the average when compared to all other professions.

Yet the Journal of the American Medical Association predicts a “large and prolonged shortage of nurses.” It is estimated that we will need to graduate 30,000 additional nurses annually to meet the Nation’s healthcare needs, an expansion of 30 percent over the current number of annual nurse graduates. And to make matters worse, in a 2006 survey 55 percent of nurses reported their intention to retire between 2011 and 2020. The average age of the Registered Nurse is climbing. With the average age of RNs projected to be 44.5 years by 2012, nurses in their 50s are expected to become the largest segment of the nursing workforce, accounting for almost one quarter of the RN population.

So at a time when we need more nurses—many more nurses—we have both a systemic shortage and the potential for higher retirement rates on the near horizon. It seems to me that we should be doing everything we can to keep the nurses we have safe, healthy and on the job, as a bare minimum.

But, and with no small irony, it is our nurses who too often selflessly break their own backs to deliver the best healthcare they can.

Often overlooked in discussions of workplace safety are healthcare workers. When considering the idea of a “dangerous industry,” most Americans think of construction work, oil refineries, commercial fishing, and mining. However, statistically, healthcare work consistently falls among the most dangerous professions.

Sadly, half of our nurses report they have chronic back pain, and back injuries to nurses are costly. They cost their employer in worker compensation, overtime, replacement and training costs. These costs then get passed on to the government in the form of additional training costs, lost productivity, and disability payments. But the biggest costs are borne by the workers and their families—moms and dads who can’t pick up their kids and grandkids, or be physically active with them without constant pain.

This is a lose-lose situation. Society loses someone who chose a job based on compassion and wanting to help and heal people. Those same people are forced to leave their important work because the up front cost of some lifting equipment seemed like a big investment that fiscal year.

In the past, nurses were being hurt on the job when we didn’t have the research and equipment available to prevent lifting injuries. But now we have the equipment and knowledge to implement safe patient lifting policies.

NIOSH says that under the best circumstances, a worker should only lift 50 pounds. There are few 50-pound patients, and they surely aren’t packaged into boxes with handles so you can bend at the knees. And there is a lot of bending and twisting involved in

moving a patient. It's almost inevitable that manual lifting will overtime **or** suddenly hurt a healthcare worker. Why should our nurses have to lift more than truck drivers or construction workers?

This committee has taken a serious look over time at the growing obesity epidemic, but one thing we haven't taken a look at yet is the effect of that epidemic on healthcare workers who must manually lift them. If you visit the Work Injured Nurses' Group's Web site, one of the top stories featured is about a nurse who was injured while lifting a single patient who weighed over 700 pounds with a colleague. While a great deal of injuries happen over time, as patients get heavier, the odds that a nurse will be hurt in a single lift has increased dramatically.

Meanwhile, the shortage of registered nurses in the United States could reach as high as 500,000 by 2025 according to a report released in March 2008 by Dr. Peter Buerhaus of Vanderbilt University School of Nursing, Dr. Douglas Staiger of Dartmouth University, and Dr. David Auerbach of the Congressional Budget Office. Moreover, the report found that the demand for registered nurses is expected to grow by 2 to 3 percent each year. In September 2007, Dr. Christine T. Kovner and colleagues found that 13 percent of newly licensed registered nurses had changed principal jobs after 1 year and 37 percent reported that they felt ready to change jobs,

It is clear that we need proactive and cost-effective ways to stem the loss of nurses. That's why today's hearing will focus on something that has worked for the VA, nine States, including my home State of Washington, and several hospitals systems—safe patient handling.

There's no shortage of research or evidence about how this equipment works and how to implement a program, and there's no question that this saves money and saves nurses backs. Now the question remains: what does a Federal solution need to look like?

But before we hear from our witnesses, I'd like to recognize Senator Isakson for his opening statement.

I am looking forward to hearing from our witnesses about this important issue:

- Capt. James W. Collins is the Associate Director for Science at NIOSH.
- Dr. Michael Hodgson is the Chief Consultant for the Occupational Health, Safety, and Prevention Healthcare Group in the Office of Public Health and Environmental Hazards at the Veterans Health Administration.
- Dr. Barbara Silverstein is the Research Director for Safety and Health Assessment and Research for Prevention at the Washington State Department of Labor and Industries.
- Elizabeth Shogren is a nurse from Minnesota.
- June Altaras is the Administrative Nursing Director at Swedish Medical Center in Seattle, WA.
- And Douglas Erickson is the Deputy Executive Director for the American Society for Healthcare Engineering.

Senator MURRAY. We will hear Senator Isakson's opening statement when he arrives, but, at this point, I will turn to Senator Franken for his opening statement.



## STATEMENT OF SENATOR FRANKEN

Senator FRANKEN. Thank you, Madam Chair, for holding this hearing on such a crucial and urgent issue.

We have a serious problem on our hands. We've got a nursing shortage, a nursing workforce that's growing older, and a general population growing heavier, with the obesity epidemic. This is a recipe for disaster, and we must take action now.

Lifting and repositioning are the leading cause of back, neck, and shoulder injuries in the healthcare industry. Nurses' back injuries cost about \$16 billion in worker compensation benefits each year, and another \$10 billion in medical treatment and lost productivity.

In 2007, nursing aides experienced musculoskeletal injuries at a rate of more than seven times the national average for all occupations, and a much higher rate than freight handlers and other jobs that require lots of heavy lifting.

The problem is that right now there is a disconnect between this data and bedside practices. OSHA nursing home guidelines recommend that, "Manual lifting of residents be minimized in all cases, and eliminated when feasible." And the National Institute of Occupational and Safety Health, NIOSH, sets the safe maximum lifting limit at 35 pounds. These recommendations are great, but they don't mean much if healthcare workers don't have the equipment they need to avoid unsafe lifting.

Healthcare workers are the people we trust to care for our loved ones, to monitor our health, to provide us with the best treatment possible. That's what they're trained to do, that's what their expertise is, and that's why it is simply unacceptable that nurses and other healthcare workers are putting their own well-being on the line in order to care for their patients.

Employers have a fundamental obligation to provide a safe work environment for all workers, and our healthcare workers are no exception. Not only are these injuries costly and inhumane, manually lifting patients isn't good for patients. When Minnesota passed historic safe patient handling legislation in 2009, it had the support of groups like the Minnesota Council on Disability. That's because mechanical lifts reduce the risk of patient injury, too. This equipment requires an up front investment, but research shows that it pays off in 2 to 3 years.

The good news is that we know what to do to make things better. Because of the pioneering work in Minnesota, and stories like Bettye Shogren's, who will be testifying later, I am proud to have introduced Senate bill 1788, the Nurse and Health Care Worker Protection Act. Under my bill, OSHA would issue a standard on safe patient handling and injury prevention, including the use of lift equipment. All healthcare facilities would also be required to implement safe patient handling plans and train workers to use the necessary equipment.

The most important take-home message from today's hearing is that we know how to make things better.

I want to thank the witnesses for joining us today, and I encourage my colleagues to consider cosponsoring S. 1788, the Nurse and Health Care Worker Protection Act.

Thank you.

Senator MURRAY. Thank you very much, Senator.

Senator FRANKEN. Thank you, Madam Chairman.

Senator MURRAY. With that, we will turn it over to our first panel. Joining us today is Captain James Collins, the associate director for science at NIOSH, and Dr. Michael—say it for me.

Dr. HODGSON. Hodgson.

Senator MURRAY. Hodgson, very good, the director of occupational health programs at the VA.

Welcome, to both of our witnesses. You have 5 minutes each, and your written testimony will be part of the full record.

Captain Collins, we'll begin with you.

**STATEMENT OF CAPTAIN JAMES W. COLLINS, Ph.D., M.S.M.E.,  
ASSOCIATE DIRECTOR FOR SCIENCE, NATIONAL INSTITUTE  
FOR OCCUPATIONAL SAFETY AND HEALTH, WASHINGTON,  
DC**

Mr. COLLINS. Madam Chair and members of the subcommittee, I am pleased to appear before you today to provide testimony on safe patient handling.

NIOSH has conducted extensive research on safe patient handling over the past 20 years. Healthcare workers experience a higher rate of musculoskeletal disorders than workers in construction, mining, manufacturing, and wholesale and retail trade. These injuries are due, in large part, to repeated patient handling activities involving heavy manual lifting when transferring and repositioning patients, often done in extremely awkward postures. In the next few minutes, I would like to describe the extent of the problem and some of the solutions that have been shown to be effective in preventing these injuries.

Direct and indirect costs associated with back injuries in the healthcare industry, adjusted for inflation, are estimated to be over \$7 billion annually, in 2008 dollars. In 2000, over 10,900 registered nurses suffered lost-time work injuries due to lifting patients, while nursing aides and orderlies suffered the highest prevalence rates and report the most annual cases of work-related back pain among female workers in the United States. Of nurses who plan to leave the profession, 12 percent cited back injuries as a contributing factor to their decision.

The risk of musculoskeletal disorders from patient handling results from the high forces on a caregiver's spine when lifting a patient. There is a risk of injury even if the patient is of relatively low weight, such as when two caregivers are lifting a 110-pound patient from a bed to a chair. Between 1988 and 2008, the average prevalence of obesity rose from 22 to over 35 percent, and the average prevalence of extreme morbid obesity rose from 2.9 to 5.7 percent. The average body weight of both patients and caregivers is increasing, and is likely to play a major role in increasing the risk of injury to healthcare workers.

Early discharge of patients from hospitals is another concern. In 1980, the average length of hospital stay was 7.5 days, compared with only 4.8 days in 2005. When patients are dismissed earlier from the hospital, home healthcare workers are at increased risk because they're exposed to higher levels of physical demands in a

home-care environment, where the availability of assistive patient handling technology is often lacking.

To identify safer ways to lift and move nursing home residents, NIOSH studied over 1,700 nursing personnel who were trained to use mechanical lifting equipment to assist residents. After the lifting equipment was installed, there was a 61-percent reduction in workers' compensation injuries and a 66-percent reduction in lost-workday injuries attributed to resident handling.

The initial investment of \$158,000 for lifting equipment and worker training was recovered in less than 3 years, due to an annual savings of \$55,000 in workers' compensation cost. This is significant, given that cost is often cited as a barrier to purchasing lifting equipment and establishing safe patient lifting programs.

Another advantage of lifting equipment is the reduction in the rate of assaults on caregivers during resident transfers, down 72 percent in our study.

Another study examined the long-term effectiveness of a safe lifting program. Manual lifting and transferring of patients was replaced with modern battery-operated portable hoists and other patient transfer assistive devices. The number of injuries from patient transfers decreased by 62 percent; lost workdays, by 86 percent; restricted workdays, by 64 percent; and workers' compensation costs were reduced by 84 percent.

Overall, the program produced many intangible benefits, including improvements in patient comfort and safety during transfers in patient care.

In closing, NIOSH has shown that manual handling of patients is a serious risk to healthcare workers. Programs that rely on the use of mechanical lifting devices, and worker training in using these devices, offer practical solutions to prevent healthcare worker injuries. These effective alternatives to manual patient handling are safe, and can be cost-effective to implement.

We appreciate the opportunity to present our work, and thank you for your continued support. Additional information and references to this work are presented in the written testimony that we've provided. And I'd be pleased to answer your questions.

[The prepared statement of Mr. Collins follows:]

PREPARED STATEMENT OF CAPT. JAMES W. COLLINS, PH.D., M.S.M.E.

Madam Chair and members of the subcommittee, my name is James Collins and I am Associate Director for Science for the National Institute for Occupational Safety and Health's (NIOSH) Division of Safety Research, part of the Centers for Disease Control and Prevention (CDC) within the Department of Health and Human Services (HHS). I am pleased to appear before you today to provide testimony on Safe Patient Handling. I am accompanied by Dr. Thomas Waters, Senior Research Safety Engineer at NIOSH. Dr. Waters and I are also principal investigators within NIOSH and we have conducted extensive research on safe patient lifting.

Health care workers experience musculoskeletal disorders at a rate exceeding that of workers in construction, mining, manufacturing, and wholesale and retail trade.<sup>1</sup> Musculoskeletal disorders (MSDs) are disorders of the muscles, nerves, tendons, ligaments, joints, cartilage and spinal discs. These injuries are due in large part to re-

<sup>1</sup> Bureau of Labor Statistics, U.S. Department of Labor, November 12, 2009, Case and Demographic Characteristics for Work-related Injuries and Illnesses Involving Days Away From Work, Table 10—Number, percent, and incidence rate of nonfatal occupational injuries and illnesses involving days away from work by selected worker and case characteristics and musculoskeletal disorders, All United States, private industry, 2008. Accessible on the Web at: <http://www.bls.gov/lif/oshwc/osh/case/ostb2211.pdf>.

peated manual patient handling activities, often involving heavy manual lifting when transferring and repositioning patients, working in extremely awkward postures, and in pushing and pulling heavy objects. The risk, which can exist even if the patient is of relatively low or moderate weight, is magnified by the increasing weight of patients due to the obesity epidemic in the United States, and the rapidly increasing number of older people who require assistance with the activities of daily living.<sup>2,3</sup>

NIOSH is proud of the work we have done researching MSDs in health care settings, for developing and evaluating interventions to prevent these problems among health care workers, and in working collaboratively with other Federal agencies and Associations to reduce risk for health care workers.

#### BURDEN OF INJURIES

Direct and indirect costs associated with back injuries in the health care industry, adjusted for inflation, are estimated to be \$7.4 billion annually in 2008 dollars.<sup>4</sup> Additionally, nursing aides and orderlies suffer the highest prevalence (18.8 percent) and report the most annual cases (269,000) of work-related back pain among female workers in the United States.<sup>5</sup> In 2000, 10,983 registered nurses (RNs) suffered lost-time work injuries due to lifting patients. It has been reported that 12 percent of nurses who planned to leave the profession cited back injuries as a contributing factor.<sup>6</sup>

The age of the Registered Nursing population has been rising over the past two decades. Between 2004 and 2008, the average age of all licensed nurses rose from 46.8 to 47.0 years and that of employed nurses rose from 45.4 to 45.5 years. This aging trend has raised concerns that future retirements could substantially reduce the size of the U.S. nursing workforce.<sup>7</sup> Preserving the health of our nursing staff and reducing back injuries in health care personnel is critical. NIOSH has a comprehensive research program aimed at preventing work-related MSDs with major efforts to reduce lifting injuries in health care settings. NIOSH's research with diverse partners has already made great strides in developing best practices and demonstrating the effectiveness of these "best practices" in health care settings.

The risk of musculoskeletal disorders resulting from patient handling results from the high internal forces created in the spine when a person lifts a heavy object. Musculoskeletal disorders are a high risk for patient handling because it can require lifting a patient who is far away from the worker which puts heavy loads on the spine. Repeated lifting of this type can result in scarring that causes more damage. Studies have suggested that there can be risks of injury even when two people are lifting a 110-lb patient from a bed to a chair.<sup>8</sup>

NIOSH recommends that no caregiver should manually lift more than 35 lbs of a person's body weight for a vertical lifting task.<sup>9</sup> NIOSH further recommends that when the weight to be lifted exceeds this limit, assistive devices should be used. These recommendations have been adopted by the Veterans Health Administration (VHA) and incorporated into its current patient handling recommendations and patient handling algorithms. Moreover, other major interest groups, such as the American Nurses Association (ANA), National Association of Orthopaedic Nurses

<sup>2</sup> State of Washington [2006]. An act relating to reducing injuries among patients and health care workers. Accessible on Web at [http://www.leg.wa.gov/pub/billinfo/2005-06/Pdf/Bill\\_Reports/House/1672.HBR.pdf](http://www.leg.wa.gov/pub/billinfo/2005-06/Pdf/Bill_Reports/House/1672.HBR.pdf).

<sup>3</sup> Ogden, C., Carroll, M., and Curtin, L. (2006). prevalence of overweight and obesity in the United States, 1999–2004. *Journal of the American Medical Association*, 295, 1549–1555.

<sup>4</sup> Waehrer G., Leigh J., and Miller T. Costs of Occupational Injury and Illness Within the Health Services Sector, *Intl. J. of Health Services*, Volt. 35(2) 342–359, 2005.

<sup>5</sup> Guo, H.R., Tanka, S., Cameron, L.L., et al. (1995) Back pain among workers in the United States: national estimates and workers at high risk. *Am J Ind Med*, 28:591–602.

<sup>6</sup> Stubbs, DA, Buckle, PW, Hudson, MP, Rivers, PM, and Baty D (1986). Backing out: nurse wastage associated with back pain. *International Journal of Nursing Studies* 23(4): 325–336.

<sup>7</sup> U.S. Department of Health and Human Services (2010). Registered Nurse Population: Findings from the 2008 National Sample Survey of Registered Nurses. Available on the Internet: <http://bhpr.hrsa.gov/healthworkforce/rnsurvey/initialfindings2008.pdf>.

<sup>8</sup> Marras, W.S., Davis K.G., Kirking, B.C., Bertsche, P.K. (1999). A comprehensive analysis of low-back disorder risk and spinal loading during the transferring and repositioning of patients using different techniques. *Ergonomics*. 42(7):904–926.

<sup>9</sup> Waters T. (2007). When is it safe to manually lift a patient? *American Journal of Nursing*. Volt. 107(8): 53–59.

<sup>10</sup> AORN Workplace Safety Task force. (2007). *Safe Patient Handling & Movement in the PeriOperative Setting*. Denver, CO: Association of PeriOperative Registered Nurses (AORN).

<sup>11</sup> de Castro, A.B. (2006). Handle With Care®: The American Nurses Association's Campaign to Address Work-Related Musculoskeletal Disorders. *Orthopaedic Nursing*, 25, 6, 356–364. Reprinted from de Castro, A.B. (2004). Handle With Care®: The American Nurses Association's

(NAON), and Association of PeriOperative Registered Nurses (AORN) have all adopted similar patient handling guidelines that recommend use of technology-based solutions for patient handling and movement.<sup>10 11 12</sup>

#### EXTERNAL FACTORS

A major concern for health care workers is the obesity epidemic that our country is facing. The average body weight of both patients and caregivers is increasing over time and this increase in average body weight is likely to play a major role in increasing risk of MSDs for health care workers. Data from the National Health and Nutrition Examination Survey show that between 1988 and 2008, the average prevalence of obesity rose from 22.9 percent to 35.5 percent, and the average prevalence of morbid (extreme) obesity rose from 2.9 percent to 5.7 percent. Rates of adult morbid obesity in 2008 ranged from 3.8 percent of Hispanic men to as high as 14.2 percent of non-Hispanic black women.<sup>13 14</sup>

The majority of direct patient care workers are females who, on average, have lower strength and lifting capacity than males. Most female nurses work at a higher percentage of their maximum physical capabilities than males when performing the same strength-demanding tasks. While most health care workers do not have established maximum weight lift limits, in manufacturing industries, where the majority of workers are male, employers have developed maximum weight limits for manual lifting and they have incorporated robots and other lifting assistive devices.

A recently emerging issue that has resulted in increased risk for MSDs for health care workers is that patients are often released from the hospital following surgery and other treatments much earlier than in the past. In 1980, for example, the average length of hospital stay was 7.5 days compared with only 4.8 days in 2005.<sup>15</sup> When patients are dismissed from the hospital earlier in the recovery process, the patient is often more dependent upon the caregiver for assistance in being transferred or in moving. This has resulted in increased risk for workers in the hospital setting due to the concentration of extreme patient needs associated with patient transfers and movement while in the acute care environment. It also increases the level of patient transfer assistance needed in the home care environment at an earlier stage of recovery than was previously required, placing home health care workers at increased risk. The home health care worker is now exposed to higher levels of physical demands in a care environment where the availability of assistive patient handling technology is often lacking.<sup>16 17</sup>

#### PREVENTION RESEARCH

NIOSH carried out a comprehensive lab and field study to identify safer ways to lift and move nursing home residents. The study design included removing the excessive forces and extreme postures that can occur when manually lifting residents. Historically, the caregiver has used his or her own strength to provide manual assistance to the resident. NIOSH also conducted a field study to determine if a “best practices” intervention consisting of mechanical equipment to lift physically dependent residents, training on the proper use of the lifts, a safe lifting policy, and a medical management program would reduce the rate and the associated costs of the resident handling injuries for the nursing personnel in a real world setting. During the 6-year period, from January 1995 through December 2000, 1,728 nursing personnel were studied before and after implementation of the intervention. After the intervention, which was a safe lifting program that includes mechanical lifting equipment, worker training on the use of the lift, and a written resident lifting policy, there was a 61 percent (range 45–71 percent) reduction in workers’ compensation injuries involving resident handling, workers’ compensation costs, and lost work

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Campaign to Address Work-Related Musculoskeletal Disorders. *Online Journal of Issues in Nursing*. Volt. #9 No. 3. Retrieved from <http://www.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Volume92004/Number3September30/HandleWithCare.aspx>.

<sup>12</sup> NAON (2009) Safe Patient Handling. Special Issue. *Orthopaedic Nursing*, 28(2S) 2–35.

<sup>13</sup> Flegal, K., Carroll, M., Ogden, C., and Curtin, L. (2010). Prevalence and trends in obesity among U.S. adults, 1999–2008. *Journal of the American Medical Association*, 303, 235–241.

<sup>14</sup> Flegal, K., Carroll, M., Ogden, C., and Johnson, C. (2002). Prevalence and trends in obesity among U.S. adults, 1999–2000. *Journal of the American Medical Association*, 288, 1723–1727.

<sup>15</sup> National Center for Health Statistics (2007) 2005 National Hospital Discharge Survey, Retrieved from <http://www.cdc.gov/nchs/data/ad/ad385.pdf> on 2/2/2010.

<sup>16</sup> Galinsky, T., Waters, T., and Malit, B. Overexertion Injuries in Home Health Care Workers and Need for Ergonomics *Home Health Care Services Quarterly*. 20(3):57–73. 2001.

