



**HIDDEN TRAGEDY:
Underreporting of Workplace Injuries and
Illnesses**

**A MAJORITY STAFF REPORT BY
THE COMMITTEE ON EDUCATION AND LABOR
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**THE HONORABLE GEORGE MILLER
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Executive Summary

The Occupational Safety and Health Act of 1970 requires the Department of Labor to collect and compile accurate statistics on the extent of occupational injuries, illnesses and fatalities in the United States. Employers are also required to keep accurate records of workplace injuries, illnesses and deaths. Top officials at the Department of Labor (DOL) and Occupational Safety and Health Administration (OSHA) often cite declining injury, illness and fatality numbers to demonstrate the effectiveness of their programs and to fight off criticism that OSHA has abandoned its original mission of setting and enforcing workplace safety and health standards.

But extensive evidence from academic studies, media reports and worker testimony shows that work-related injuries and illnesses in the United States are