<sup>17</sup> NIOSH (2010) NIOSH Hazard Review Occupational Hazards in Home Health Care. DHHS (NIOSH) Publications No. 2010-125. National Institute for Occupational Safety and Health, Cincinnati, OH.

day injuries. The initial investment of \$158,556 for lifting equipment and worker training was recovered in less than 3 years on the basis of post-intervention savings of \$55,000 annually in workers' compensation costs.<sup>18</sup> This is significant given that cost is an often cited barrier to purchasing lifting equipment and establishing safe patient lifting programs. Another advantage of lifting equipment is the reduction in the rate of assaults on caregivers during resident transfers—down 72 percent on the basis of workers' compensation claims.

Based on the successes achieved in the long-term care industry, NIOSH has undertaken a new 6-year longitudinal research study to evaluate the effectiveness of a "best practices" safe patient handling program at two large acute-care hospitals in the United States.

Another major study demonstrating success in reducing back injuries to health care workers was funded by NIOSH through a cooperative agreement. The study examined the long-term effectiveness of a safe lifting program with the primary objective to reduce injuries to health care workers resulting from manual lifting and transferring of patients. These safe lifting programs, which used employee management advisory teams, i.e., a participatory-team approach, were used in seven nursing homes and one hospital. In this study, manual lifting and transferring of patients was replaced with modern, battery operated, portable hoists, and other patient-transfer assistive devices. The number of injuries from patient transfers decreased by 62 percent, lost work days decreased by 86 percent, restricted workdays decreased by 64 percent, and workers' compensation costs were reduced by 84 percent. Overall, the program produced many intangible benefits including improvements in patient comfort and safety during transfers and patient care. The nursing personnel reported that their backs were less sore and that they were less tired at the end of their shifts.<sup>19</sup>

Despite the obvious advantages to using lifting equipment, schools of nursing continue to teach, and nurses' licensure exams continue to include, outdated and unsafe manual patient handling techniques.<sup>20</sup> This is due in large part to outdated books and curricula both of which promote unsafe patient handling practices. To address this, a team of experts from NIOSH, the American Nurses Association, and the Veterans Health Administration developed and evaluated an evidence-based training program on safe patient handling for educators at schools of nursing that relies on use of technology for moving and transferring patients. The study found that when using the curriculum, nurse educator and student knowledge improved significantly as did the intention to use mechanical lifting devices in the near future.<sup>21 22 23</sup>

#### GUIDELINES

Over the past decade, we have found that best practices are specific to health care settings. What works in critical care may not be appropriate for emergency room settings or operating rooms. Because each health care setting has specific needs for specialized approaches, NIOSH worked collaboratively with outside groups to develop safe patient handling guidelines for caregivers in operating rooms and in orthopaedic settings (AORN and NAON efforts).

Recently, the health care industry has recognized the risks associated with performance of physically demanding patient handling tasks, and to reduce costs and increase productivity, companies have begun to implement ergonomic programs or practices aimed at preventing these injuries. The core element of these programs is reliance on use of state-of-the-art ergonomically designed equipment to assist the worker in carrying out the prescribed task. As an added incentive to adopt technology-based patient handling practices, OSHA recently published an ergonomics guideline that provided an overview of the risks of work-related MSDs in nursing homes. The guideline provided information about the most effective approaches for

<sup>18</sup> Collins, J.W., Wolf, L., Bell, J., and Evanoff, B., (2004). An evaluation of a best practices" musculoskeletal injury prevention program in nursing homes *Injury Prevention*, 10, 206–211.

<sup>19</sup> Garg, A. (1999). Long-term effectiveness of "Zero-Lift Programs" in seven nursing homes and one hospital. U.S. Department of Health and Human Services, National Institute for Occupational Safety and Health, Contract Report No. U60/CCU512089–02.

<sup>20</sup> National Council of State Boards of Nursing (2006). National Council Licensure Examination (NCLEX)® Web site. Accessible on Web at: <http://www.ncsbn.org/245.htm>. Last accessed on November 25, 2006.

<sup>21</sup> Nelson, et al. (2007): Evidence-Based Nursing School Curriculum in Safe Patient Handling. *International Journal of Nursing Education Scholarship*, Volt. 4, Iss. 1, Art. 26.

<sup>22</sup> Menzel, N. (2007). Preventing Musculoskeletal Disorders in Nurses: A Safe Patient Handling Curriculum Module for Nursing Schools. *Nurse Educator*. 32 (3): 130–135.

<sup>23</sup> NIOSH (2009). *Safe Patient Handling Training Schools of Nursing, Curricular Materials*. DHHS (NIOSH) Publication No. 2009–127. National Institute for Occupational Safety and Health, Cincinnati, OH.

mitigating or reducing those risks, and discussed training needs.<sup>24</sup> The most important recommendation in the OSHA nursing home guideline was that “manual lifting of residents be minimized in all cases and eliminated when feasible.” This is best accomplished by implementing a technology-based safe patient handling program.

In 2009, NIOSH initiated a project aimed at improving safety while lifting and moving bariatric patients. In health care settings, the term “bariatric” is used to refer to patients whose weights exceed the safety capacity of standard patient lifting equipment (300 lbs), or who otherwise have limitations in health, mobility, or environmental access due to their weight/size.<sup>25</sup> Compared to the non-obese population, obese individuals require more frequent and extensive health care due to obesity-related health problems, and health care personnel are encountering hospitalized and critical-care bariatric patients on an increasingly frequent basis.<sup>26 27 28</sup> In the extreme, such patients can weigh over 1,200 pounds. The upcoming NIOSH project will evaluate bariatric patient handling practices at multiple hospitals, including intervention programs and health/safety outcomes, in order to identify and promote evidence-based best practices.

We all have a vested interest in taking care of those who help take care of us and our families when we need medical attention. It is likely that the implementation of the research presented here will significantly reduce injuries and illnesses for health care workers and increase the quality of patient care. In turn, reducing MSDs among nurses may help address the critical issues of nurse recruitment and retention.

#### CONCLUSION

In closing, NIOSH has shown that manual handling of patients is a serious risk to health care workers and that we continue to work diligently to protect the safety and health of those workers. We have assessed the overall scope of the problem, characterized the risks from moving patients, and identified increasing risks due to the aging workforce and obesity epidemic in the United States. We have also developed some practical solutions in terms of best practice programs that rely on use of technology-based solutions. Our efforts have shown that there are effective alternatives to manual patient handling that are safe and cost-effective to implement. We appreciate the opportunity to present our work to you and thank you for your continued support.

I would be pleased to answer your questions.

Senator MURRAY. Dr. Hodgson.

#### **STATEMENT OF MICHAEL HODGSON, M.D., MPH, CHIEF CONSULTANT, VETERANS HEALTH ADMINISTRATION, WASHINGTON, DC**

Dr. HODGSON. Good afternoon, Chairman Murray and Ranking Member Isakson, and thank you for the opportunity to discuss safe patient handling and lifting standards for a safer American workforce.

My testimony today will discuss our experience in the Department of Veterans Affairs in evaluating and responding to the concern.

Patient manual handling injuries generate staff shortages for acute service delivery and affect workforce retention. In the late 1990s, a nursing research group at the Tampa VA undertook a review of nursing injuries; identified common and specific mechanisms of injury related to patient handling and movement; assem-

<sup>24</sup> OSHA (2009) *Ergonomics for the Prevention of Musculoskeletal Disorders: Guidelines for Nursing Homes*. U.S. Department of Labor, Occupational Safety and Health Administration. Document No. OSHA 3182-3R.

<sup>25</sup> Bushard, S. (2002). Trauma in patients who are morbidly obese. *Association of PeriOperative Registered Nurses (AORN) Journal*, 76, 585-589.

<sup>26</sup> Pieracci, F., Barie, P., and Pomp, A. (2006). Critical care of the bariatric patient. *Critical Care Medicine*, 34, 1796-1804.

<sup>27</sup> Reto, C. (2003). Psychological aspects of delivering nursing care to the bariatric patient. *Critical Care Nursing Quarterly*, 26, 139-149.

<sup>28</sup> Tizer, K. (2007). Extremely obese patients in the health care setting: Patient and staff safety. *Journal of Ambulatory Care Management*, 30, 134-141.

bled an expert panel that redesigned patient transfers; and identified the associated needed technology and support.

A VA Health Services research and development grant evaluated those recommended changes, and justified the new program, now known as Safe Patient Handling. That program supports both patient safety and employee injury prevention. The VA Sunshine Healthcare Network VISN 8 in Florida evaluated this program between 2001 and 2003 in a very rigorous way.

In parallel, external efforts by the VA program developers included support for the development of OSHA's "Ergonomics Guidelines for Nursing Homes" and leading the content and writing of the "2010 Guidelines for the Design and Construction of Health Care Facilities" that were recently published by the American Society of Healthcare Engineers.

VISN 8 business-case calculations suggested an internal rate of return on program investment of between 19 and 37 percent so that the VA funded a national program. Since 2008, VA has disbursed approximately \$143 million to VA healthcare facilities for this initiative, with another \$62 million planned for fiscal year 2011.

The program itself consists of several major elements, including the technology, such as ceiling lifts, sliding devices, and the like; patient transfer algorithms that define how nurses move patients as a function of patient dependency and the goal of the transfer; unit peer leaders as local program implementation support; and a whole series of additional infrastructure elements.

Major implementation lessons over the last years include the following:

- First, the program fails without strong local leadership and a robust unit peer leader program;
- Second, immediate equipment availability is a major driver for success so that ceiling lifts far outperform portable equipment; and
- Third, this is a fundamental change in patient care processes so that it relies on the nursing community to accept new technology and change longstanding practices.

Working with our Office of Nursing Services over the last years has led VA to recognize that, even though implementation must be a joint effort, the public face must include a very prominent nursing presence.

Over the last year, new evidence from researchers in Holland and from Stanford University suggests that the program actually also supports dramatically improved quality of patient care, as demonstrated by reduced rates of decubitus ulcers, incontinence, and urinary tract infections.

In addition, a recent reanalysis from the Stanford University program identified an internal rate of return greater than 65 percent, a phenomenal addition from these additional patient care quality measures.

VA's program encompasses a comprehensive evaluation component, including status reports, audits and fiscal reviews, and longitudinal evaluations of selected sites.

New technologies, that were not envisioned when the program was designed in 2006, have emerged. So, for example, air-assisted lateral transfer devices, powered wheelchairs and stretchers, and



car extractors were simply not available 5 years ago, when we designed the program. As the problem of obesity increases for the veteran patient population, these additional technologies have been developed for moving patients, including overweight patients.

New equipment and extension of ceiling tracks into bathrooms have been designed to reduce the frequency of transfers, and we're currently modeling how and where the additional newer program elements are likely to be beneficial and cost-effective.

Chairman Murray, VA has found it can improve patient care while reducing costs through efforts like the Safe Patient Handling Program.

Thanks for the opportunity to describe this.

[The prepared statement of Dr. Hodgson follows:]

PREPARED STATEMENT OF MICHAEL HODGSON, M.D., MPH

Good afternoon, Chairman Murray and Ranking Member Isakson, and thank you for the opportunity to discuss safe patient handling and lifting standards for a safer American workforce. My testimony today will discuss our experience in the Department of Veterans Affairs (VA) in evaluating and responding to this concern.

Manual handling injuries, such as lifting patients, represent the most frequent injuries to nursing personnel, an occupation with among the highest injury rates in the United States. These injuries are the primary reason for early retirement and disability retirement and, thus, have major consequences affecting VA's ability to retain qualified health care personnel.

Those injuries also increase workers' compensation costs and lead to unplanned staff absences, causing problems for service delivery. In response, a VA nursing research group in Tampa undertook a review of nursing injuries in the late 1990s. They identified common and specific mechanisms of injury related to patient handling and lifting. This group then assembled an expert panel that included widely recognized VA and non-VA researchers and practitioners that redesigned patient transfers. This group identified the needed technology to support these changes in process, i.e., appropriate patient transfers. They evaluated those recommended changes in clinical practice with a VA Health Services Research and Development grant and developed the new program which we now know as "Safe Patient Handling." That program supports both patient safety and employee injury prevention. The VA Sunshine Healthcare Network (Veterans Integrated Service Network, VISN 8) in Florida deployed this program between 2001 and 2003 with a rigorous evaluation component. Since that time, the VA Tampa Patient Safety Center of Inquiry has continued to evolve the program with major changes to the patient care handling process.

In parallel to these internal efforts, VA program developers participated in the Occupational Safety and Health Administration's (OSHA) Ergonomics Advisory Committee and supported the development of OSHA's ergonomics guidelines for nursing homes. Recently the Facilities Guidelines Institute (FGI) released the *2010 Guidelines for the Design and Construction of Health Care Facilities* [published by the American Society of Healthcare Engineers (ASHE)], based on this work.

The VISN 8 program reduced patient manual-handling caregiver injuries and led to markedly increased employee and patient satisfaction. Results that document the reductions in injury and the increases in patient and provider satisfaction have been published in the peer-reviewed literature. The initial business case calculations, published in the peer-reviewed literature in 2005, suggested an internal rate of return on program investment in the range of 19 percent. Subsequent internal work suggested an internal rate of return of up to 37 percent. With such dramatic benefits, VA developed and funded a national program, with a budget initiative that was proposed in 2007 and that was to run through 2011. The first funds were distributed in July 2008, and so far VA has disbursed approximately \$135 million to VA health care facilities for this initiative. VA has budgeted another \$62 million for fiscal year 2011, the final year planned for implementation of the basic program. The program itself consists of several major elements, including technology (ceiling lifts, sliding devices, and the like), algorithms that define patient transfers as a function of patient dependency and the goal of the transfer, unit peer leaders as local program implementation support, and infrastructure-like maintenance, equipment inventory, and replacement. Standing up the program requires strong local leadership, working through program implementation and planning issues, supporting the local

equipment selection, training peer leaders, and managing the program. A broad range of training and education support materials have been developed, from cognitive aids to support appropriate transfers through books, CDs, and videotapes. A brief introductory video for patient education, to guide expectations, is available on the Web sites of some facilities.

Implementation lessons from several VISNs in 2004 and 2005 clearly demonstrated that without a unit peer leader program and strong local leadership, the program fails. Additional work suggests that just in time equipment availability is a major driver; for example, ceiling lifts far outperform portable equipment as they are always in the same place. This is a fundamental change in patient care processes, and it relies on the nursing community to accept new technology and change long-standing processes. Many nursing schools have recently incorporated this approach into their educational curricula. Working with our Office of Nursing Services over the last year has led VA to recognize that even though implementation must be a joint effort, the public face must include a nursing presence, without which the program simply fails.

New evidence from researchers in Holland and from Stanford University suggests the program also supports improved quality of patient care, which is demonstrated by reduced rates of decubitus ulcers, incontinence, and urinary tract infections. In addition, the Stanford analysis identified an internal rate of financial return greater than 65 percent. Much of the cost savings is directly attributable to nursing retention and the decreased cost of training.

The program encompasses a comprehensive evaluation component including status reports, audits and fiscal reviews, and longitudinal evaluations of selected sites. We are currently conducting a formal evaluation of changes in injury rates as a function of program implementation and activation status. This program highlights VA's work on nursing workforce development and retention in parallel with the efforts to support both employee working conditions and patient care. Most importantly, it demonstrates the benefits of using rigorous, evidence-based approaches to improve patient safety.

Finally, new technologies, not envisioned when the program was designed in 2006, have emerged. For example, air-assisted lateral transfer devices, powered wheelchairs and stretchers, and car extractors were not available 5 years ago. As the problem of obesity increases for the Veteran patient population, additional technologies have been developed for moving patients, including overweight patients. New equipment and extension of ceiling tracks into bathrooms have been designed to reduce the frequency of transfers. We are currently modeling how and where additional program elements are likely to be beneficial.

VA continues to share information about the Safe Patient Program throughout its national health care system. An annual conference in Florida, co-sponsored by the National Institute of Occupational Safety and Health, the University of Florida, and the Veterans Health Administration, is one important way VA has increased awareness, disseminated research, and conducted training.

Chairman Murray, every health care organization must address safe patient handling and lifting standards. VA has found it can improve patient care while reducing costs through efforts like the Safe Patient Handling program. Thank you for the opportunity to appear, and I am prepared to answer your questions at this time.

Senator MURRAY. Thank you both for your testimony.

Senator Isakson has joined us. I'll turn to him for opening comments.

Senator ISAKSON. Out of respect for those testifying, I'd ask unanimous consent that my opening statement be submitted for the record.

Senator MURRAY. OK, thank you very much.

[The prepared statement of Senator Isakson follows:]

#### PREPARED STATEMENT OF SENATOR ISAKSON

I thank Senator Murray for calling this hearing and welcome our witnesses.

Every day, caregivers transfer, position, and mobilize patients. Providing this assistance by the manual lifting of patients can involve significant physical effort. This task is further complicated with tubes and other devices hindering the patient's movement.

Patients are moved or repositioned for a number of reasons, including accomplishing patient care tasks, such as an examination, preventing bedsores, or simply providing patients with additional comfort and safety.

Manual patient handling, including lifting, transferring, positioning, and sliding patients, can be difficult and even dangerous for both caregivers and patients. There is evidence that manual patient handling puts caregivers at considerable risk for injuries.

For these reasons, more and more health care facilities are installing assistive patient handling and movement technology. This technology may not only make caregivers' work easier and safer, but provide for better patient outcomes and improved quality of life while receiving care. Additionally, this technology may allow hospitals and nursing homes to mobilize patients immediately following a procedure.

Legislation that would mandate lift policies and the use of these assistive devices is currently before the HELP Committee. The costs associated with this legislation are unnecessary and come at a time when the industry is already crippled with costs imposed by the new health care bill.

According to his own actuaries, the President's new health care law bends Federal spending curve *upward* "by a net total of \$251 billion" over the next decade.

Many of the entities that will be forced to comply with the crippling new mandates in the health reform bill are small businesses that are struggling to keep their doors open.

The CMS Actuary has already told us the half trillion dollars in Medicare cuts included in the new law may cause providers to end their participation in the Medicare program, and possibly jeopardize access to care for beneficiaries. Further, the purchasing of medical devices will be more expensive after Congress imposed a 2.3 percent excise tax on device manufacturers. Passing a new mandate on lifting assistive devices will only make these problems more severe.

While patient handling and movement technology certainly holds much promise, I have been in Washington long enough to know that not every good thing needs to be mandated immediately. The health care industry is very active in this area, going above and beyond current legal and regulatory minimums to try to help both workers and patients.

In legislating in this area, Congress must consider the high cost and all its ramifications, intended and unintended.

Senator MURRAY. We'll turn to questions, then.

Captain Collins, I'd like to start with you. Various NIOSH publications make the point that simply training our workers to lift differently is ineffective. We all know that lifting is easier when you bend at the knees and hold the body weight close, but obviously nurses, in having to lift patients, have to reach over beds or equipment, and, we know, this often results in nurses being more than 6 inches, at least, away from their patient.

NIOSH standards say that the average person can lift 45 or 50 pounds, but how much do those figures change when the lift requires bending over or holding your arms more than a foot away from the center of your body mass?

Mr. COLLINS. Typically, about half, less than half—25 to 35 pounds is about the maximum acceptable lifting, with the postures that nurses have to assume.

Senator MURRAY. So, our lifting standards don't reflect the fact that nurses pick up things differently.

Mr. COLLINS. No.

Senator MURRAY. OK. Can you perhaps address for this committee some of the other dangers that are inherent to lifting human beings rather than some kind of inanimate object?

Mr. COLLINS. Well, the original lifting standards were designed for inanimate objects, such as boxes. You can understand that some nursing home patients can be combative, resistant to being transferred, and they can also be injured if they're mishandled or dropped during the course of lifting. And they're not packaged very well for transfers, and they're excessively heavy; well beyond the 51-pounds lifting limit.

Senator MURRAY. OK. Well, I suspect that most people don't think of nurses or people in healthcare professions as having to lift as much as construction workers. Can you tell us, What is the comparison between how much a healthcare worker lifts in a day, compared to other high-professions, like truck drivers or construction workers?

Mr. COLLINS. It depends on the particular caregiver's job, but I suspect it's very similar. In fact, when I first started in this area of research, I was working with United Auto Workers on a dissertation study with Johns Hopkins University. They were a 95-percent male workforce, and they were restricted from lifting over 35 pounds during the course of assembling automobiles. And here, I had this concurrent study population with female workers, nursing aides and orderlies, which the workforce was 93 percent female, and there was an expectation that they would lift 300-pound bodies as part of their daily routine. We knew that we had a huge challenge ahead to discover and evaluate effective methods to help them safely lift and move patients.

Senator MURRAY. If we implemented a national lifting standard, what kind of reduction in injury rates to nurses and healthcare providers would we see?

Mr. COLLINS. In the two well-controlled studies that I've been involved in, we've seen reductions of—where comprehensive best-practices programs have been implemented in excess of 60 percent; and that's in the nursing home industry. I have a current study where we're working with UPenn Medical Center and Northwestern Memorial Hospital in an acute-care setting. These are ongoing studies—the hospital study's still going, but we're—preliminary results are over 50-percent injury reductions there.

The National Research Council and the Institute of Medicine have estimated that, when you reduce the biomechanical exposures from manual lifting, that the assistive devices could result in reductions somewhere between 55 and 65 percent.

Senator MURRAY. OK.

Dr. Hodgson, my father was in World War II and came home injured, and was eventually diagnosed with Multiple Sclerosis. And my family were caregivers, so I'm intimately aware of how closely families and veterans take care of their loved ones. I also worked

in the Seattle VA, right after the Vietnam war, and worked with soldiers who were both physically and mentally injured, and I know how much families are involved in this.

And I wanted to ask you, Have you interviewed any veterans who use the VA healthcare facilities—about their views on your new safe patient handling policy?

Dr. HODGSON. Actually, it's a great question. And yes, there are both formal evaluations of patient acceptance—even in the early VISN 8 study, the patient acceptance was a major criterion for evaluating the utility of the program. There's a publication on that, that we can submit as part of the post-hearing comments.

Dr. HODGSON. We do have a PVA service rep at every hospital. The one from Tampa was actually lined up to come tomorrow and testify on the panel, before the panel got moved. He would be happy to fly up and talk.

Yes, we do know that patients like the technology. It makes many of them feel much safer.

There are ways that it must be implemented. For example, in our spinal cord injury units, the issue of dignity and thinking through how patients are transferred is a real issue.

We have spent a fair amount of time thinking about that. There is written peer-reviewed publicational record on that, and there are lots of people who think about that. It's an important issue.

Senator MURRAY. Thank you very much.

Senator Isakson.

Senator ISAKSON. Well, thank you Chairwoman Murray.

I do apologize to both of you, as well as the Chairman, for being late. And that's why I didn't read my statement. It's also why this next question may have already been either explained in your testimony or come up.

On page 3 of Dr. Collins' transcript, it says,

“These recommendations”—referring to NIOSH's recommendations on lifting—“have been adopted by the Veterans Health Administration and incorporated into its current patient handling recommendations and patient handling algorithms.”

So, my question, Dr. Hodgson, is, What have you implemented, by virtue of NIOSH's regulations, in terms of the lifting of patients?

Dr. HODGSON. The VA program is designed a little differently. NIOSH has been part and partner of our work over the last 10 years, from the program design through the conferences, but our program was designed in a different way, not quantitatively to deal with specific lifting thresholds, in terms of force requirements, but in terms of commonsense approaches and likely issues. So, thinking through patient dependency—fully, partially, or a minimally dependent patient's weight and approximate, kind of, force requirements, and designing the transfer to use technology to minimize the amount of force required.

We don't actually have detailed force thresholds; we have, from that HSR&D lab evaluation, the knowledge that, in general, when you do something, following a set of algorithms with a certain number of staff, you will not exceed weight limit restrictions.

It wasn't designed the way the NIOSH program was laid out; it was designed in an algorithmic, you know, operationally efficient way.

Senator ISAKSON. In other words, you have parameters and guidelines and recommendations as to the handling of the movement of a patient and their weight, but you don't have a specific approach that fits all movement. Is that what I heard you say?

Dr. HODGSON. Each transfer requires a different set of actions. If you're going to move a patient up in bed, or move a patient from a bed to a wheelchair, or from a wheelchair onto a commode, there are different acts that are required; you need different technology, and you may need different numbers of nurses. The force requirements to put someone in a sling, lying on their back, are always going to be the same, but they are going to be different from the force requirements and strength requirements to take someone out of a sling once they're sitting in a chair. Our program was designed to address, kind of, the practicalities of movement, knowing the NIOSH lifting equation and force requirements.

Senator ISAKSON. Well, I think the operative word of what you just said is "practicality." I speak from a recent experience, where I was being lifted, back in March, and I was in the hospital for a couple of days. And, in terms of getting tests and being moved, having an IV, or whatever you might have, there are lots of different circumstances under which movement is important to the care of the patient, but limitations of either the patient or the test, whatever it is—an MRI or CAT scan or something like that—are very different.

So, your approach is very much to try and accomplishing the minimizing of lifting, but being broad in the different ways in which that's accomplished, I take it.

Dr. HODGSON. That's correct. That's the core of the unit peer-leader program. You know, our approach is really to focus on the nursing process and to provide local support—front-line peer safety leaders, on some level—who will model appropriate behavior, who will serve as resources to help people think through how to do a lift that they haven't encountered, if we happen not to have an algorithm, or if it's not in the nursing care plan for that patient. So, having someone around who is the designated expert—a nursing assistant, the licensed practical nurse, an R.N.—but someone who's undergone a more detailed, thoughtful training program, who is respected by their peers, and then helps work through how that should work—that's really the core of the nursing model, the nursing process.

Senator ISAKSON. Well, the author of the legislation is on our panel today—Senator Franken. And I certainly wait for him to summarize the legislation. But, I would be very curious if this is a one-size-fits-all approach to movement or whether there's the type of flexibility that Dr. Hodgson has talked about, because if it's a one-size-fits-all equipment-based, installation-type situation, I would find that, having gone through certain experiences, to be very difficult. But, I will defer to the distinguished Senator from Minnesota to do that.

Thank you, Madam Chair.

Senator MURRAY. With that, we will turn to the distinguished Senator from Minnesota, Senator Franken.

Senator FRANKEN. Thank you, distinguished chairwoman, and thank you for the lead-in, my distinguished colleague from Georgia.

This is not a one-size-fits-all. You know, when I first started running for the Senate, the SEIU—Service Employees International Union—had a Walk-In-Our-Shoes Day. You could choose to be one of anything that SEIU members do, and I chose a nurse's assistant—in a nursing home—because my mom had gotten such great care. I worked with a guy, Ulysses Bridges, who had been a nurse's assistant for 25 years, or something, and was awarded with people with severe MS, very disabled. He had a sling. He had a sling to lift people. And I remember the first patient that he lifted from bed to wheelchair, and he said, "These are lifesavers, these machines." And I remember thinking, like, "I don't know how he could have done this without this thing." And he said, "It just saves so many backs"—basically, is what he was saying.

Dr. Hodgson, on our next panel we'll hear testimony asserting that hospitals and other healthcare facilities don't have the physical infrastructure to implement new standards for patient handling. Can you describe how the VA was able to make the necessary changes to their existing facilities?

Dr. HODGSON. I'm not an engineer, but there are three parts to that answer:

- In general, most of our hospitals are built in a way that, in fact, the weight loads will work for ceiling lifts;
- Second, there are very formal structural assessments that are sometimes needed to make sure—and sometimes there is structural reinforcement required—to make ceiling lifts safe; and
- Third, where those can't be done, there are ways of building a framework inside a room to effectively build a steel cage—a frame, as it were—on which the ceiling-lift track sits. It's not as aesthetically pleasing. It's not consistent with, kind of, the philosophy of our, kind of, making hospitals and what we call "community living centers"—nursing homes—look like home, but it works. It is something that can be put up temporarily, as a portable thing, in homes, in residences.

There are solutions for that in almost every place that we've encountered.

Where it is not possible to do ceiling lifts, there is portable equipment available to do that. It's generally more expensive, but, you know, there are solutions.

Senator FRANKEN. Thank you.

Captain Collins, NIOSH data show that the initial investment in safe patient lifting equipment and training can be recouped in less than 3 years. What specific savings are included in that calculation? The workers' comp, savings in overtime and placement, staff, etc.

Mr. COLLINS. That particular savings was "direct cost only" for workers' compensation. That was the medical and indemnity expenses associated with workers' comp only. That did not include any indirect costs. The costs were recovered so quickly, in that study—these were portable lifts that were installed—or, were available for about every eight patient rooms.

Senator FRANKEN. And so, this doesn't include sick leave or retraining.

Mr. COLLINS. None of that went into this calculation. This was direct—the cost, on the expense side of the equation, was for the purchasing of the lifting equipment, and the training and the use of the equipment. And to counter that was the reductions strictly in workers' compensation medical and indemnity expenses.

Senator FRANKEN. And just to assure my colleague, my esteemed colleague from Georgia, this is not a one-size-fits-all—I mean, each lifting exercise is different, right?

Mr. COLLINS. Right. There was multiple prescriptions for how patients would be lifted, depending on their disability, their weight, and their ability to bear weight. One of the challenges in the study was how this was communicated from the nurse management to the nursing aides and orderlies.

Senator FRANKEN. I think part of the reason there are so many injuries is that there are so many awkward, different ways of having to lift so many patients—and there's almost an infinite number of lifts that you have to do. And so, obviously the commonsense solution to it is certainly not a one-size-fits-all, is it?

Mr. COLLINS. No, sir.

Senator FRANKEN. Well, thank you.

Thank you, Madam Chair.

Senator MURRAY. Thank you very much.

Captain Collins, I wanted to ask you—in your written testimony, you talked about the fact that the average age of the nurses has been rising, and that's a consideration in this. And I wanted to know if you could describe for us, What's the physiological difference between a 46-year-old person lifting and a 26-year-old person lifting somebody?

Mr. COLLINS. Clearly, their lifting capacity would be diminished. Their muscle strength would be diminished. And they would have to call on a lot more of their ability to lift to—as they age, to transfer patients.

Senator MURRAY. It would take additional staffing. Is that part of the cost?

Mr. COLLINS. Additional staffing, certainly, and their ability to lift is clearly diminished as they age.

Senator MURRAY. OK.

Dr. Hodgson, we've talked a little bit about this—different kinds of equipment. I mean, most people think just about the ceiling-mounted lift when they talk about it. What are some of the other types of equipment, like in a very small space, where you can't use a ceiling-mounted lift?

Dr. HODGSON. Well, actually, ceiling lifts are probably easier to use in small spaces than if you have large patient rooms. Sit-to-stand lift—I mean, there are portable lifts that are either self-powered or that you push around, that have arms that extend to let you, kind of, move patients from a bed out into a chair. Sit-to-stand lifts help patients stand up. Things like air-assisted lateral transfer devices are effectively, you know, air mattresses that move patients laterally so that you don't have to lean over and pull someone back. Powered wheelchairs and powered stretchers—if you have a 600-pound patient in a wheelchair, there is a lot of force requirement



to push that patient. Having a motor on that wheelchair or the stretcher means you're not pushing 650 pounds down the hallway. Car extractors are things that let you pull patients who are sitting in a car out of the car and lift them into a wheelchair or a gurney to cart them into a—

Senator MURRAY. I remember doing that with my dad many times. Reaching into a car and trying to get him into a wheelchair was extremely difficult.

Dr. HODGSON [continuing]. A huge problem and a very common cause of injuries. You know, only about 60 percent of the manual handling injuries are actually back injuries; the rest are shoulder, neck, and forearm injuries. Some hit the knee. But, those kinds of—leaning over and torquing your back and pulling your shoulder—not uncommon.

Senator MURRAY. One of the challenges we're hearing about is the training of the nurses with the use of all that kind of equipment. If there were a national zero-lift requirement, do you think nursing schools would be more likely to teach zero-lift techniques—and simplify the burden of continuing education? What do think the consequences would be?

Dr. HODGSON. Yes. And, in fact, that movement is well underway. I think, 2 years ago, NIOSH and VHA had a joint project with AORN and orthopaedic nurses to put this program into the core curriculum in a series of nursing schools. Nurses who were coming out of—that original project was, I think, 26—

Mr. COLLINS. Twenty-six.

Dr. HODGSON [continuing]. Nursing schools. That movement has spread. Many nurses now come out expecting that as the basic tool in a hospital.

We assumed, when VHA funded this program—back when the discussions happened in 2007—that, within 10 years, we would have a very hard time hiring nurses if we weren't, you know, up on this, because nurses won't work without it. And with a nursing shortage, there will be the opportunity to go where people have that. We're already seeing that in cities where there are disparities between hospitals. Nurses clearly walk and make their choices.

Senator MURRAY. OK.

Senator Isakson.

Senator ISAKSON. I'm reading a bullet point, here in my explanation in my manual, that says that the legislation prohibits the manual lifting of patients, except where the patient's care may be compromised. Is that the correct bottom line?

Senator FRANKEN. Yes.

Senator ISAKSON. There wouldn't be any manual lifting at all; it would be equipment used to lift, except in the case where somebody would be compromised—or, the patient's health could be compromised.

Senator FRANKEN. Yes.

Senator ISAKSON. Which means you would have to have this stuff—whatever "this assistance" is, it would have to be installed in the facility. Is that correct?

Senator FRANKEN. Right.

Senator ISAKSON. OK. Captain Collins, as a—well, no, it's just in your opinion—how long would it take to establish that in the hos-

pitals of the United States, in the nursing homes of the United States? An installation.

Mr. COLLINS. Nationwide?

Senator ISAKSON. And it's a guess, I realize.

Mr. COLLINS. It would be a guess, sir. I don't know the answer to that. I know that it has taken—and the current acute-care hospital that I'm working now, it was a year-and-a-half process to install 600 ceiling lifts in a 695-bed hospital, and it was an incremental installation in that single facility. And that was from the time that they began the installation process. They estimate, to equip a room, when they have the contracted installers, is about 4 hours per hospital room.

Senator ISAKSON. The enforcement agency on this would end up being OSHA, I believe. Is that not correct?

Mr. COLLINS. Yes, sir.

Senator ISAKSON. And the enforcement mechanism are no-notice inspections, I believe.

Mr. COLLINS. Um.

Senator ISAKSON. That's what my notes say, but I could stand to be corrected.

Mr. COLLINS. I am not sure about how the enforcement would proceed.

Senator ISAKSON. The point I'm getting to is really this. The VA has made an extraordinary effort to accomplish the intent of NIOSH's recommendations, in terms of lifting, correct, Dr. Hodgson?

But, this legislation would invalidate that—if it went into immediately, you'd have to go to manual equipment, versus what your term was. I've forgotten where my notes were—but, dealing with the situation according to the situation.

What I'm trying to get at is, How long are we going to give health facilities the time to do this? What would be the interim position during that time, in terms of reducing the potential injury to workers, yet still providing for movement of those workers that might, in fact, in part, be manual?

[No response.]

Would anybody know, or have a guess?

Senator FRANKEN. I'm sorry, can you repeat the question?

Dr. HODGSON. Is this a question about the legislation or—

Senator ISAKSON. Yes, the question is, Between the time the legislation passed that mandated this, and the time the hospitals could actually install it, what's the transition mechanism that you're going to use, first of all? Because you're going to have patients coming and going in hospitals all the time.

Senator FRANKEN. Right. Well, we allow 2 years from the promulgation of a final regulation—for hospitals to enact. So, it would be 2½ years after enactment that providers would be expected to develop a plan. They wouldn't have to purchase the actual equipment until 2 years following the implementation of a final regulation. That's 4 years after the enactment.

Senator ISAKSON. OK. So, you've got a 4-year—and you also have a grant program, is that right?—in HHS, to help hospitals in the acquisition? Correct?

Senator FRANKEN. Yes. This is Federal money.

Senator ISAKSON. And my last question—and it's not—these aren't questions as much as they're kind of observations that pretend themselves to be a question.

In that one caveat, about the patient care being compromised, that clearly is going to be a—to a certain extent—a subjective judgment that's going to have to be made at a moment in time, but it looks like the enforceability, other than the no-notice inspection, is through litigation. Is that correct?

[No response.]

If somebody complained they had an injury because of the lifting, and the decision was made—

Senator FRANKEN. I think it would be done through OSHA.

Senator ISAKSON. Through OSHA.

Senator FRANKEN. Yes.

Senator ISAKSON. Thank you, Madam Chairman.

Senator FRANKEN. Yes. And OSHA—can I take it from here?

Senator MURRAY. Senator Franken will take it—

Senator FRANKEN. OK, thank you.

Under this legislation, OSHA would issue a standard on safe patient handling and injury prevention that requires the use of lift equipment to move patients, except in cases which would compromise patient care.

Care facilities would implement safe patient handling and injury prevention plans.

Workers would receive training on safe patient handling and injury prevention.

Workers would be protected from employer retaliation if they refuse to accept assignments which do not meet safety standards.

And Health and Human Services would administer a \$200-million grant program to cover costs of acquiring safe handling and equipment for eligible facilities.

Let me ask, Captain Collins, What reduction in injury rates could we expect if a national lifting standard were implemented, as is called for in the bill?

Mr. COLLINS. What we've seen in the best practices programs, where they have a comprehensive safe patient handling and movement program, injury reductions have been achieved in excess of 60 percent. And the Institute of Medicine and the National Research Council, who's examined the literature, has come to the conclusion, somewhere between 55- and 65-percent injury reduction when you eliminate—or significantly reduce—the manual lifting and replace that with assistive devices.

Senator FRANKEN. Do you think that a standard would yield savings for healthcare facilities?

Do you think that a standard would yield savings for healthcare facilities?

Mr. COLLINS. Yes, sir. The findings that we have is that, when the programs are comprehensively implemented—somewhere between 3 and 5 years—the return on the investment is achieved. And after that, you're making money, so to speak.

Senator FRANKEN. There will be a return on investment, here, that's greater than the investment—

Mr. COLLINS. Three to five years.

Senator FRANKEN. OK, thank you.

Senator MURRAY. All right. Thank you very much, Senator Franken.

With that, I'd like to thank both of our witnesses. We will leave the record open for additional questions for both of you.

And, with that, I'd like to have our second panel come forward and get seated. And, while you're doing that, we will do introductions. So, if you can all move forward and sit at the desk, please.

We're going to begin with: Dr. Barbara Silverstein, who is the research director for safety and health assessment and research for prevention at the Washington State Department of Labor and Industries; June Altaras, who is the administrative nursing director at Swedish Medical Center, in Seattle, WA; and Douglas Erickson, who is the chairman on Guidelines for Design and Construction of Healthcare Facilities at the Facilities Guidelines Institute.

Senator Franken also has a witness today.

And, Senator Franken, I'll let you introduce your witness.

Senator FRANKEN. Thank you, Madam Chair.

I'm happy to introduce Bettye Shogren, a specialist in occupational health and safety from the Minnesota Nurses Association, and the Minnesotan who inspired S.1788, the Nurse and Health Care Work Protection Act.

Bettye's nursing career ended prematurely when her doctor put her under a 40-pound lifting restriction because of cumulative injuries from her job. Instead of purchasing the lifting equipment Bettye needed to safely care for her patients, her employer offered her an administrative position, a job that required no nursing education or skill.

Unfortunately, Bettye is just one of many nurses who have lost their careers due to the lack of safe patient handling standards.

Thank you, Bettye. Thank you for being here. I look forward to hearing your testimony.

Senator MURRAY. All right.

We'll begin with Ms. Silverstein.

**STATEMENT OF BARBARA SILVERSTEIN, MSN, MPH, Ph.D.,  
CPE, RESEARCH DIRECTOR, WASHINGTON STATE DEPARTMENT OF LABOR AND INDUSTRIES, OLYMPIA, WA**

Dr. SILVERSTEIN. Thank you very much.

You have my written testimony, so I will make this brief.

Basically, Washington is one of nine States with safe patient handling legislation. A legislation has been initiated in another 10 States. Washington's law, which covers only acute-care hospitals, has the following requirements:

A safe patient handling committee, with at least half of the committee being direct-care staff.

A needs assessment for all patient care areas.

A minimum of one lifting or moving device per 10 acute-care beds, or per unit.

The right to refuse unsafe handling.

And an annual program evaluation.

Additionally, the law provides incentives for implementation of the safe patient handling legislation, including a business and occupations tax credit through 2010. And this is equivalent to about \$1,000 per acute-care bed for the hospitals in Washington State.

Placement in a reduced State-fund workers compensation premium class for those hospitals that are part of the State fund and have fully implemented safe patient handling programs.

And a department of health does the audit, rather than OSHA, of implementing the safe patient handling legislation.

Since the law went into effect, injuries related to lifting patients in Washington State have decreased about 35 percent. The legislation is fully implemented at the end of this year, but we've already decreased over 35 percent. And when we compare that to nursing homes, that are not affected by the legislation, their injury rates have been going up.

While there's reason to believe that improvement is the result of safer work required by the legislation, definitive proof of this would require a comparison with States without legislation.

We began to compare Washington with the State of Idaho, which does not have any legislation related to safe patient handling. However, because they do not participate in the BLS survey, we could not do a comparison of injury rates between the two.

However, we were able to conduct a scientific study to compare patient handling programs and activities in Washington and Idaho hospitals of similar size and location—meaning rural or urban—using surveys and site visits. And then, the results of these studies have shown that Washington study hospitals were much more informed about patient handling—safe patient handling, but they had purchased more equipment, provided more hands-on training for staff, and had involved staff in the program development process—much more so than in Idaho.

One of the important components of successful implementation of safe patient handling legislation in Washington has also been the creation of an active tripartite steering committee with a how-to Web site that has been used by virtually all the hospitals in Washington State to assist in implementation of the legislation. This steering committee has been integral to the successful implementation, I would say.

We expect that these differences will result in measurable improvements in injuries that are greater in Washington than Idaho. While we don't have the definitive injury data yet, it's reasonable to expand Washington's model to the country. However, in my opinion, nursing homes should be included in any national legislation. Nursing homes have been included in the safe patient handling legislation in a number of other States, but not yet in Washington.

Thank you for allowing me to provide this brief summary. I'd be happy to answer any questions. And you have my written testimony.

[The prepared statement of Dr. Silverstein follows:]

PREPARED STATEMENT OF BARBARA SILVERSTEIN, MSN, MPH, PH.D., CPE

My name is Barbara Silverstein. I have been the Research Director for the Washington State Department of Labor and Industries' Safety and Health Assessment and Research for Prevention program (known as SHARP) for almost 20 years. I received a Master of Science degree in nursing, Master of Public Health in Epidemiology and Occupational Health, and Ph.D. in epidemiologic science. We conduct safety and health research in a variety of workplaces to identify potential hazards and evaluate potential solutions. Health and safety of health care workers has been one of our areas of study.

Research has shown that manual handling of patients increases risk of injury for caregivers and patients. Injury statistics show manual patient handling is dangerous to care givers and patients. Even with “good” lifting technique, it is not possible to manually lift patients without exceeding the NIOSH action limit for manual handling. Mechanical lifting devices are necessary but not sufficient.

Nursing homes and hospitals have amongst the highest numbers and incidence rates of injuries in the United States. Back and shoulder injuries related to manually handling patients comprise the largest proportion of injuries. Patients are older, bigger, heavier, sicker and rapidly changing status. Nursing staffs are also getting older, fewer, working longer hours, suffering from career ending injuries and are not easily replaced. Nursing schools have difficulty in recruiting faculty. Nursing assistants can make more money working at fast food restaurants. Nursing homes face management and staff turnover and inadequate funding. Hospital and nursing home injury rates are high and workers compensation claims for back injuries are costly. Safe patient handling legislation and programs are aimed at reducing this burden for workers, patients, families and society.

Washington is one of nine states that currently have safe patient handling legislation to address this problem. Others include Illinois, Ohio, Maryland, Minnesota, New Jersey, New York, Rhode Island and Texas. Legislation has been initiated in another 10 States (California, Florida, Kansas, Massachusetts, Michigan, Nevada, New York, Vermont, Connecticut, Hawaii and Missouri). The legislation varies in terms of coverage and requirements.

Safe Patient Handling (SPH) legislation has a positive impact on staff knowledge and practice of safe patient handling as well as reduction in patient handling injury rates. This has been demonstrated in Washington State.

Washington State passed safe patient handling legislation for acute care hospitals in 2006 with phase-in from 2007–10. Requirements and incentives of the Washington State law requires that hospitals have:

- A safe patient handling committee with at least half of the committee comprised of direct care staff.
- A needs assessment for all patient care areas.
- Minimum of 1 handling device per 10 acute care beds/unit.
- Right to refuse unsafe handling.
- Annual evaluation.
- Department of Health audit of SPH implementation and practice.

Additionally, the law provided incentives for implementation, including:

- A tax credit equivalent to \$1,000 per acute care bed for SPH equipment purchases up to \$10 million total.
- Placement in a reduced workers compensation premium class for those with fully implemented SPH programs.
- Department of Health audit of SPH implementation.

This law is similar to the legislation proposed in H.R. 2381 Nurse and Health Care Worker Protection Act of 2009 that also included all direct care workers in health care facilities, and enforcement by OSHA.

To assist in the implementation of the Washington State law, a steering committee was created in 2006 with initial representation from the Washington State Hospital Association, Washington State Nurses Association, SEIU1199NW, UFCW141 nurses, and SHARP. Since that time, additional members from a number of large hospitals have been participating in the steering committee. The steering committee Web site (slide 8) is used by health care facilities to guide implementation of safe patient handling programs and practices. ([www.washingtonsafepatienthandling.org](http://www.washingtonsafepatienthandling.org))

The hospital financial tax credit incentive of \$1,000 per acute care bed for purchasing SPH equipment was used by most hospitals. Of 92 acute care hospitals, 28 used their maximum business and occupations tax credit. As of March 2010, \$7.6 million in tax credits were accessed. Access to tax credits ends December 31, 2010.

In 2006, SHARP initiated a study to evaluate the potential impact of this legislation on hospital nursing staff. In addition to monitoring individual and overall injury incidence rates, we are comparing SPH implementation and outcomes in four acute care hospitals in Washington with four acute care hospitals in Idaho (which has no legislation), matched for size (two large, two small) and geographic location (east, west).

Incidence rates for patient handling related injuries increased in 2006, remained high in 2007 and dropped significantly from 2007 to 2008, and we have preliminary indications of a further decline in 2009.

However, injury rates are lagging indicators. Leading indicators include changes in perceptions and practices. In order to capture changes in these indicators, we fo-

cused on four hospitals in Washington (with legislation) and four similar size and location (urban/rural) in Idaho (without legislation).

2007 baseline data included staff surveys, staff and management focus groups, observations and back injury workers compensation data. We repeated data collection in 2009 and will collect the final round of data in 2011. Direct care staff survey areas included demographics, knowledge of SPH policies, procedures, committees, equipment and training, as well as physical demands, health and quality of work life. There were no significant differences in these areas between Washington and Idaho at baseline. Slides 13–20 show a survey of some results at baseline (2007 and follow-up 2009).

Findings to date are included in the accompanying figures and include:

- Decreasing workers compensation claims rates related to patient handling injuries in Washington State acute care hospitals.
- Compared to Idaho hospital staff survey data, Washington survey data indicated greater staff knowledge about safe patient handling including:
  - What “safe patient handling” means (safe for patients/safe for staff) .
  - Less likelihood of injury on their team.
  - Satisfaction with patient handling equipment.
  - Availability of equipment to handle patients weighing more than 500 pounds.
  - Greater likelihood to routinely use lifting and transfer equipment.
  - Satisfaction with availability of patient handling equipment.
  - Safety committee involvement in the purchase of SPH equipment.

However, Washington nursing staffs were twice as likely to report conflicting job demands as Idaho nursing staffs. This was not necessarily related to the SPH program.

Focus groups (qualitative data) are used to “put the meat on the bones” of surveys (quantitative data) by including clarification of comments. Issues discussed in the staff and supervisor focus groups included knowledge of SPH concepts, barriers and successes in implementation.

At baseline, staff members were asked what SPH meant to them. Many tended to focus on patient falls and using “good body mechanics” to lift patients than on prevention of staff injuries using appropriate equipment. There is no safe way to manually lift an adult patient by one or more people.

In staff interviews in Washington State, there was much more knowledge of the requirements of an effective SPH program, including adequate staffing, safety committee involvement, hands-on training, and management support. Safe patient handling can be very effective in small as well as large hospitals as evidenced by comments from a staff focus group that indicated management support and adequate equipment were essential ingredients.

A lack of management knowledge about and support for a SPH program in a large Idaho hospital was evidenced by relying on manual handling with transporter support and a decision to not include ceiling lifts in a new hospital when it is much less expensive to install them during construction than in retrofitting. An example of a staff member using a ceiling lift is provided on the last page of the figures attached to this testimony. Using a ceiling lift is safer and more comfortable than manual handling or using a floor lift for both the patient and the staff.

Implementation of safe patient handling program cannot be successful if done in isolation. Mechanisms must be in place for continuous practice in use of equipment, easy availability of equipment, on-going training opportunities for staff such as looking for teachable moments with new or reluctant staff, a culture shift from “back injuries are inevitable in nursing” to, handling patients safely for the patient and the care-giver. The VA has shown the importance of facility champions and peer leaders in the implementation and sustainability of SPH programs.

There is some indication among Washington nursing staff of reduction in “very, very” physically demanding work by the first follow-up (see accompanying slides). This is likely to result in reduced injury and turnover of nursing staff in the future.

In summary, legislation and regulation can provide a “floor” for what are minimally acceptable working conditions, but as a society, a profession and an industry, we should expect more of ourselves and each other. We need to take care of those who take care of us. Mason General Hospital, a small critical access hospital in rural Washington, provides an example of this through their “environment of prevention” which advertises their safe patient handling program to promote staff recruitment and community good will. They have been quite successful in their recruitment and retention of nursing staff. Perhaps this would have happened eventually without legislation, but legislation provided compelling and immediate incentives for implementation and sustainability. Other examples can be found on the

Washington State Safe Patient Handling Steering Committee Web site ([www.washingtonsafepatienthandling.org](http://www.washingtonsafepatienthandling.org)).

The attached figures provide more detail and illustration.

Senator MURRAY. Thank you very much.

Ms. Shogren.

**STATEMENT OF ELIZABETH (BETTYE) SHOGREN, RN, MNA,  
MINNESOTA NURSES ASSOCIATION, STAFF SPECIALIST, ST.  
PAUL, MN**

Ms. SHOGREN. Good afternoon, Chairman Murray and Senator Isakson. Thank you for the opportunity to testify in support of Senate bill 1788, the Nurse and Health Care Worker Protection Act.

My name is really Elizabeth Shogren, but I think I might be the only one who knows that, some days. I'm employed by the Minnesota Nurses Association as a staff specialist in occupational health and safety. I'm also a work-injured nurse. I'm honored to speak on behalf of the thousands of nurses and other healthcare workers who are work-injured, and the thousands more who will be work-injured unless this legislation is enacted.

In March 1982, as Senator Franken said, my bedside career ended, not because I chose to end it, but because my injury resulted in a 40-pound lifting restriction that my employer would not accommodate.

I've been a nurse for less than 10 years. The last shift I was able to work without pain, I was assigned to care for several patients, one of whom weighed over 400 pounds. She required repositioning every 2 hours and a boost up in bed multiple times a shift. There weren't enough people to lend a hand that night, so, with the help of one nursing assistant, we cared for and moved her as prescribed and as needed. That was the last shift I worked at the bedside.

When my physician determined I would have a permanent lifting restriction, my employer offered me a job as an admitting clerk, a job that required no education and no skill, a job that was very similar to the one I had before I went to nursing school.

I declined that position and began a litigation battle that lasted 2 years and 9 months. My wage replacement benefits were cut off. My medical care was threatened. My family's income was cut in half. My husband took a second job to help us make ends meet. And my three kids learned to do without things that they took for granted up to that point.

I was fortunate to have the opportunity to fight, because most people simply couldn't afford to do that.

I fought because what was happening to me wasn't right. It wasn't right that my ability to be a bedside nurse was determined, not by what I knew, but by how much I could lift. I didn't have to lift weights to pass my licensing exam.

I fought because I was angry and because I needed to fight more than I needed to win. But, ultimately, I did win, when the Minnesota U.S. Supreme Court ruled that the job my employer offered was not suitable work. And that remains the standard for civil work and nurses in Minnesota, to this day.

By the time the court ruled, I was working for the Minnesota Nurses Association, and we started getting calls, as we published what happened, from nurses all around the country. And they



thought they were alone. And, back then, when nurses got hurt, they disappeared; and they were at work 1 day, and they were gone the next day, and you never saw them again.

With that—I'd like to say that's changed, but I feel nurses and other healthcare workers who are injured are frequently treated like disposable towels, and—they're used and they're tossed aside when they are injured.

I talk to hundreds of nurses around the country every year who have had the same kind of experiences. Many of them are significantly worse than my situation.

I talk to other healthcare workers, too; and, sadly, they're actually treated worse than registered nurses.

MNA has supported my efforts to improve the working conditions that created these injuries, but for so long, all we ever heard was, "Nurses weren't lifting correctly. If you'd just use good body mechanics, you wouldn't be hurt."

In an average 8-hour shift, a nurse on a med-surg unit can care for three to eight patients. Sometimes there's staff to assist, sometimes there isn't. But, we still have to care for them. We turn them, we lift them, we walk them, we even catch them when they fall. We do whatever needs to be done, and we work—we lift an average of 1.8 tons per shift. That's a lot of weight: 1.8 tons per shift.

We're expected to work like this every shift for 30 or more years in our career. And if you start adding up all the shifts, it's a remarkable amount of weight that my body, and other bodies, have to endure.

In 2004, we started hearing about the work of Audrey Nelson and the work at the James A. Haley Tampa VA, in Tampa, FL. I went to my first conference in 2004, along with a number of other people. And to kind of quote a commercial, what I learned was "priceless." I learned what I always knew, but I had evidence now that good body mechanics don't work to prevent injuries related to patient handling.

The process that we had been instructed to do over and over and over again to save our backs actually harms us more than it ever helped us. They don't work, because lifting patients exceeds the body's biomechanical limits.

I learned these types of injuries are largely preventable, because there was equipment that was available; and using equipment instead of our bodies prevents injuries.

I learned that many other industrialized countries had been using equipment for 20 or more years, because they had laws that required it.

And I also found out there was a quick return on investment, because injuries to workers are reduced, therefore workers' compensation claims are reduced, and patient injuries are reduced, as well.

That's really important to me, the patient injury part, because I'm still a nurse, and nurses care about stuff like that.

There were 38 people from Minnesota at that conference in 2004, and we went back to Minnesota and said, "What can we do here to make it better?" We worked extensively with one of the major employers in Minnesota—Allina—as well as the Minnesota Hospital Association, to help bring a new program, Safe Patient Han-

dling, to our State. We've seen significant success with Allina, Mayo, Fairview, Bemidji, and a number of nursing homes.

And, although we commended those who were changing, we needed the rest of the employers in the State to follow their lead. Unfortunately, there was a great deal of reluctance to do so, and we decided we needed a law.

So, in 2007, the Minnesota legislature passed the Minnesota Safe Patient Handling Act, which requires the use of equipment in all licensed healthcare facilities. It was amended in 2009 to include outpatient care facilities, as well.

I would like to read some testimony—but I'm going to run out of time—from another nurse, Stacy Lundquist.

Senator MURRAY. All of your written testimony will become part of the record.

Ms. SHOGREN. That's right.

Senator MURRAY. So, if you would just summarize.

Ms. SHOGREN. With that, we understand and believe that employers don't intentionally want to hurt their employees. But, rather, they continue to use a scientifically-based—evidence-based theory that says it doesn't work, they rely on industry practice, as we now know it. And we know it isn't effective in preventing injury and protecting patients.

We aren't here to place blame; but, rather, to focus on what we can do together to ensure safe working conditions in an industry that faces an acute shortage of workers. Continued use of manual patient handling is unsafe for healthcare workers and for patients. It contributes to increased cost of care in an environment when we're all questioning the rising cost of healthcare.

The Nation needs what has been started in Minnesota and a number of other States. The patients across the country and their nurses and the other caregivers desperately need it.

Thank you again for the opportunity to testify and to share my story. I am grateful for this hearing, and I've been waiting 28 years for it to happen, so it's good to be here. And we're anxious to start working on a safe patient handling law for the Nation.

It looks like I've got some time left, right?

Senator MURRAY. No, well, you're actually 2½ minutes over, but—

[Laughter.]

Ms. SHOGREN. Oh, sorry.

Senator MURRAY. We were listening.

Ms. SHOGREN. I'm good at that. OK, thank you very much.

[The prepared statement of Ms. Shogren follows:]

PREPARED STATEMENT OF ELIZABETH (BETTYE) SHOGREN, RN, MNA STAFF  
SPECIALIST

Good morning. Chair Murray and Senator Isakson, thank you for the opportunity to testify in support of Senate bill 1788; the Nurse and Health Care Worker Protection Act.

My name is Elizabeth Shogren. I am employed by the Minnesota Nurses Association as a Staff Specialist in Occupational Health and Safety. I am also a work injured registered nurse. I am honored to speak on behalf of the thousands of nurses and other healthcare workers who are work injured, and the thousands more who will be unless this legislation is enacted.

In March 1982 my bedside nursing career ended. Not because I chose to end it, but because my injury resulted in a 40-pound lifting restriction that my employer

would not accommodate. I had been a nurse less than 10 years. The last shift I was able to work without excruciating pain I was assigned to care for several patients, one of whom weighed over 400 pounds. She required repositioning every 2 hours and “a boost up” in bed multiple times per shift. There were not enough people to lend a hand that night so with the help of one nursing assistant, we cared for and moved her as prescribed and as needed. That was my last shift.

When my physician determined I would have a permanent lifting restriction, my employer offered me a job as an admitting clerk. A job that required no nursing education or skill, a job that was very similar to one I worked before I became a nurse. I declined that position and began 2 years and 9 months of litigation. My wage replacement benefits were cut off, and my medical care was threatened. My family's income was cut in half. My husband took a second job to make ends meet and my three children learned to go without. I know I was fortunate to have the opportunity to fight as most people couldn't afford to.

I fought because what happened to me wasn't right. It wasn't right that my ability to be a bedside nurse was being determined not by what I knew, but by how much I could lift. I didn't have to lift weights to pass my licensing exam. I fought because I was angry. I needed to fight, more than I needed to win, but ultimately I did.

**The MN Supreme Court ruled that the job my employer offered was not suitable work.**

By the time the court ruled, I was working for the MN Nurses Association. The news spread quickly of the court's decision and then the calls started coming, nurses from across the country. Nurses who thought they were alone. You see back then when nurses got hurt they disappeared. I would like to say that has changed but I feel Nurses and other healthcare workers who are injured are treated like disposable towels; used and tossed aside when they get hurt. Hurt caring for patients. I talk to hundreds of nurses every year who have the same kind of experiences. I talk to other healthcare workers, too. Sadly, they are often treated worse than registered nurses.

The Minnesota Nurses Association has supported my efforts to improve the working conditions that create these injuries, but for so long all we heard was that nurses weren't lifting correctly. “If you just used ‘good body mechanics’ you wouldn't get hurt.”

In an average 8-hour shift a nurse on a Medical/Surgical Unit can care for 3–8 patients. These patients come in all sizes; from tiny babies to patients who weigh 700 pounds or more all with varying degrees of need for assistance. Sometimes there is staff to assist with turns and repositioning and, other times there is not. When there is not, you still have to care for the patients. We turn them, we lift them, we walk them, and we even catch them when they fall; we do whatever needs to be done. **We lift an average of 1.8 tons per 8 hour shift.** That's right, you heard me right, **we lift an average of 1.8 tons per 8 hour shift.** We don't see that in other jobs; they use equipment. Yet nurses are expected to work like this every shift for 30 or more years relying on the hydraulics of their bodies.

In the 2004 MN Workplace Safety Report, issued by the MN Dept. of Labor and Industry, workers with the most frequent OSHA recordable injuries were identified. It was a small wonder of the 14 occupations listed, Nursing Assistants were second; RNs seventh and LPNs twelfth. Essentially, the report said healthcare workers have higher rates of injury, and more severe injury than most other workers in this State. **As an industry aggregate they are No. 1.** In 2004 I also went to my first Safe Patient Handling Conference in Orlando. What I learned was priceless.

Good body mechanics don't work to prevent injuries related to patient handling! The process nurses have been instructed to do and have practiced to “save our backs” for decades ACTUALLY harms us. They don't work because lifting patients exceed the body's biomechanical limits. I learned that these types of injuries were largely preventable because there was equipment available. Using equipment instead of our bodies prevents injury. I learned that many other industrialized countries had been using equipment for 20-plus years because they had laws that required it. I also found out that there is a quick return on investment because injuries to workers are reduced which in return decreased workers compensation costs. Patient injuries are reduced as well. This is especially important to me because I am still a nurse. I just take care of the people **who take care of you.** There were 38 people from MN at that Conference in 2004. We went home and we developed a plan to change what was happening in MN and we did!

MNA has worked extensively with one of the employers, Allina, as well as the MN Hospital Association to bring a new program, Safe Patient Handling, to our State. We have seen significant success with Allina, Mayo, Fairview, Bemidji and some Nursing Homes. We commended those who are changing, but we needed the rest

of the employers to follow their lead but they were reluctant to do so. That's when we realized we needed a law.

In 2007 the MN legislature passed the MN Safe Patient Handling Act which requires the use of equipment in all licensed healthcare facilities. It was amended in 2009 to include all outpatient care settings.

When we presented testimony one of our members, Stacy Lundquist testified. Stacey was severely injured at work while transporting a surgical patient and the patient's equipment—a combined weight of close to 1,000 pounds from one unit to the next. Stacey had begged her employer to invest in a \$7,000 piece of equipment which could have pushed the bed for her, but they didn't see the need.

I wish she was able to be here today, but her injuries prevent it. I would like to share with you some of her testimony. This is how her injury has impacted her life.

“I have had 4 surgeries over the last 3+ years; I suffer from severe chronic pain which can only be controlled with medication. I can walk only short distances with a cane and must use a wheelchair when I leave my home. The pain is so intense that some days I think it would be better to be a paraplegic. I have lost my career. My injury fundamentally changed every part of my life. I can't walk, I can't drive, I can't shop, and I can't bike. I can't pitch a tent or camp or hike in the woods. I can't sleep or rest without medication and even then, I can't sleep very well. I couldn't pick up my first grandchild. I believe all of that could have been prevented if I had that piece of equipment. The pain I endure every day may never end. The rest of my life will never be what it could have been.”

Safe Patient Handling is a program based on the scientific work of Dr. William Marras, and was initially implemented at the Veterans Administration Hospital in Tampa, FL. When the VA started using the new approach to lift, move, and transport patients two things happened: the frequency and severity of worker injury declined, and patient injuries related to falls and other injuries such as skin tears, dislocated shoulders, fractures, and pressure ulcers declined as well. That success has been replicated in numerous facilities across the country. This SPH program is public domain. It is free and walks an employer through the necessary steps to start and fully implement a SPH program.

In MN we even asked for grant money to assist employers with start up costs associated with implementing this change. It isn't common to have a union ask for financial assistance for employers, but we believed it was in the best interest of patients, employers and workers and expedited the changes we needed.

We understand and believe that employers do not intentionally want to hurt their employees. Rather they rely on an industry practice that we **now know** IS NOT effective in preventing injury and protecting patients. We are not here to place blame but rather to focus on what we can do together to ensure safe working conditions in an industry that faces an acute shortage of workers.

Continued use of manual patient handling is unsafe for health care workers and patients. It contributes to increased cost of care in an environment where we are all questioning the rising cost of health care. The Nation needs what has been started in MN. The patients across the country, their nurses and other care givers desperately need it.

Thank you again for the opportunity to testify and for me to share my story. I/we are grateful for this hearing and are anxious to start working on bringing Safe Pt. Handling to the Nation. I would be happy to take any questions at the appropriate time.

Senator MURRAY. Thank you very much. I appreciate it.

Ms. Altaras.

**STATEMENT OF JUNE M. ALTARAS, RN, BSN, MN, ADMINISTRATIVE NURSING DIRECTOR, SWEDISH MEDICAL CENTER, SEATTLE, WA**

Ms. ALTARAS. Senator Murray and members of the subcommittee, thank you for this opportunity to share with you the learnings and results of Swedish Medical Center's Safe Patient Handling Program.

My name is June Altaras, and I'm the nurse executive at Swedish Health Services, in Seattle, WA. Swedish is the largest, most comprehensive nonprofit healthcare provider in the great North-

west, employing 7,000 staff, 2,000 practicing physicians, and 1,000 volunteers.

I was asked to testify today regarding our comprehensive Safe Patient Handling Program, called "Safe Moves."

In March 2006, Washington State Governor Christine Gregoire signed new legislation requiring hospitals in the State to implement a safe patient handling program. This legislation caused this issue to be prioritized in our organization, and we moved systematically to develop a safe patient handling program that would benefit our patients, our staff, and reduce costs.

The results of our work are overwhelming. We have developed a system that reduces workplace injuries, and days lost from those injuries, which has a direct result on our bottom line. Safe patient handling is not an initiative; it is a culture change, and, as such, it requires the engagement and support of front-line staff in designing the approach, establishing the workflow, and selecting the equipment. In addition, it requires the support of senior leadership, middle management, and unit experts. This is not a small undertaking; however, the results can be dramatic.

I have been asked to address a few key aspects of our program. I will start with our lifting policy.

Before adopting a formal lifting policy, we established a committee to evaluate the various lifting requirements throughout all units of the hospital. In addition, this committee researched what other hospitals were doing before developing recommendations for Swedish's lifting program and associated policies.

In November 2007, we approved our employee safety standard, a policy intended to define Swedish Medical Center's commitment to partner with our employees to provide and support a safe workplace.

In January 2008, we adopted our safe patient handling policy to promote and maintain a culture of safety by providing an environment of safe patient handling and movement for all inpatients and staff. These policies outline employee and manager responsibilities, required in depth educational trainings to ensure compliance, and clearly State that those found in violation of this policy may be subject to progressive corrective action.

At a large health system like Swedish, there are different units, with vast differing lifting needs. As part of our year-long assessment period, the Safe Patient Handling Committee conducted an in depth audit with each of our specialty units—the ICUs, medical, surgical, and mother-baby units—to better understand the various lifting and repositioning needs and requirements, as well as the weights that were typical for their patient populations. We then engaged stakeholders from each of the units to play a role in selecting the actual lifting equipment, to ensure those actually using the equipment would find it useful.

Swedish's initial investment in equipment was just over \$1.1 million. Because this legislation was regulated by the State, Swedish was able to pay for a portion of the up front investment with a B&O tax credit. Additional investments include the labor costs associated with hiring a program director, as well as the 6,000-plus hours of employee training, totaling approximately \$353,000, for a total first-year cost of \$1.5 million. The yearly ongoing costs of re-

training and staffing the program are approximately \$300,000 per year.

During the first 3 years of our program, 2007 through 2009, we have experienced a 60-percent reduction in work-injury incidents of our clinical staff, a 90-percent reduction in days lost from clinical work, and a total cost savings of \$3 million. This is a return of investment of approximately \$1 million in 3 years.

The return on investment is undeniable and dramatic when a safe patient handling policy is implemented successfully.

Swedish has relatively low nurse turnover rates. Turnover rates have dropped since safe patient handling policy has gone into effect. It would be disingenuous of me to attribute this trend to the safe patient handling program, given the current economic climate, but I do believe there is a probable correlation. And given that the cost to retrain a nurse is \$60,000, this is very good news.

In addition, our safe patient handling program and its resulting reduction in workplace injuries has been an important recruitment tool in attracting new talent to Swedish.

While we don't have quantitative data about our program's effect on patient satisfaction, we have qualitative and anecdotal evidence. There have been many instances of bariatric patients walking rapidly after surgery because they are no longer fearful of falling, as the right equipment is in place to support them. Patients report feeling less guilty about staff potentially hurting themselves while assisting them with ambulating or repositioning, and also feeling less embarrassed when the right equipment is there and appropriately sized.

We have also experienced decreased skin injuries, due, in part, to appropriate equipment to reposition our immobile patients.

As you can tell from our results, safe patient handling at Swedish has been a resounding success. However, I believe it is important to note that there are several key factors that are critical to achieving success:

*Set a realistic timeline.* This is a culture change. It cannot be implemented in a year, and results will take time. This is a long-term commitment that requires professionals to change years of work habits. The average age of a nurse is between 45 and 50 years old. Changing their work habits, for people who have been in the industry for so long, requires time.

*The investment is more than just equipment.* Even though there are significant up front costs associated with purchasing various equipment and lifts, be prepared for, and factor in, a significant investment of human capital to establish a committee to conduct the appropriate research, assessment, and development of the program, an expert to direct the program, as well as up front training costs and ongoing annual retraining.

*Engage the front line.* It is critical to engage those on the front lines of patient support across all hospital units in determining their equipment needs and eventual purchase, so that there is buy-in and support for these important decisions early on in the adoption process.

In closing, implementing a safe patient handling program is a big undertaking that requires cultural change and organizational commitment to be successful. You will be asking seasoned profes-

sionals, many of whom have been on the job for over 20 years, to change the way they work, adjusting long-formed habits and techniques. There must be clear commitment from organizational leadership, as well as stakeholders at all levels, to ensure success.

Although implementing a culture of safe patient handling is not an easy task, Swedish believes it is the right thing to do. If approached methodically, you will not only see a generous return on your investment, but you will also have a healthier workforce.

Thank you for this opportunity. I'll be happy to answer any questions.

[The prepared statement of Ms. Altaras follows:]

PREPARED STATEMENT OF JUNE M. ALTARAS, RN, BSN, MN

EXECUTIVE SUMMARY

Swedish Medical Center is the largest, most comprehensive, nonprofit health provider in the Greater Seattle area. We have three hospital locations in Seattle, an emergency room and specialty center in Issaquah (East King County), Swedish Medical Center locations in Ballard, First Hill, Cherry Hill, Issaquah; Swedish Home Care; a network of 14 primary care clinics; multiple specialty clinics and affiliations with suburban physician groups.

I was asked to testify today regarding our compressive safe patient handling program called Safe Moves. In March 2006, Washington State Governor Christine Gregoire signed new legislation requiring all hospitals in the State to implement a safe patient handling program. The requirement put forth in the legislation prioritized the issue throughout Swedish and we moved systematically to develop a safe patient handling program that would benefit our patients, our staff and would result in cost savings. We approached the adopting a safe patient handling policy with three key steps: research and assessment; investment in infrastructure and training; and measurement and accountability.

The results of our work are overwhelming. We have developed a system that reduces workplace injuries and corresponding lost or restricted days of work, which has a direct result on our bottom line. In the last year alone, we attribute a total cost savings of \$2,224,590 for reducing days lost and restricted days due to workplace injuries. Patient safe handling is not simply an initiative or a program or a policy, it is a culture change and as such it requires the engagement and support of front line staff in designing the approach, establishing a workflow and selecting equipment. In addition, it requires the support of senior leadership, middle management and unit experts. This is not a small undertaking, it is a long-term commitment; however, the results can be dramatic.

Implementing a safe patient handling program or policy or initiative is a big undertaking that requires cultural change and organizational commitment to be successful. You will be asking seasoned professionals—many of whom have been on the job for more than 20 years—to change the way they work, adjusting long-formed habits and techniques. There must be clear commitment from organizational leadership as well as stakeholders at all levels to ensure deep commitment throughout the organization.

Although implementing a culture of safe patient handling is not an easy task, if approached methodically and with a generous timeframe you will not only see a generous return on your investment, but also a healthier workforce.

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Senator Murray and members of the subcommittee, thank you for this opportunity to share with you the learnings and results of Swedish Medical Center's safe patient handling program. My name is June Altaras, and I am a nurse executive at Swedish Health Service in Seattle, WA.

Swedish is the largest, most comprehensive, nonprofit health provider in the Greater Seattle area. We have three hospital locations in Seattle, an emergency room and specialty center in Issaquah (East King County), Swedish Medical Center locations in Ballard, First Hill, Cherry Hill, Issaquah; Swedish Home Care; a network of 12 primary care clinics; multiple specialty clinics and affiliations with suburban physician groups.

I was asked to testify today regarding our compressive safe patient handling program called Safe Moves. In March 2006, Washington State Governor Christine Gregoire signed new legislation requiring all hospitals in the State to implement a

safe patient handling program. The requirement put forth in the legislation prioritized the issue throughout the Swedish health system and we moved systematically to develop a safe patient handling program that would benefit our patients, our staff and would result in cost savings.

The results of our work are overwhelming. We have developed a system that reduces workplace injuries and corresponding lost or restricted days of work, which has a direct result on our bottom line. Patient safe handling is not simply an initiative or a program or a policy, it is a culture change and as such it requires the engagement and support of front line staff in designing the approach, establishing a workflow and selecting equipment. In addition, it requires the support of senior leadership, middle management and unit experts. This is not a small undertaking, it is a long-term commitment; however, the results can be dramatic.

I've outlined our approach to adopting a safe patient handling policy in three steps:

- Research and Assessment;
- Investment in Infrastructure and Training; and
- Measurement and Accountability.

#### PROGRAM DEVELOPMENT

##### *Step One: Research and Assessment*

In 2007 our organization created a committee of key stakeholders including the physical therapist who was hired to manage the program, front line nursing staff from each of our five hospital units (ICU, medical, surgical, mother/baby and pediatric), nursing leadership, safety team, and facilities. This committee researched and evaluated the patient safe handling programs at other hospitals to gain an understanding of the variety of ways this could be implemented at Swedish before developing their recommendations. In addition, the committee spent a year conducting in-depth assessments of each unit to better understand their lifting and repositioning needs and requirements as well as the weights that were typical for their patient populations.

In November 2007 we approved our Employee Safety Standard, a policy intended to define Swedish Medical Center's commitment to partner with employees to provide and support a safe workplace.

In the first year there was only one equipment purchase, which was to install ceiling lifts in each of the 42 ICU rooms. The data supporting the use of ceiling lifts for ICU patients was so compelling that there was no doubt that we should purchase the infrastructure and begin training and use immediately.

##### *Step Two: Investment in Infrastructure and Training*

After the assessment the committee made its recommendations for each unit as well as for an overall policy. Investing in the infrastructure is only one part of the total cost, there is also a cost associated with initial ramp-up and training as well as on-going annual re-training. The committee recommended a scalable, multi-disciplinary approach that could be customized for each hospital unit based on their specific needs and patient populations.

In January 2008, Swedish adopted a Safe Patient Handling policy to promote and maintain a "culture of safety" by providing an environment of safe patient handling and movement for all inpatients and staff. These policies outline employee and manager responsibilities, including in-depth trainings to ensure compliance and clearly states that those found in violation of the policy may be subject to progressive corrective action, up to and including immediate termination of employment.

It was critical to involve front line employees in the selection and purchase of the actual tools to ensure the employees who would be using the equipment were comfortable with the selection. At Swedish we have a range of lifting equipment from ceiling and floor lifts to Hovermatts to assist with lateral transfers.

##### *Step Three: Measurement and Accountability*

Prior to 2007, our tracking of workplace injuries for allied health professionals was less robust and less consistent than it is today. Since 2007, we have been tracking injuries at each unit location and days and dollars lost as a result of those injuries. It took a few years to get our systems streamlined and to reduce some of the under-reporting of injuries that went on previously.

In addition, there are so many existing internal and third party measurements already that it can be difficult to implement a new measurement standard. For example The Occupational Safety and Health Act (OSHA) tracks workplace safety, but Swedish's OSHA numbers cannot be directly compared to the success of our safe handling program because of the different employee populations considered. Safe pa-



tient handling only impacts those employees with direct patient access, OSHA considers all work place injuries including administrative and support staff. Since 2007 we have been actively involved in measuring the direct impact of workplace injuries among employees that have direct patient access, so that we can accurately measure the success of our program year over year.

We established a generous timeline to account for the steep learning curve that accompanies such cultural shifts. We knew that this was a long-term commitment that would take 2 to 3 years before we could measure real results in terms of the impact of patient safe handling policies.

#### RESULTS

Although Swedish assembled a committee and installed ICU ceiling lifts in 2007, there were no programmatic adjustments until 2008. Since that time however, the results of the Safe Patient Handling efforts have been staggering.

Swedish's initial investment of equipment was just over \$1.1 million. Because this legislation was regulated by the State, Swedish was able to pay for a portion of the up front investment with a \$1 million B&O tax. Additional up-front costs were labor costs including the hiring of one full-time employee to serve as the director of the program as well as approximately 6,000 hours of training (2 hours each for 3,000 employees) totaling \$353,100 in up-front labor costs.

In the last year alone, we attribute a total cost savings of \$2,224,590 for reducing days lost and restricted days due to workplace injuries. When a nurse is injured and misses a day of work, there is a hard cost to replace that time that is at least 50 percent but often 100 percent more expensive than the salary of the full-time employee. We used the conservative 50 percent rate to calculate our savings, so our savings is likely even greater.

The return on investment is undeniable and dramatic when a safe patient handling policy is implemented successfully.

#### Recommendations

Outlined below are our recommendations for how to implement a successful, results-driven safe patient handling program.

##### SET A REALISTIC TIMELINE

This is a major culture change, it cannot be implemented in a year and results will take time. This is a long-term commitment that requires professionals to change years of work habits. The average age of a nurse is between 45–50 years old, changing work habits of professionals who have been in the industry for so long requires real commitment.

##### THE INVESTMENT IS MORE THAN JUST EQUIPMENT

Even though there are significant up-front costs associated with purchasing various tools to ensure safe patient handling, there should also be a significant investment of human capital to establish a committee to conduct the necessary research, hire someone to manage the program as well as up-front training costs and ongoing, annual re-training.

##### INVESTIGATE AND LEARN FROM EVERY INCIDENT

When an injury is reported, we are very careful not to assume non-compliance, nor is it assumed that every incidence of non-compliance should result in disciplinary action. We investigate every injury to determine if there is an opportunity for re-training, or if there are adjustments that need to be made in terms of our protocol. Of course there are times when non-compliance must result in disciplinary action, which is taken very seriously.

##### ENGAGE THE FRONT LINE

It is critical to engage those on the front lines of patient support across all hospital units in determining their equipment needs and eventual purchase so that there is buy-in and support for these important decisions early in the adoption process.

**Lessons Learned**

ESTABLISH METRICS THAT COMPARE APPLES TO APPLES

The Occupational Safety and Health Act (OSHA) tracks workplace safety nationally, but Swedish's OSHA numbers cannot be measured against our Safe Moves numbers because of the different employee populations considered. Safe Moves only considers those employees with direct patient access, OSHA considers all work place injuries including administrative and support staff. Since 2007 we have been actively involved.

ENSURE A MULTI-DISCIPLINARY/MULTI-VENDOR APPROACH

It is critical to involve as many parties as possible as early as possible in the process. Involving healthcare professionals with different responsibilities and patient populations will result in vastly different tools to ensure safe patient handling. For example, at Swedish, we created a specialized tool for one of our orthopedic surgeons based on his specific need with hip replacement patients.

IMPLEMENT PATIENT SAFETY HANDLING STANDARDS GLOBALLY

Patient safety handling should be part of all allied health training curriculum. All employees with direct patient access must be trained on patient safety handling compliance, from physicians, nurses and physical therapists to security guards, imaging specialists and respiratory therapists.

PLAN FOR OPERATIONAL AND EQUIPMENT COSTS

The up-front costs for equipment and operations are substantial, but with the right approach, organization commitment, and a reasonable timeframe to build toward results, costs can be turned into savings.

**Summary**

Implementing a safe patient handling program or policy or initiative is a big undertaking that requires cultural change and organizational commitment to be successful. You will be asking seasoned professionals—many of whom have been on the job for more than 20 years—to change the way they work, adjusting long-formed habits and techniques. There must be clear commitment from organizational leadership as well as stakeholders at all levels to ensure deep commitment throughout the organization.

Although implementing a culture of safe patient handling is not an easy task, if approached methodically and with a generous timeframe you will not only see a generous return on your investment, but you will also have a healthier workforce.

**Appendix A.—Breakdown of Cost Savings Resulting From Reducing Days Away and Restricted Days**

Total cost savings for reducing *days lost* and *restricted days* per year \$2,224,590

	Days Away Avoided	Working Hours Saved	Average RN wage at Swedish	Cost Savings (due to reducing backfill /replacement rate* of \$62.02/hour)
Lost Days .....	973 days .....	11,676 hours .....	\$41.35 .....	\$724,203 (\$62.02 x 11,676)
Restricted Days** .....	2016 days .....	24,192 hours .....	\$41.35 .....	\$1,500,387 (\$62.02 x 24,192)
Total Savings .....				2,224,590

\*Using a conservative 50% higher rate of \$62.02/hr although rate actually ranges 50–100 percent higher.  
 \*\*All restricted hours are backfilled with temporary labor because you never know the patient situation which may cause an Allied Health Professional to risk their physical well-being to help a patient.

**Appendix B.—Total Up Front/Initial Investment of Funds**

Total up front Investment for Labor Costs: 1 FTE for Director of Program .....	\$105,000+
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Approximately 6,000 hours of training @ \$41.35 .....	\$248,100 (3,000 employees)
Total up front Labor Investment .....	\$353,100
Total up front Dollar Investment for Equipment:	
Initial Investment of funds .....	\$1,100,000.00
HoverMatts CH Surgery .....	\$6,152.00
CH Neuro ICU-Golvo/slings .....	\$11,165
CH CICU-Viking/slings/Hovermatt .....	\$15,018.40
CH Abm. Infusion-Golvo/Slings .....	\$7,212.40
Total Equipment Investment .....	\$1,128,382.80

*Total Up Front /Initial Dollar Investment of Funds: \$1,481,482.80*

**Appendix C.—Total Ongoing Program Costs**

1 FTE for Director of Program .....	\$105,000+
Approximately 3,000 hours of training @ \$41.35 .....	\$124,000 (3,000 employees. Repeat training is 1 hour versus 2 hours)
Total Ongoing Labor Investment .....	\$299,000

**Appendix D.—Nurse Turnover Rates**

Year	Nurse Turnover Rates (In percent)
2006 .....	8.76
2007 .....	8.15
2008 .....	9.38
2009 .....	6.94

**Appendix E.—Swedish Medical Center’s Safe Patient Handling and Employee Safety Standard Policies.**



SWEDISH MEDICAL CENTER

**SAFE PATIENT HANDLING**

Clinical Policy and Procedure	
Approved: January 2008	Next Review: January 2011

Go directly to:

- [All Employees](#)
- [Management](#)
- [Safe Patient Handling Committee](#)

**Purpose**

To promote and maintain a “culture of safety” by providing an environment of safe patient handling and movement for all inpatients and staff.

POLICY and PROCEDURE	
Admitting nurse	<ol style="list-style-type: none"> <li>1. <b>Patient assessment.</b> All inpatients admitted to Swedish Medical Center (SMC) are assessed by the appropriate staff to determine the level of care required for safe patient handling and movement. This assessment is completed upon admission and is ongoing during the patient’s hospital stay by the appropriate staff. Circumstances under which it would be medically contraindicated to use lifting or transfer aids or assistive devices are considered during this assessment, and alternative safe patient handling techniques are employed.</li> </ol>
Employees with patient handling responsibilities	<ol style="list-style-type: none"> <li>1. <b>Equipment use.</b> Staff is required to utilize the appropriate equipment available to their unit to be compliant with the policy. In addition, all staff should at all times utilize appropriate body mechanics with all techniques and equipment.</li> <li>2. <b>Right to refuse.</b> Staff has the right to refuse to perform or be involved in patient handling, without disciplinary action, if the employee believes in good faith that action would place an unacceptable risk of injury on either a hospital employee or a patient.  This refusal does not negate the employee’s responsibility to ensure that patient care is provided in an appropriate and sensitive manner, utilizing the tools, equipment, resources and processes provided by SMC to ensure safe patient handling and movement.             <ol style="list-style-type: none"> <li>a. In the event that an SMC employee does refuse in good faith to participate in patient handling, he/she must do the following:                 <ol style="list-style-type: none"> <li>1) Notify the manager/supervisor or charge nurse immediately of the refusal and the reason for doing so.</li> <li>2) Stay on the job and make himself/herself available to the manager/supervisor or charge nurse for other work assignments.</li> </ol> </li> </ol> </li> </ol>

	<p>3) If called to assist with the affected patient who is in distress, the employee will remain with the patient as necessary, providing assistance as able until the necessary resources are available to the patient.</p> <p>b. After the immediate situation related to the refusal of patient handling has been managed, the employee must complete a QVR which will be reviewed by the manager. Clinical Effectiveness will ensure the QVR is routed to the Safe Patient Handling Committee. The committee will review the situation and if possible, will identify and inform others of ways to avoid such patient handling situations in the future.</p> <p>3. <b>Emergency and/or exceptional situations.</b> In an emergent situation, staff is expected to use a "best judgment" approach and will not be considered to be non-compliant with the policy.</p> <p>4. <b>Risk assessment.</b> A patient handling risk assessment is carried out yearly of all units that handle patients, starting with all high-risk patient care areas, and takes into consideration types of units, patient populations, and the physical environments of patient care areas.</p> <p>5. <b>New construction and remodeling.</b> When developing architectural plans for constructing or remodeling a hospital or a unit of a hospital in which patient handling and movement occurs, considerations are made for incorporating the principles of ergonomics as well as the feasibility of incorporating patient handling equipment as part of the physical space and construction design needed to incorporate that equipment at a later date.</p> <p>6. <b>Program evaluation.</b> An annual performance evaluation of the safe patient handling and movement program is conducted to determine its effectiveness. The evaluation determines the extent to which implementation of the program has resulted in a reduction in musculoskeletal disorder claims and days of lost work attributable to musculoskeletal disorder caused by patient handling, and includes recommendations to increase the program's effectiveness.</p>
Employee Responsibilities	<p>1. Attend initial orientation for safe patient handling and movement.</p> <p>2. Complete annual competency training on safe patient handling procedures and equipment use.</p> <p>3. Perform ongoing assessment of patients' needs for safe handling and movement, with consideration of possible medical contraindications for equipment use.</p> <p>4. Assist and promote a safe culture and environment by adhering to the policy and educating others as necessary by appropriate means (e.g., reporting injuries, identifying education needs for self or others).</p> <p>5. In event of an injury, take the appropriate action as outlined in the policy <i>On the Job Injury</i> in the Human Resources standards.</p> <p>6. In the event that a SMC employee does refuse in good faith to participate in patient handling, he/she must comply with the process outlined above.</p>
Management Responsibilities	<p>1. Communicate and promote compliance, including consequences of the <i>Safe Patient Handling and Movement</i> policy as well the <i>Employee Safety</i> standard.</p> <p>2. Apply the policy to all employees in a consistent and non-discriminatory manner.</p> <p>3. Ensure initial and annual competencies are maintained.</p> <p>4. Identify needs and implement action for ongoing education and equipment.</p> <p>5. Consider input from the Safe Patient Handling Committee for program management of the Safe Patient Handling Program and recommendations for equipment purchase and procedure modification as determined by annual evaluation and ongoing assessments.</p> <p>6. Follow the protocol of the Employee Safety standard regarding disciplinary action.</p>

	<ol style="list-style-type: none"> <li>7. In the event of an employee injuring himself/herself, take the appropriate action as outlined in the policy <i>On the Job Injury</i> in the Human Resources standards.</li> <li>8. Provide sufficient resources to comply with this policy.</li> <li>9. Review the circumstances surrounding all refusal to lift situations and promptly forward the QVR to Clinical Effectiveness.</li> </ol>
Safe Patient Handling Committee	<ol style="list-style-type: none"> <li>1. Evaluate the effectiveness of the Safe Patient Handling Program annually.</li> <li>2. Manage equipment acquisitions to ensure qualification for the B&amp;O Tax Credit.</li> <li>3. Conduct annual risk assessments of all patient units.</li> <li>4. Serve as advisory group on staff training needs on policies, procedures and equipment annually.</li> <li>5. Review QVR's associated with refusal situations and recommend appropriate action based on assessment of situation.</li> </ol>

### Definitions

*High-risk patient care areas.* Patient care areas with higher numbers of employee injury occurrences during patient assist events as compared to other hospital care areas.

*Safe patient handling.* The use of engineering controls, mechanical lifting equipment, and patient handling aids in accordance to guidelines of care developed in an effort to minimize caregiver manual lifting in circumstances which may be unsafe for both staff and/or patients.

*Manual lifting.* Lifting, transferring, repositioning, and moving patients using a caregiver's body strength without the use of lifting equipment / aids to reduce forces on the caregiver's musculoskeletal structure.

*Mechanical lifting aids.* Equipment used to lift, transfer, reposition, and move patients. Examples include portable base and ceiling track mounted full body sling lifts, stand assist lifts, and mechanized lateral transfer aids.

*Patient handling aids.* Equipment used to assist in the lift or transfer process. Examples include gait belts, stand assist aids, sliding boards, and surface friction reducing devices.

*Culture of safety.* Describes the collective attitude of employees and management taking shared responsibility for safety in a work environment and by doing so, providing a safe environment of care for themselves as well as patients.

*Emergency situation.* A situation where leaving the patient would cause greater harm or a worse outcome than manually moving the patient.

### Expert Consultants

Safe Patient Handling Committee

### Author

Leslie Pickett, PT

### Regulatory Requirement

Washington State Engrossed House Bill (EHB) 1672 (Chapter 165, Laws of 2006).



**References**

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- Veterans Health Administration & DOD, Patient Safety Center of Inquiry. (8/31/05). Patient care ergonomics resource guide: Safe patient handling and movement template of a safe patient handling and movement policy, Chapter 6, p.81.

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**Clinical Policy/Procedure: SAFE PATIENT HANDLING**

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**EMPLOYEE SAFETY STANDARD**

**Human Resources Policy/Procedure**

**Approved:** November, 2007                      **Next Review:** November, 2010

**Purpose**

To define Swedish Medical Center's (SMC) commitment to partner with employees to provide and support a safe workplace.

**Population Covered**

All of the following, when on SMC property for any purpose other than to receive medical care, including times when not on duty.

- All SMC employees
- Any person working for SMC in any capacity

**POLICY**

In recognition of the importance a safe environment plays in providing quality patient care and a positive work place, Swedish Medical Center (SMC) makes every attempt to maintain a safe work environment for employees. SMC believes a safe environment requires a partnership between employees and the organization. As such, all employees are responsible for taking steps to maintain and promote an environment that is free from avoidable hazards to themselves and others.

**PROCEDURE**

Employee Responsibility	<ol style="list-style-type: none"> <li>1. Employees are expected to participate in any training relating to SMC safety protocols, procedures, equipment, etc.</li> <li>2. In order to insure a safe work environment, employees are expected to be aware of and follow SMC safety protocols and be knowledgeable about specific safety procedures for their work area and to perform his or her job. Examples of protocols that must be adhered to include; hazardous materials handling, Safe Patient Handling, and body mechanic techniques, etc. Other examples of following expected safety protocols are using safety guards on equipment, not overloading electrical outlets, and properly disposing of sharps, etc.</li> <li>3. Any employee who fails to follow or understand proper safety techniques while performing work may be required to participate in further training. Safety violations that are determined to be willful, reckless or puts other employees or persons in harms way may be subject to progressive corrective action, up to and including immediate termination of employment.</li> </ol>
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	<p>4. No employee should engage in any work that they reasonably believe would cause injury to themselves or others or put the safety of themselves or others at risk.</p>
<p>Manager Responsibility</p>	<p>1. It is the department manager's responsibility to:</p> <ul style="list-style-type: none"> <li>a. Provide employees with the information, orientation and training to assure they are knowledgeable about proper safety protocols and procedures for their area and job</li> <li>b. Ensure employees are clear on the expectation that they are to follow all safety protocols and procedures.</li> </ul> <p>2. The manager must address any situation in which an employee is unnecessarily putting themselves or others in harms way. This could include additional training, counseling the employee, or other actions as deemed appropriate to eliminate the hazard.</p> <p>3. If an employee requests to be excluded from duties they believe could cause harm to themselves or others, the manager shall identify the specific concern and determine the course of action required to accomplish the task and maintain individual safety. This may include consulting with other medical center resources (Infection Control, Clinical Education, Radiation Safety, Human Resources, etc.) to determine a response. In cases where it is an immediate issue in a patient care area, the manager will ensure that care is not compromised.</p> <p>4. Should the manager determine there is no threat to an individual's health or safety, the manager will explain why they reached that conclusion, and provide information that will help the employee understand how to accomplish the task in a safe manner.</p> <p>5. In the event an employee reports an on-the-job injury, the manager must facilitate proper medical attention, investigate the cause of the injury, and take appropriate action to minimize the chance of further injury or damage.</p>
<p><b>Forms</b></p>	
<p>N/A</p>	
<p><b>Supplemental Information</b></p>	
<p>N/A</p>	
<p><b>Expert Consultants</b></p>	
<p>Cary Natiello, Director Labor Relations and Strategic HR Partners Steve Anderson, Manager, Strategic HR Partners</p>	
<p><b>Author</b></p>	
<p>Cary Natiello, Director Labor Relations and Strategic HR Partners</p>	
<p><b>Regulatory Requirement</b></p>	
<p>N/A</p>	
<p><b>References</b></p>	
<p>N/A</p>	
<p><i>Administrative HR Policy/Procedure: EMPLOYEE SAFETY STANDARD</i></p>	
<p>2007 Swedish Health Services</p>	<p>Page 2 of 2</p>

Senator MURRAY. Thank you very much.  
Mr. Erickson.

**STATEMENT OF DOUGLAS ERICKSON, FASHE, HFDP, CHFM, CHC, DEPUTY EXECUTIVE DIRECTOR, AMERICAN SOCIETY FOR HEALTHCARE ENGINEERING, CHICAGO, IL**

Mr. ERICKSON. Good afternoon, Madam Chair and Senator Isakson.

I'm Douglas Erickson, chairman of the Guidelines for Design and Construction of Healthcare Facilities. I'm a healthcare engineer. I'm a fellow within the American Society for Healthcare Engineering, and have more than 35 years of experience in the healthcare field, specializing in the development of codes and standards supporting the healthcare physical environment. I appreciate the opportunity to present before the subcommittee this afternoon.

First, there are Federal programs and standards already in place to systematically implement a no-lift policy, so additional regulation is unnecessary.

Second thing is that there are technical difficulties in installing patient lifting devices in our healthcare facilities, and it is extremely difficult and complex, in many instances.

And, third, the patient disruption in an occupied environment is significant when modifications are made to install equipment needing structural support.

A major concern of mine, as an expert in writing and implementing codes and standards in the healthcare physical environment, is that we are trying to rush such a monumental modification into our Nation's existing healthcare system. This action will absolutely create havoc, panic to comply, a tremendous waste of our healthcare resources. In my professional judgment and that of other professionals in my field, it will take decades to bring about the necessary physical modifications to provide mechanical lifting equipment sufficient to implement a no-lift policy throughout the entire system.

The fact is, most existing healthcare facilities in the United States are not designed and constructed to accommodate the installation of fixed lifting equipment, or, in many cases, to accommodate the use of even portable equipment.

While we are making great advances in modernizing our hospitals, nursing facilities, clinics, and other patient care sites, the fact remains: We are still providing care in buildings that date back to the early 20th century.

Some points to consider:

Healthcare facilities have been including permanently installed ceiling- and wall-mounted lifting devices in new construction and major renovation, but in existing construction, it is minimal, because of the time and cost to gain access to the structural components of the ceiling or walls.

Structural capacity of our floors, ceilings, and walls may be inadequate to support lifting devices.

Most healthcare facilities have semiprivate rooms that do not provide a good environment for fixed lifts, due to the limited size and configuration of those rooms.

Installing lifting devices will require, in many instances, the need to reposition lighting fixtures, ventilation systems, sprinkler heads, ceiling-mounted radiology equipment, OR lights, electrical conduits, plumbing pipes, and has the potential of even needing to use asbestos abatement if asbestos is still contained and encapsulated within the ceiling cavity.

Installing lifting devices will also result in the loss of bed capacity and the disruption due to noise, vibration, infection control, and other risks to patients, when making facility modifications.

Our healthcare facilities need a systematic approach to instituting safe patient handling practices that include all interested parties. The healthcare industry already has a time-tested, formulated process and quality document known as the Guidelines for Designing Construction of Healthcare Facilities. The 2010 edition is the latest in a 63-year history of this document to aid in the design and construction of healthcare facilities. Approximately 42 State departments of health already adopt some iteration of the guidelines.

Over the past 4 years, the authors of the guidelines have undertaken a national consensus effort to develop quality standards for assessing safe patient handling risk and implementing a program to install mechanical lifting devices in new construction and major facility modifications.

The 116-person all-volunteer committee consists of nurses, surgeons, occupational health experts, infection prevention, and we have worked with safe patient handling experts, nursing union representatives, State and Federal authorities, and also health professionals, to develop the standard on patient handling and movement.

The effort has two distinct, yet interdependent, phases. First, a patient-handling needs assessment to identify appropriate handling and movement of patients. And the second one would be to define the space requirements, the structural and the other technical aspects to accommodate the incorporation of such patient equipment, and also—within that environment.

In conclusion, safe patient handling is critical to the fabric and future of the healthcare system. However, this needs to be accomplished in a highly systematic fashion, or the fix could be worse than the problem.

The Facility Guidelines Institute stands ready to work with lawmakers on innovative ways to build on efforts already happening at the Federal, State, and public levels, and to share information that will help healthcare organizations make smart choices on implementing a safe patient handling program.

Madam Chair, it has been an honor to be here this afternoon, and I would like to thank the subcommittee for inviting me to present on this very important topic.

[The prepared statement of Mr. Erickson follows:]

PREPARED STATEMENT OF DOUGLAS S. ERICKSON, FASHE, HFDP, CHFM, CHC

Good afternoon, Madame Chairperson and committee members. I appreciate the opportunity to present before the Senate Employment and Workplace Safety Subcommittee. The subject being addressed by the subcommittee is of great importance to the overall success of our health care system.

**As a health care engineer, I've been involved in the patient care environment for nearly 35 years and involved in the patient safe movement issue for the past 10 years. From my experience, I do not believe a Federal Government approach to safe-patient handling is the best approach.**

I come before the committee not to argue against the merits of a safe-patient handling bill, as having some form of legislation to protect the health care worker from injury and to support safe movement of patients in health care facilities is extremely important and worthy of the current attention. My concern as a citizen and as an expert in writing and implementing codes and standards in the health care physical environment is that we are not allowing enough time to properly alter the health care built environment to accommodate mechanical lifting equipment. Trying to rush such a monumental modification to our Nation's health care system will cre-

ate havoc, panic, and a tremendous waste of health care resources. My experience of more than 30 years—writing standards, compromising on proposed language, advocating for and against the adoption of codes and standards, and having to implement and live with those codes once issued—indicates it will take time to bring about the necessary physical modifications to provide mechanical lifting equipment sufficient to implement a no-lift policy throughout the entire system.

**The safe-patient handling and lift standards as presented will not allow enough time to alter the built environment and install mechanical lifting devices before the no-lift policy is mandated. This will create havoc in the health care industry as organizations will panic and do something—anything—to avoid impending OSHA fines, ultimately wasting a tremendous amount of health care resources.**

Yes, we can mandate that OSHA shall establish a Federal Safe-Patient Handling Standard in a year and, yes, we can mandate that all health care facilities shall develop and implement a safe-patient handling plan not later than 6 months after such a standard is published. However, the truth is that complying with these mandates cannot be physically accomplished within those timeframes.

**To modify our Nation's health care facilities and provide mechanical lifting equipment to fully support a no-lift policy throughout the entire health care system will take a decade or more to achieve.**

The fact is that most existing health care facilities in the United States are not designed and constructed to accommodate the installation of fixed lifting equipment or, in many cases, to accommodate the use of portable lifting devices. While we are making great advances in modernizing our hospitals, nursing facilities, clinics, and other patient care sites, the fact remains that the U.S. health care system is still providing care in buildings that date back to the early 20th century. Many health care facilities were designed and built under the Hill-Burton program and have inflexible physical environments. Some points to consider:

- Very few hospitals have been retrofitting patient rooms with permanently installed ceiling- or wall-mounted patient lifting devices. At issue is the tremendous cost to gain access to the structural components of the ceiling or wall. A typical retrofit for a ceiling-mounted lift would mean removing a portion of the existing plaster or acoustical ceiling, cubicle track, light fixtures, sprinkler piping, and potentially the heating and cooling ductwork. Often, the space above the acoustical ceiling is limited in height and would not permit installation of the structural supports needed for the ceiling-mounted grid of a mechanical lift system. For a wall-mounted lift, the wall must be strengthened with additional structural elements and structural plates, which must be fit in among the other equipment located on the headwall, including electrical devices such as the nurse call, emergency/normal power receptacles, medical gas connections, and patient-related equipment for monitoring, suction, and bed control. Other physical features needing modification to accommodate installation of lifts are the toilet room doorframe and the wall above the doorframe to permit passage of the track and hoist cabling.

- Most ceiling- and wall-mounted lifts are installed during new construction or major renovation projects.

- Most ceiling-mounted lifts are installed in private rooms as the semi-private room is not an appropriate environment due to the size and configuration of the room, which means the patient on the far side of the room would have to be hoisted over the other patient to reach the toilet room.

- The use of portable lifts in semi-private patient rooms is limited based on the size of the room. With its typical footprint of 30' x 40', maneuvering a patient lift into position in an older room of 160 sq. ft. is almost impossible due to the equipment, both patient-related and family-related, that fills it. Also, the bed size has increased dramatically over the past 20 years, limiting the clear floor space in the patient room.

Other architectural and business-related issues to consider when installing mechanical lifting equipment in existing buildings include these:

- Structural capacity of floor slabs, ceilings and walls capable of supporting the lift loads.

- Positioning of light fixtures, A/C diffusers, fire sprinkler heads.

- Items above ceiling (e.g. other ceiling-mounted equipment such as radiology equipment and OR lights, HVAC equipment, electrical conduits, plumbing equipment).

- Amount of interstitial space (dictates the amount of lateral bracing required and type of attachment method—rod or pendant—needed to achieve a stable system).

- Unique architectural considerations: Multi-level ceiling heights, vaulted ceilings, soffits, non-structural or radius walls.
- Header and door walls (structural vs. non-structural walls—use of structural walls creates more challenges in room-to-room tracking).
- Fire code requirements.
- Ceiling height compared to maximum lifting range required by lifting practices.
- Wall-mounted barriers: TVs, light fixtures, cabinets, and door swing radius must be considered in determining track dimensions.
- Motor maintenance: Enough space must be allowed between rail-end and wall for removal of the lift motor.
- Recessed track (for straight, traverse, or curved track, ensure dropped ceiling grid is butted against track).
- Conveniently accessible space for motor and hanger bar storage when not in use.
- Location/design of privacy curtains.
- Approval of plans by State architectural review boards, which can take as long as 6–18 months.
- Loss of bed capacity when making modifications to accommodate installation of fixed lifting equipment.
- Infection control risk to patients from generation of aspergillus or other harmful spores and bacteria in the patient environment.
- Asbestos abatement if asbestos is still encapsulated in the cavity above the patient environment.
- Training of facility and maintenance staff on the new equipment.

**The solution for creating a safe-patient handling program has been clearly defined in the VA manual on developing a no-lift policy.**

In this manual, the Veterans Administration's first statement is that, for a no-lift policy to be successful, the health care facility **MUST** have required infrastructure in place before it is implemented. This infrastructure includes:

- An adequate number and variety of patient handling aids and mechanical lifting equipment on each high-risk patient care unit.
- Sufficient numbers of staff trained and competent in the use of these aids and equipment.
- Staff trained and skilled in applying safe patient handling and movement algorithms.
- Administrators and supervisors who support the comprehensive approach.

**The U.S. health care system needs a systematic approach to instituting mandatory safe-patient handling that includes all interested parties.**

Over the past 4 years, the authors of the *Guidelines for Design and Construction of Health Care Facilities* have undertaken a national consensus effort to develop quality standards for assessing safe-patient handling risk and implementing a program to install mechanical lifting devices in new health care construction and major modifications. The 116-person, all-volunteer multidisciplinary committee worked with industry safe-patient handling experts, nursing union representatives, State and Federal authorities, and health care professionals to develop the concept of a patient handling and movement assessment (PHAMA) along with an industry best practice to provide guidance for implementing the program. A compilation of the safe-patient handling provisions in the 2010 *Guidelines for Design and Construction of Health Care Facilities and Patient Handling and Movement Assessments: A White Paper* have been provided for further review (see Attachment 2).

**National guidelines for effectively evaluating safe-patient handling needs, patient movement equipment, and space design considerations were released in January 2010.**

This national team of experts crafted safe-patient handling language for public review and comment. After a 2-year review process, all the public comments were addressed and the following core paragraphs emerged. Another 10 pages of requirements and appendix material within the Guidelines support these two paragraphs (see Attachment 1).

*1.2–5 Patient Handling and Movement Assessment*

*A patient handling and movement assessment (PHAMA) is conducted to direct / assist the design team in incorporating appropriate patient handling and movement equipment into the health care environment. The purpose of this equipment is to increase or maintain patient mobility, independent functioning, and strength as well as to provide a safe environment for staff and patients during performance of high-risk patient handling tasks.*

*The PHAMA has two distinct yet interdependent phases. The first phase includes a patient handling needs assessment to identify appropriate patient handling and patient movement equipment for each service area in which patient handling and movement occurs. The second phase includes definition of space requirements and structural and other design considerations to accommodate incorporation of such patient handling and movement equipment.*

Simultaneous to the crafting of standards language, the white paper on patient handling and movement (PHAM) was being developed to support these new requirements. In addition to the workplace safety issues of safe-patient handling, this white paper sensitizes us to many additional advantages that PHAM equipment may offer, including:

- Better patient outcomes and improved quality of life for both patients and caregivers.
- Economic benefits from avoiding adverse events related to manual patient handling.
- Improved patient outcomes stemming from the potential for hospitals and nursing homes to mobilize patients using assistive devices immediately following a procedure or admission and diagnosis.

The authors concluded that these benefits and possibilities deserve to receive more emphasis—in addition to (rather than instead of) workplace safety.

**The health care industry already has a time-tested, formalized process and quality document for designing and constructing health care facilities.**

The 2010 edition is the latest in the 63-year history of this Guidelines document to aid in the design and construction of health care facilities.

The original *General Standards* appeared in the *Federal Register* on February 14, 1947, as part of the implementing regulations for the Hill-Burton program. The standards were revised from time to time as needed. In 1974 the document was re-titled *Minimum Requirements of Construction and Equipment for Hospital and Medical Facilities* to emphasize that the requirements were generally minimum, rather than ideal standards. The 1974 edition was the first for which public input and comment were requested.

In 1984 the Department of Health and Human Services (DHHS) removed from regulation the requirements relating to minimum standards of construction, renovation, and equipment of hospitals and medical facilities, as cited in the *Minimum Requirements*, DHEW Publication No. (HRA) 81-14500. Since the Federal grant and loan programs had expired, there was no need for the Federal Government to retain the guidelines in regulation format. To reflect its non-regulatory status, the title was changed to *Guidelines for Construction and Equipment of Hospital and Medical Facilities*. Since that time, the document has been continuously updated every 4 to 5 years, using a public revision process.

The 2010 Guidelines was written by a 116-person, multidisciplinary Health Guidelines Revision Committee (HGRC) with representation from nurses, surgeons, anesthesiologists, neonatologists, infection preventionists, administrators, architects, facility managers, consulting engineers, safety and security professionals, risk managers, and more than 25 State, Federal, and private enforcing authorities.

The 2010 edition had more than 25 focus groups reviewing specific sections of the 2006 document or working on the development of new sections. Two specialty subcommittees were formed to take on major projects on acoustic design and patient handling and movement. Expertise on these specialty subcommittees was bolstered by the contributions of outside technical and subject experts. The HGRC reached a consensus at its final meeting and unanimously endorsed the revised guidelines to be sent out for letter ballot, which was then unanimously approved.

**A public process, with a 63-year history, is already in place with a set of consensus standards for assessing and implementing safe-patient handling. The Guidelines is adopted by the Joint Commission, HUD, PHS/IHS, HRSA, and State departments of health and licensure. So the process works without the need for a set of Federal Government safe-patient handling standards.**

#### CONCLUSION

Safe-patient handling is critical to the fabric and future of the health care system. I agree that the health care system needs to implement policies and install adequate equipment to protect workers and patients when manual handling is required. However, this needs to be accomplished in a highly systematic fashion or the fix could be worse than the purpose for implementing the program.

The FGI and its health guidelines revision committee members stand ready to work with lawmakers on innovative ways to build on efforts already occurring at

the Federal, State and public levels and to share information that help health care organizations make smart choices on implementing a safe-patient handling program.

Madame Chairperson, it has been an honor to be here this afternoon, and I would like to thank the Health, Education, Labor, and Pensions Committee for inviting me to present on this very important topic, and of course I am available for any questions from the committee.

Senator MURRAY. Thank you very much.

I want to thank all of our witnesses today for excellent testimony. This is extremely helpful to this committee.

We have hit a couple of time constraints. Senator Isakson has to leave; he has a previous engagement. We have four votes that are going to start, here shortly, which are going to take over an hour. And all of us have questions.

So, what I'm going to do is allow Senator Isakson to ask his questions. I will have one or two, and turn it over to Senator Franken. Hopefully, we can finish those before the votes begin.

And the rest of the questions will be submitted to all of you to return in writing.

So, with that, let me turn it over to Senator Isakson.

Senator ISAKSON. Well, thank you, Madam Chairman. Actually, I'm not going to ask a question. But, two things:

One, first, thanks, to each of you, for your testimony.

Second, I really commend pages 5, 6, and 7 of Ms. Altaras's testimony, which were, I think, really excellent—both in terms of recommendations as well as lessons learned, which goes back to some of those initial questions I asked. It was very helpful to me. I commend you on that.

And I thank all our panelists for their effort today.

Thank you.

Senator MURRAY. Thank you very much.

Ms. Altaras, let me start with you. You have over 100 years of service. Congratulations. I think it's 110, now, Swedish has been operating. You have a mix of old and new buildings that you dealt with as you implemented this policy. Can you tell us what impact the age and condition of your buildings had on your efforts?

Ms. ALTARAS. We've taken a multiequipment approach. We have not installed ceiling lifts in 100 percent of our rooms. We make a decision on whether ceiling lifts are appropriate, based on the assessment of each individual nursing unit, of what patient populations are in that unit and what the work is in that unit. Ceiling lifts are not necessarily appropriate for all areas.

In the surgical suites, we use HoverMatts, because it would be very difficult to install ceiling lifts in surgical OR rooms. And we use HoverMatts in that setting.

There are many settings where the patients can reposition themselves in bed, and, really, the goal is to get them from sit-to-stand, so we use portable movement machines to go from a sit-to-stand position. So, the ceiling lifts aren't necessarily required. You can use HoverMatts in those situations also. So, we've used a variety of approaches.

Some of our older buildings, we have found that there are the—if you decide it's appropriate to use ceiling lifts in older construction, you can use the portable framework, where you can install the motor and the tracking to use that lift. But, I think that you need

to do very in depth assessment to make sure ceiling lifts is actually the appropriate solution with that patient population and nursing unit.

Senator MURRAY. OK, thank you very much.

And, Ms. Silverstein, I wanted to ask you about the recruitment and retention of experienced nurses and, in your experience, how this policy has helped with that.

Dr. SILVERSTEIN. In doing the interviews in both Idaho and Washington, where there has been available equipment, nursing staff may have, at first, been reluctant, but, once they became used to using the equipment, were absolutely delighted with it and felt that their careers could last a lot longer.

The turnover—we don't have evidence that the turnover has dramatically decreased across the board, but it has, we know, in certain hospitals, where they've really implemented safe patient handling.

Senator MURRAY. OK.

Senator Franken.

Senator FRANKEN. Thank you, Madam Chair.

Ms. Silverstein and Ms. Altaras, could you please respond to Mr. Erickson's assertion that it would take decades to implement this bill?

Minnesota facilities, Ms. Shogren, were able to make changes much more quickly. And I assume Washington has, too.

I want to point out that my legislation really gives 4 years to enact this—so, can you respond to Mr. Erickson, either of you, or any of you? Ms. Shogren, too.

Dr. SILVERSTEIN. Three years. In Washington.

Senator FRANKEN. You did it—in the entire State.

Dr. SILVERSTEIN. Yes.

Senator FRANKEN. In 3 years.

Dr. SILVERSTEIN. Yes.

Senator FRANKEN. OK.

And, Ms. Altaras.

Ms. ALTARAS. It took our organization 3 years, and we have three hospitals. We have over 1,000 patient beds, in addition to all of our—we have 60-plus operating rooms. And we were able to install in—it's actually under 3 years.

Senator FRANKEN. And, Ms. Shogren, what was the experience in Minnesota?

Ms. SHOGREN. The law won't be fully implemented until the end of the year, but the law provides about 2½ years to fully implement the program; and there is a provision for hardship, for an additional year. It can be extended if the employer is experiencing hardship.

Senator FRANKEN. One of the reasons I love nurses is that they're patient advocates. And from the patient's perspective, the disability community in Minnesota, Ms. Shogren, when this law was passed—I understood they were for it, right? They were advocating for it.

Ms. SHOGREN. Well, we talked with just about anyone who would talk with us as we were getting ready to work on the bill, and we found that, within the disability community, we had some kindred spirits there, from a different perspective.



They were very concerned, especially in the outpatient-care settings, which is why we did the amendment, that even though the facilities had ramps at the doorways and buttons that you could push to open the doors for you, that once they got beyond the waiting room, they were not equipped to care for them, and they couldn't get on the exam table. So, for instance, the MS Society lobbyist testified that only about 20 percent of women with MS can get a Pap smear every year, because they simply can't get on the table. And that was a very fundamental issue around access to healthcare that we felt was very compelling.

We also know that when we lift patients manually, we're generally hurting them; that's why they're combative. And I didn't go into nursing to hurt people, and the fact that I can use equipment to help move someone, versus, brute force to try and do it, seemed to me a much more compassionate and humane way to deal with the issues of people in need of assistance.

Senator FRANKEN. Let me ask you about the Minnesota Hospital Association. Did the Minnesota Hospital Association oppose the safe patient handling bill that was enacted in Minnesota?

Ms. SHOGREN. No. They testified they felt it was the right thing to do.

Senator FRANKEN. Well, I'm proud that Minnesota hospitals understand that worker safety is part and parcel of good patient care. And if we can succeed in Minnesota, in Washington—if this can be implemented within 3 years in Washington, I don't know why it would take decades in other States.

So, thank you all for your testimony today.

And thank you, Madam Chairwoman.

Senator MURRAY. Well, thank you, again, to all of you.

We're going to leave the committee record open for the next 7 days for all committee members to be able to add their statements and to ask questions of all of our witnesses.

And I personally want to thank all of you for taking time out of your lives to come and help us understand the implications of this.

Senator Franken, thank you for your tremendous participation on this, as well.

With that, this hearing is adjourned.

[Additional material follows.]

## ADDITIONAL MATERIAL

PREPARED STATEMENT OF DAVID MICHAELS, PHD, MPH, ASSISTANT SECRETARY OF  
LABOR FOR THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA)

Chair Murray, Ranking Member Isakson and members of the subcommittee, patient handling is an important issue that affects health care workers in the United States. Health care workers experience large numbers of work-related musculoskeletal disorders (MSDs) as a result of manually lifting, moving, assisting, and repositioning patients. An OSHA analysis of the latest Bureau of Labor Statistics data available showed more than 36,000 workers were injured lifting, repositioning and transferring patients in 2008. These are just the injuries that resulted in days away from work, the total is much higher and many injuries may not be reported. Almost all of the injured workers were nurses and nursing aides, and most were women. Disabling back injuries or the fear of being injured have contributed to the large number of nurses leaving the profession, thus increasing the nursing shortage. An estimated 12 percent to 18 percent of nursing personnel leave the profession annually due to chronic back pain, and another 12 percent consider a job transfer to reduce their risk of back injury.<sup>1</sup>

Due to the seriousness of this problem, OSHA supports the efforts of the subcommittee to address this significant occupational safety and health issue. OSHA agrees with the statement provided by the National Institute for Occupational Safety and Health (NIOSH) regarding research on patient handling risk, and supports NIOSH's efforts to learn more about this problem and its solutions. But while more research is always welcome, there are well established and proven interventions that have been successful in preventing these injuries in health care establishments across the country.

We acknowledge the advancements the U.S. Department of Veterans Affairs has made in this area, pulling in the experience of the VA Sunshine Healthcare Network (Veterans Integrated Service Network, VISN 8) to implement safe patient handling procedures in VA clinics nationwide. Between 2001 and 2003, VISN 8 deployed a program that reduced patient manual-handling caregiver injuries and led to markedly increased employee and patient satisfaction. Based on these results, VA developed and funded a national program through a budget initiative in fiscal year 2007.

Additionally, OSHA has a long history with this issue. In 2000, OSHA issued a comprehensive ergonomics standard that included health care workers. This standard was repealed by Congress and the President in 2001. In 2003, OSHA published ergonomic best practice guidelines for nursing homes. These guidelines recommend that manual lifting and transferring of patients should be minimized in all cases and eliminated when feasible. The guidelines also recommend that employers implement an effective ergonomics process that provides management support, involves employees, identifies problems, implements solutions, addresses reports of injuries, provides training, and evaluates ergonomics efforts.

Many States have also recognized the seriousness of this problem, and eleven have successfully enacted safe patient handling laws. Several others are considering similar legislation. A study is currently underway in the State of Washington to evaluate the effectiveness of their legislation, and results may be available later this year. Health care employers covered by State laws, as well as employers who have voluntarily implemented safe patient handling programs, have successfully reduced injury rates to nurses and other health care providers. OSHA supports the subcommittee's efforts to provide the same protection to all health care workers.

OSHA implemented a National Emphasis Program in September 2002 that focused on ergonomic hazards in nursing home facilities. We continue to investigate patient and resident handling incidents and have conducted 4,109 ergonomics inspections in nursing homes. To address enforcement of ergonomic hazards, OSHA uses Section 5(a)(1) of the Occupational Safety and Health Act, commonly referred to as the General Duty Clause. Enforcement under the General Duty Clause poses many difficulties, as very stringent legal tests must be met to successfully support citations. Despite the size of the problem and OSHA's efforts to deal with it, the Agency has only been able to issue 12 General Duty Clause ergonomic citations to health care facilities in the last 8 years. The General Duty Clause does not provide an efficient means for dealing with these workplace hazards. However, OSHA has put numerous health care facilities on notice by issuing ergonomic hazard alert letters. These letters inform employers of potential ergonomic risk factors observed at

<sup>1</sup> Hal Wardell, "Reduction of Injuries Associated with Patient Handling" AAOHN Journal, October 2007, Vol. 55, No. 10, 407-412.

their facility and provide recommendations on how to reduce the risk of these hazards.

Thank you for the opportunity to comment on the issue of safe patient handling. OSHA applauds the subcommittee's efforts to shed light on this problem that affects too many of our Nation's healthcare workers.

MAY 10, 2010.

Hon. PATTY MURRAY,  
*Chair, Subcommittee on Employment and Workplace Safety,*  
*Committee on Health, Education, Labor, and Pensions,*  
*U.S. Senate,*  
*Washington, DC 20510.*

DEAR MADAM CHAIRWOMAN: On behalf of the 1.6 million members of the American Federation of State, County and Municipal Employees (AFSCME), I request that the attached statement from AFSCME be included in the record for the May 11, 2010 hearing on Safe Patient Handling and Lifting Standards for a Safer American Workforce before the Subcommittee on Employment and Workplace Safety, of the Senate Health, Education, Labor, and Pensions Committee.

We thank you for holding this important hearing.  
 Sincerely,

CHARLES M. LOVELESS,  
*Director of Legislation.*

PREPARED STATEMENT OF THE AMERICAN FEDERATION OF STATE, COUNTY AND  
 MUNICIPAL EMPLOYEES (AFSCME)

We submit this statement on behalf of the 1.6 million members of the American Federation of State, County and Municipal Employees (AFSCME) for the official record of the Hearing on Safe Patient Handling and Lifting Standards for a Safer American Workforce of the Employment and Workplace Safety Subcommittee of the Health, Education, Labor, and Pensions Committee.

Approximately 360,000 AFSCME members work in our Nation's health care system to provide quality care for patients in hospitals, clinics, long-term care facilities, public health and other practice settings. These nurses, nursing aides, orderlies, attendants and other health care workers who lift or move patients as part of their jobs are at great risk of developing preventable musculoskeletal injuries and disorders. According to the U.S. Department of Labor, Bureau of Labor Statistics, nursing personnel are consistently listed as one of the top 10 occupations for work-related musculoskeletal disorders (for example, back pain, herniated discs, pulled or torn ligaments). In 2007, nursing staff ranked first in the incidence rate of such injuries—with a case rate of 252 cases per 10,000 workers, a rate seven times the national musculoskeletal average for all occupations. The nursing occupation also typically ranks in the top 10 in yearly incidence rate of sprain and strain injuries.

In most industries the injury rates for musculoskeletal disorders have declined in recent years but for nurses in the healthcare industry the rates have not declined. Patient handling and movement tasks are physically demanding, often performed in less than ideal conditions and often are unpredictable in nature, placing healthcare workers at risk. Healthcare workers are at even higher risk for back and other injuries when they work in facilities with low staffing, lack lifting equipment in good repair and have a high proportion of dependent patients. In addition, the shortage of nurses, longer work hours, aging workforce and increased obesity rates of patients all contribute to risk of injury. There are adverse consequences to the worker and patient as a result of improper and unsafe handling. It is time for Congress to act to change industry patient handling practices that put workers at risk.

For many years, employers have focused on outdated and ineffective techniques for patient handling based on "proper" body mechanics. There is strong evidence that these commonly used approaches are not effective in reducing worker injuries. There is a need for a specific national safety and health standard for this group of workers because patient handling is very different from lifting and moving other objects of the same weight. For example, weight can shift, and patients can resist movement and may even be combative. Accordingly, AFSCME urges the subcommittee to pass the Nurse and Health Care Worker Protection Act of 2009 (S. 1788) which would move healthcare employers away from ineffective approaches to evidence-based safe patient handling practices.

The legislation would prompt a real paradigm shift based upon over three decades of research to support interventions that are effective in reducing musculoskeletal

pain and injuries in healthcare workers who lift and handle patients. Under the legislation the U.S. Department of Labor's Occupational Safety and Health Administration (OSHA) would issue a standard on safe patient handling and injury prevention that requires the use of lift equipment to move patients except in cases which would compromise patient care. It would also require healthcare facilities to implement safe patient handling and injury prevention plans. Healthcare workers would receive training on safe patient handling and injury prevention. In addition, healthcare workers would be protected from employer retaliation if they refused to accept assignments which do not meet safety standards.

For the foregoing reasons, AFSCME urges the subcommittee to pass the Nurse and Health Care Worker Protection Act of 2009.

PREPARED STATEMENT OF THE AMERICAN INDUSTRIAL HYGIENE ASSOCIATION (AIHA)

SAFE HANDLING OF PATIENTS AND RESIDENTS

It is the position of the American Industrial Hygiene Association (AIHA) that:

1. The proper implementation of legislation can help to reduce the presence of the risk factors associated with musculoskeletal disorders, including work-related musculoskeletal disorders (WMSD), arising from the manual handling of patients and residents. Some of the critical components of legislation to address this exposure:

- AIHA believes that management systems are the best/recommended approach to hazard identification, risk assessment, and risk mitigation. As such, AIHA recommends that hospitals, nursing homes, and other health care facilities have a written safe patient handling policy or related policy incorporating all the necessary elements of a management system, such as elements in the AIHA/ANSI Z10-2005, *Occupational Health and Safety Management Systems*.

- The need for occupational providers of these services to have a patient handling committee or sub-committee. The committee should have representation from, but not be limited to, administration, education, unit management, nurses, nurses aides, maintenance, housekeeping, techs, and transport.

- The policy needs to address patient handling hazard assessment, task type and frequency, patient dependency levels, environmental restrictions, enhanced use of mechanical devices, incorporating space and construction design for mechanical lifting devices into job design and architectural plans, details for assuring proper equipment maintenance, storage and availability, training programs, responsibility and accountability systems for both management and associates.

- The policy needs to address how to evaluate the effectiveness of the program.

Activity, outcomes and compliance measures should be in place to evaluate success.

- The policy should address methods of sustainability and enhancement of the program as new technology and/or additional resources becomes available.

- While there is significant ergonomic risk associated with handling residents in home health care, there is currently a lack of knowledge regarding how to properly control this exposure. Research should be funded and other efforts undertaken to fill this knowledge gap.

2. There is a significant need to improve safe patient and resident handling with the resultant positive outcomes to include:

- The reduction of musculoskeletal disorder development and their resulting costs.

- Improved caregiver efficiencies and productivity. Reduces non-value added task for caregivers thereby freeing them up to spend more time on patient care.

- Reduction in the physical demand required to provide this care.

- With the ever increasing concern due to nursing shortages, improving caregiver safety will help reduce the loss of human assets as well as reduce turnover, recruitment and training costs. Improvement in the desirability of providing this care, thereby increasing the population willing to enter and remain in the health care profession.

- With the use of lifting devices and progressive mobility models for patients, caregivers can reduce the number and severity of pressure ulcers and wounds, decrease the number of patient falls, and enhance lung function and circulation, thereby improving the clinical outcomes for patients and residents and provide a greater quality of care. This will lead to a reduction in length of stays and related healthcare costs.

3. There is a significant body of scientific evidence (as a start, see the references that follow) demonstrating that effective ergonomics programs applied to patient and resident handling will result in the positive outcomes mentioned above.

4. The funding of research into improving home health care ergonomics, including the increase of the availability and quality of resident handling equipment, should help lead to:

- Reduction in home health care worker WMSD.
- Reduction in the need to have family members sent to nursing homes or hospitals to receive care.
- Reduction in the overall healthcare cost during the period when care can be provided at home.
- Maintaining a stronger family unit during the period when care can be provided at home.

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MAY 10, 2010.

Hon. PATTY MURRAY, *Chairwoman,*  
*Subcommittee on Employment and Workplace Safety,*  
*Committee on Health, Education, Labor, and Pensions,*  
*143 Hart Senate Office Building,*  
*Washington, DC 20510.*

DEAR CHAIRWOMAN MURRAY: On behalf of the American Nurses Association (ANA), we request the opportunity to submit testimony for the hearing record regarding the Subcommittee on Employment and Workplace Safety's hearing on Safe Patient Handling & Lifting Standards for a Safer American Workforce. ANA is the only full-service professional association representing the interests of the Nation's 3.1 million registered nurses (RNs) through its constituent member nurses associations, its organizational affiliates, and its workforce advocacy affiliate, the Center for American Nurses.

For more than a decade, the American Nurses Association has been leading the fight on behalf of registered nurses, health care workers and patients to eliminate manual patient handling. The Nation—now facing a serious nursing shortage—can no longer afford to lose the nurses who leave the profession annually due to musculoskeletal injuries and pain.

ANA greatly appreciates your consideration of this request. Thank you again, and please feel free to contact me at (301) 628-5098 or at the e-mail address: [rose.gonzalez@ana.org](mailto:rose.gonzalez@ana.org) if you have additional questions.

Sincerely,

ROSE GONZALEZ, MPS, RN,  
*Director, Government Affairs.*

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PREPARED STATEMENT OF THE AMERICAN NURSES ASSOCIATION (ANA)

The American Nurses Association (ANA), the largest nursing organization in the country, is pleased to submit our statement for the record to the Subcommittee on Employment and Workplace Safety's hearing on the Safe Patient Handling & Lifting Standards for a Safer American Workforce.

Founded in 1896, ANA is the only full-service professional association representing the interests of the Nation's 3.1 million registered nurses (RNs) through

its constituent member nurses associations, its organizational affiliates, and its workforce advocacy affiliate, the Center for American Nurses. The ANA advances the nursing profession by fostering high standards of nursing practice, promoting the rights of nurses in the workplace, projecting a positive and realistic view of nursing, and by lobbying the Congress and regulatory agencies on health care issues affecting nurses and the public.

The ANA prides itself on our long history as patient advocates. Patient advocacy has always been at the core of nursing and ANA takes that responsibility very seriously. We believe that it is possible to care for our patients without jeopardizing our own safety and health—and that of our patients. For almost two decades, the American Nurses Association (ANA) has been leading the fight on behalf of registered nurses, health care workers and patients to eliminate manual patient handling. This issue is at the heart of our members day-to-day lives. Moreover, it affects the lives of dedicated support staff including nurses' aides, patient care assistants and health care technicians who work alongside the registered nurse to provide competent, compassionate care to patients. A Safe Patient Handling program decreases injury to nurses, other health care workers and patients, while reducing work-related health care costs and improving the safety of patient care delivery.

The Nation—now facing a serious nursing shortage—can no longer afford to lose the nurses who leave the profession annually due to musculoskeletal injuries and pain. The extent of musculoskeletal disorders among the U.S. nursing workforce is particularly distressing. It is estimated that greater than 52 percent of the nursing workforce suffers from chronic back pain. Injuries and pain secondary to patient handling tasks exacerbate the shortage and are of particular concern with the aging of the nursing workforce. Although the Occupational Safety and Health Act (OSHA, 1970) requires employers to maintain records of serious workplace injuries and illnesses (29 U.S.C. section 657c(2)), these statistics may not capture episodic and remitting musculoskeletal injuries. Because this type of injury is largely a result of cumulative physical insult over time, they often go underreported, so the reported data is likely just the tip of the iceberg.

In spite of the statistics and OSHA recommendations, “no lift” policy initiatives in other nations such as the United Kingdom and Australia have been slow to be accepted in the United States. In 2003, the ANA Handle with Care® program was developed to support safer practices with regards to patient handling. Approaches to addressing this issue include recommended changes in nursing school curriculum as well as legislation.

ANA's policy is supported by a 2003 Institute of Medicine report entitled *Keeping Patients Safe: Transforming the Environment for Nurses* which describes the nurses work environment as a potential threat to their safety as well as that of patients. As a result, legislation in a number of States focusing on nurses working conditions has been advanced. An example is requiring the creation of safe patient handling programs with “no manual lift” policies.

Although progress to address patient handling has been made as evidenced by changes in nursing schools' curriculums and continued activity within the State legislatures, initiatives are too few and too limited in scope, and injuries continue to occur. Legislation is needed at the Federal level. ANA strongly supports, and is actively working to enact *The Nurse and Health Care Worker Protection Act of 2009* (H.R. 2381/S. 1788). This legislation would help improve patient safety and protect registered nurses and other health care workers from debilitating injuries that could force them from their professions. ANA strongly urges Congress to enact *The Nurse and Health Care Worker Act of 2009* (H.R. 2381/S. 1788).

**Safe Patient Handling Programs Are Important . . . For Registered Nurses, Health Care Workers . . . and Patients!**

A Safe Patient Handling (SPH) program decreases injury to nurses, other health care workers and patients, while reducing work-related health care costs and improving the safety of patient care delivery. The performance of tasks such as lifting, repositioning and transferring patients exposes nurses and other health care personnel to increased risk for work-related musculoskeletal disorders. With the development of assistive equipment and devices, such as lifting equipment and lateral transfer and friction reducing devices, the risk of musculoskeletal injury can be eliminated or significantly reduced.

According to the Bureau of Labor Statistics, nursing aides, orderlies, and attendants reported the highest incidence rate of musculoskeletal disorders (MSD) requiring days away from work in 2006 (BLS, 2007). This group was ranked second in

overall musculoskeletal disorders requiring days away from work, with Registered Nurses ranked fifth.<sup>1</sup>

Healthcare workers are over represented for upper extremity MSD among worker's compensation claims. Injured nurses contribute to about one-fourth of all claims and one-third of total compensation costs. More than one-third of back injuries among nurses have been associated with the handling of patients and the frequency with which nurses are required to move them.

The extent of musculoskeletal disorders among the U.S. nursing workforce is particularly distressing when considered in the context of the current nursing shortage. The Nation—now facing a serious nursing shortage—can no longer afford to lose the nurses who leave the profession annually due to musculoskeletal injuries and pain. Injuries secondary to patient handling and movement tasks compound factors driving the nursing shortage.

An ANA Health and Safety Survey revealed that 88 percent of nurses reported that health and safety concerns influence their decision to remain in nursing and the kind of nursing work they choose to perform. More than 70 percent said the acute and chronic effects of stress and overwork were among their top three health concerns, with more than two-thirds reporting they work some type of mandatory overtime every month. In addition, nurses cited a disabling back injury (60 percent), followed by contracting HIV or hepatitis from a needlestick injury (45 percent) as also being among their top three health and safety concerns. The survey further revealed that fewer than 20 percent of respondents felt safe in their current work environment.<sup>2</sup>

Safe patient movement and handling benefits patients as well. The potential for patient injury (such as falls and skin tears) as a consequence of a manual handling mishap is reduced by using assistive equipment and devices. Equipment and devices provide a more secure process for lifting, transferring or repositioning patients.

- Studies have shown that the use of mechanical lifting equipment increases a resident's comfort and feelings of security when compared to manual methods.<sup>3</sup>

- Patient handling technology encourages the safe movement and repositioning of patients, which is required to avoid pressure ulcers (bed sores). Years of research point to the effectiveness of patient turning and repositioning as the primary means to avoid pressure ulcers.<sup>4</sup>

- The National Institute for Occupational Safety and Health (NIOSH) reports that manual lifting is associated with undesirable outcomes for patients, including: Decreased quality of care . . . Diminished resident safety and comfort . . . Decreased resident satisfaction . . . Higher risks of falls, or of being dropped, friction burns, and dislocated shoulders . . . Skin tears and bruises.<sup>5</sup>

Most importantly, patients are afforded a safer means to progress through their care, have less anxiety, are more comfortable and maintain their dignity and privacy. Assistive patient-handling equipment can be selected to match a patient's ability to assist in his or her own movement, thereby promoting patient autonomy and rehabilitation.

#### SAFE PATIENT HANDLING PROGRAMS PAY FOR THEMSELVES

ANA strongly believes that enactment of the Nurses and Health Care Worker Protection Act of 2009 (H.R. 2381/S. 1788) will not only save the health and careers of registered nurses and other health care workers, but that it will also inevitably reduce costs for health care facilities. In essence, a business case can be made for implementing a safe patient handling program.

- Initial investment in both lifting equipment and employee training can be recovered in 2 to 3 years through reductions in workers' compensation costs.<sup>6</sup>

<sup>1</sup>Bureau of Labor Statistics (BLS). (2007). Nonfatal occupational illness and injuries causing days away from work, 2006. U.S. Department of Labor NEWS. USDL 07-1741. <http://www.bls.gov/iif/oshwc/osh/case/osnr0029.pdf>.

<sup>2</sup>ANA Health & Safety Survey, Sept. 7, 2001. See [www.nursingworld.org/surveys/hssurvey.htm](http://www.nursingworld.org/surveys/hssurvey.htm) for details.

<sup>3</sup>Zhuang Z, et al. (2000). Psychophysical assessment of assistive devices for transferring patients/residents. *Applied Ergonomics*. 31(1), 35–44.

<sup>4</sup>Thomas, David. (2001). Prevention and treatment of pressure ulcers: What works? What doesn't? *Cleveland Clinic Journal of Medicine*. (68) 8. August. <http://www.cejm.org/pdf/files/Thomas801.pdf>.

<sup>5</sup>National Institute for Occupational Safety and Health (NIOSH). (2006). *Safe Lifting and Movement of Nursing Home Residents*. DHHS (NIOSH) Publication No. 2006-117. <http://www.cdc.gov/niosh/docs/2006-117/pdfs/2006-117.pdf>.

<sup>6</sup>Collins et al., 2004; Tiesman et al., 2003; Nelson et al., 2003; Garg, 1999.

- Research has shown that resident lifting programs reduce workers' compensation injury rates by 61 percent, lost workday injury rates by 66 percent, restricted workdays by 38 percent, and the number of workers suffering from repeated injuries.<sup>7</sup>
- SPHM programs are cost-effective due to reductions in workers' compensation claims, costs associated with absenteeism, and turnover.<sup>8</sup>
- It was estimated the Veterans Health Administration (VHA) spent approximately \$22 million a year on health care worker injuries associated with patient movement. After initiating safe patient lifting programs in 23 units as part of an observation study, it was demonstrated that the VHA was able to recoup all of the direct and indirect costs associated with the safe lifting program in 4.3 years. The savings occur through significant reductions in workers compensation payments and avoidance of costs associated with caregiver absenteeism.<sup>9</sup>
- The Centers for Disease Control and Prevention (CDC) recently released the results of a 6-year field study of a safe patient lifting program. This study showed that the investment in equipment and training was recouped in less than 3 years in lower worker compensation claims.<sup>10</sup>

While the evidence shows that manual patient handling is a high-hazard task, with high incidence rates of musculoskeletal disorders for nurses and other personnel, employers remain reluctant to institute safe patient handling programs regardless of the data that demonstrates a strong return on investment for registered nurses, health care workers and patients.

#### THE NURSE AND HEALTH CARE WORKER PROTECTION ACT OF 2009 (H.R. 2381/S. 1788)

The American Nurses Association strongly supports the Nurse and Health Care Worker Protection Act of 2009 (H.R. 2381/S. 1788). This bill would require OSHA to develop and implement a standard that will eliminate manual lifting of patients by direct-care registered nurses and other health care workers. The legislation will also require health care facilities to develop a plan to comply with the standard (with input from RNs), provides protection for RNs through refusal of assignment and whistle blower provisions, and requires the Secretary to perform audits.

The Nurse and Health Care Worker Protection Act of 2009 will address some of the issues previously noted by decreasing injuries sustained by registered nurses, health care workers, and patients. It will also improve the safety of patient care delivery while reducing work-related health care costs.

#### CONCLUSION

We applaud the subcommittee's foresight in acknowledging the issue of manual lifting, transferring and repositioning patients as a continued hazard for nurses, health care workers and patients. As we expand access to health care services, ANA believes that the enactment of H.R. 2381/S. 1788 will reduce the number of injuries incurred by registered nurses, health care workers and patients. H.R. 2381/S. 1788 will also serve to decrease patient anxiety and improve the overall quality of care. Again, the ANA is pleased to submit our statement for the record and will work with Congress to secure enactment of *The Nurse and Health Care Worker Act of 2009* (H.R. 2381/S. 1788). Thank you.

#### RESPONSE BY CAPTAIN COLLINS TO QUESTIONS OF SENATOR HAGAN AND SENATOR ISAKSON

##### SENATOR HAGAN

*Question 1.* In your testimony, you indicated that "direct and indirect costs associated with back injuries in the health care industry, adjusted for inflation, are estimated to be \$7.4 billion annually in 2008 dollars." My question to you is: can you elaborate more on what the cost trajectory has been over the years and what the future may hold, for costs associated with back injuries in the health care industry?

<sup>7</sup>Collins J.W., et al. 2004. An evaluation of a "best practices" musculoskeletal injury prevention program in nursing homes. *Injury Prevention* (10) 206–211.

<sup>8</sup>Bureau of Labor Statistics (BLS). (2007). Nonfatal occupational illness and injuries causing days away from work, 2006. U.S. Department of Labor NEWS. USDL 07–1741. <http://www.bls.gov/iif/oshwc/osh/case/osnr0029.pdf>.

<sup>9</sup>Siddharthan, K., Nelson, A., Tiesman, H., & Chen, F. (2007). Cost effectiveness of a multifaceted program for safe patient handling. *Advances in Patient Safety*, 3(1):347–358.

<sup>10</sup>NIOSH (2007). The NIOSH Traumatic Injury and Prevention Program Evidence Package. March, 2007. <http://www.cdc.gov/niosh/nas/traumainj/pdfs/T1chapter5NAS03-07.pdf>.



Answer 1. We expect future costs associated with back injuries in health care to increase due to demographic trends, economic factors, and management strategies that continue to change. These are described in the bullets below. Note that costs mentioned below refer to workers' compensation costs only, that are a portion of the true occupational safety and health costs to workers, employers, and society overall.

There is evidence that occupational back injuries result in additional health care costs, over and above the medical costs covered through worker's compensation. For example, Lipscomb et al. (2009)<sup>1</sup> examined private health insurance payments for back diagnoses among a 15-year cohort of 18,768 carpenters who worked in the State of Washington during 1989–2003. They found that private health insurance payment rates for workers with one work-related injury were 40 percent higher than those with no history of work injury, while payment rates for those with four or more work-related injuries were almost three times the payment rate for those with no prior work injury. After the first work-related back injury claim, medical costs for back disorders covered by private health insurance increased 19 percent in the first year, and 30 percent for each year thereafter. Increasing private payments and deductibles were observed in contrast with a decline in reported work-related injuries. The authors concluded that their findings suggest cost-shifting from workers' compensation to the union-provided health insurance and to the worker.

In addition, there is evidence that workers suffering from back injuries are more likely to suffer from additional health conditions. For example, Nimgade et al. (2010)<sup>2</sup> analyzed health claims during December 1998 to March 2004 in a community-based health maintenance organization in Massachusetts that serves more than 200,000 clients. They reviewed healthcare expenditures in a random sample of 655 patients with new onset low back pain in 1999. A total of 6.5 percent of these patients had their low back pain services covered by worker's compensation, and 18 percent had received worker's compensation health coverage at some point during 1999 to 2004. No significant difference existed between the population and the study sample with respect to age, gender, worker's compensation status, or distribution of low back pain diagnostic criteria. The authors concluded that the traditional estimates of low back pain, that are based primarily on low back pain services, underestimate the true cost of the condition that would include physical or mental comorbidities.

Aging patients and workers:<sup>3</sup>

- The share of low back injuries for direct care workers in long-term care settings (including nursing homes, residential care, and home healthcare) is almost twice that for workers in all other industries (23 percent vs. 12 percent). The proportion of strains due to lifting in long-term care settings is approximately twice that for workers in all other industries, (41 percent for long-term care settings and 25 percent for all other).
- Total workers' compensation losses per worker are higher than average and employment is growing faster than average in the long-term care settings. Strains due to lifting were the top cause of all workers' compensation injuries.
- Incidence rates with days away from work are above average in all long-term care settings.
- The rapidly aging population will likely cause the number of long-term care settings to grow faster than average.

Obese patients and workers:<sup>4</sup>

- The number of workers' compensation claims and total medical payments are higher for claims by obese claimants.
- Obesity increases the risk for other injuries and illnesses.
- In the United States, the prevalence of obesity measured by body mass index (BMI) over 30 has increased by more than two since 1990, and continues to increase.

<sup>1</sup>Lipscomb HJ, Dement JM, Silverstein B, Cameron W, Glazner JE. 2009. Who is paying the bills? Health care costs for musculoskeletal back disorders, Washington State union carpenters, 1989–2003. *JOEM* 51(10):1185–1192.

<sup>2</sup>Nimgade A, McNeely E, Milton D, Celona J. 2010. Increased expenditures for other health conditions after an incident of low back pain. *Spine* 35(7): 769–777.

<sup>3</sup>Restrepo T, Shuford H, De A. 2007. An Emerging Issue for Workers Compensation—Aging Baby Boomers and a Growing Long-Term Care Industry. National Council on Compensation Insurance Research Brief: <https://www.ncci.com/documents/research-baby-boomer-fall07.pdf>.

<sup>4</sup>NCCI. Winter 2009. Gauging Current Conditions: The Economic Outlook and Its Impact on Workers Compensation. National Council on Compensation Insurance Research Newsletter: <https://www.ncci.com/documents/GaugingtheEconomy-Winter2009.pdf>.

Employment trends in healthcare:<sup>5</sup>

- Wage and salary employment in the healthcare industry is projected to increase 22 percent through 2018, compared to 11 percent for all industries combined.
- Employment growth is expected to account for about 22 percent of all wage and salary jobs added to the economy over the 2008–18 period.
- Projected rates of employment growth for the various segments of the industry range from 10 percent in hospitals, the largest and slowest growing industry segment, to 46 percent in the much smaller home healthcare services.

Employment in healthcare will continue to grow due to many contributing factors:<sup>5</sup>

- The proportion of the population in older age groups will grow faster than the total population between 2008 and 2018.
- Older persons have a higher incidence of injury and illness and often take longer to heal from maladies—as a result, demand for healthcare services will increase, especially in employment settings specializing in geriatric care.
- Employment in home healthcare and nursing and residential care settings should increase rapidly as life expectancies rise, and families are less able to care for their elder family members and rely more on long-term care facilities.

Severely ill patients will live longer:<sup>5</sup>

- Advances in medical technology will continue to improve the survival rate of severely ill and injured patients, who will then need extensive therapy and care.
- New technologies will continue to enable earlier diagnoses of many diseases which often increase the ability to treat conditions that were previously not treatable.

Employment changes across worksites:<sup>5</sup>

- Because of cost pressures, healthcare facilities may reduce their staff to reduce labor costs, distributing the same amount of work over fewer healthcare workers.
- Where patient care demands and regulations allow, healthcare facilities will substitute lower paid providers and will cross-train their workforces.
- Traditional inpatient hospital positions are no longer the only option for many future healthcare workers; persons seeking a career in the field must be willing to work in various employment settings.
- Hospitals will be the slowest growing segment within the healthcare industry because of efforts to control hospital costs, shorten lengths of hospital stays, and increase the use of outpatient clinics and other alternative care sites.

*Question 2.* In your testimony, you make reference to the aging nursing population and that, “this aging trend has raised concerns that future retirements could substantially reduce the size of the U.S. nurse workforce.” I am fully aware of the alarming nursing shortage we have across the Nation and in North Carolina. North Carolina’s nursing shortage ranks 19th highest in the Nation. My State nurse shortage is already over 8,000 and only projected to get worse. My question to you is: what impact would safe patient handling and lifting standards have on the current nursing workforce and the new generation of nurses?

*Answer 2.* Safe patient handling and lifting standards would reduce injuries in current and future nurses and potentially keep them from leaving the field due to back injuries. Our data has shown that mechanical assisted lifting, when used within a safe lifting program, reduces the number of injuries in nurses. It has been estimated that approximately 12 percent of nurses who planned to leave the profession cited back injuries as a contributing factor for leaving the profession. This statistic does not include the nurses who have sustained permanently disabling work-related injuries and are unable to return to work.

SENATOR ISAKSON

*Question 1.* Legislation before this committee, S. 1788, would “require the use of engineering controls to perform lifting, transferring, and repositioning of patients and the elimination of manual lifting of patients by direct-care registered nurses and all other health care workers, through the use of mechanical devices to the greatest degree feasible except where the use of safe patient handling practices can be demonstrated to compromise patient care.” The standard would apply to all health care facilities including, but not limited to, out-patient centers, rehabilitation facilities, skilled nursing facilities, nursing homes, and home health care. How

<sup>5</sup>Bureau of Labor Statistics, U.S. Department of Labor, *Career Guide to Industries, 2010–11 Edition*, Healthcare, on the Internet at <http://www.bls.gov/oco/eg/cgs035.htm> (visited June 17, 2010).

would such a rigid standard be flexible enough to account for the myriad of patient treatments at a wide range of facilities?

Answer 1. The proposed standard appears to be flexible enough to accommodate a variety of healthcare needs. There are several different types of mechanical lifts available to assist patients with mobility restrictions. The type of equipment prescribed for a particular patient depends on the healthcare setting, the nature of the transfer task, the patient's ability to bear weight, the patient's weight, the cooperativeness of the patient, the patient's upper body strength, the patient's overall ability to assist with the transfer, and the needs of the patient. The fundamental principle of any safe patient handling and movement program, regardless of the type of facility, is the use of mechanical lifting equipment to eliminate the manual lifting of patients by healthcare workers.

*Question 2.* Would a health care facility in minimal compliance with Minnesota's standard need to make additional alterations to meet the new standard imagined by S. 1788?

Answer 2. No, if the pending Federal legislation were enacted, facilities in Minnesota that are meeting the minimal requirements of the existing Minnesota State law should already be in compliance with the standards proposed by S. 1788.

*Question 3.* How many years do you think it would take every health care facility in Minnesota to reach the new standard imagined by S. 1788?

Answer 3. If the pending Federal legislation were enacted, facilities in Minnesota that are meeting the minimal requirements of the existing Minnesota State law should already be in compliance with the standards proposed by S. 1788.

*Question 4.* How much do you think health care facilities in Minnesota would have to spend to implement every aspect of S. 1788?

Answer 4. Healthcare facilities in Minnesota that are in compliance with the Minnesota State law should not have to spend any additional money to be in compliance with the Federal law. Further, research has shown that the initial capital investment in lifting equipment and worker training is recovered based on savings in workers' compensation expenses in 3 to 5 years.

*Question 5.* Similarly, would a health care facility in minimal compliance with Washington State's standard need to make additional alterations to meet the new standard imagined by S. 1788?

How many years do you think it would take every health care facility in Washington to reach the new standard imagined by S. 1788? How much do you think health care facilities in Washington would have to spend to implement every aspect of S. 1788?

Answer 5. The law in Washington State applies only to hospitals. Thus, other healthcare facilities would need alterations to meet the standard proposed in S. 1788. NIOSH is not in a position to assess how long it would take every healthcare facility in Washington to reach the standard proposed by S. 1788 or how much healthcare facilities would have to spend to comply with such a standard.

*Question 6.* Does any State in the union proscribe manual lifts of patients? Does any State require the use of engineering controls to perform lifting, transferring, and repositioning of all patients?

Answer 6. No State proscribes manual lifting; however, Illinois, Maryland, Minnesota, New Jersey, Rhode Island, Texas and Washington have enacted laws (citations provided below) to restrict/ reduce manual lifting of patients by requiring engineering controls with exceptions to certain circumstances.

Illinois: 210 ILL. COMP. STAT. ANN. 85/6.25.

Maryland: MD. CODE ANN., Health §19-377.

Minnesota: MINN. STAT. ANN. §182.6553.

New Jersey: NJ. STAT. ANN. §26:2H-14.8-14.14.

Rhode Island: R.I. GEN. LAWS §23-17-59.

Texas: TEX. CODE ANN. HEALTH & SAFETY §256.002.

Washington: WASH. REV. CODE ANN. §70.41.390 AND 72.23.390.

RESPONSE TO QUESTIONS OF SENATOR HAGAN BY MICHAEL HODGSON, M.D., MPH

*Question 1.* In your testimony, you discussed how the VA system has implemented safe patient handling and lifting policies. I welcome the idea that these policies promote a culture of safety and provide an environment for safe patient handling for patients and staff, in addition to lowering costs. My question to you is: What have

you experienced working with the lifting equipment and the need for maintenance and replacement? At what frequency does lifting equipment need to be replaced?

Answer 1. Clearly, effective maintenance programs and plans are an essential element if the safe patient handling initiative is to be successful. These maintenance programs require input both from patient care staff (nursing and infection control), and engineering staff (biomedical engineering or other engineering departments). These programs should include planning for slings, electrical and electronic equipment maintenance, and repairs. Backup plans when equipment is not functional or in repair are also important.

There are no formal data on replacement frequency, as of yet. Our assumptions have been that the program likely needs to be refreshed at least every 10 years because technology ages. In general, this type of equipment has two major components to consider. The rail system, following normal standards, is designed for infinite life or at least a 20-year minimum. Only failures to maintain the system connections, or overload of the system connections, will generally result in an earlier life termination. The second is the lift unit. It too, if properly maintained, would last mechanically for at least 10 years. Overload, battery death, or preventive maintenance failures would shorten the life. The major wear points are the lift belt/strap/cable/chain and the batteries/hand controls/power supply wipers/brushes. VA assumes the need for new batteries every 3 years, at a maximum, and new belts every year for a normally used unit, with 7–10 lifts per day. Preventive maintenance always follows the manufacturer's recommendations, or will be more frequent as needed.

On the other hand, new technology is developed every year, and some of that is very useful in preventing injuries. For example, VA's program, designed in 2006, was based on publications from 2006 and earlier. As a result, since that time VA's national program has evolved. Additional benefits have been recognized, including reductions in skin problems (ulcers) and other improved patient care outcomes.

*Question 2.* Furthermore, would health facilities benefit from budgeting for maintenance and replacement expenses versus budgeting for unpredictable expenses due to injuries?

Answer 2. Yes. This benefit has been used to justify the implementation of safe patient handling programs.

[Whereupon, at 3:54 p.m., the hearing was adjourned.]

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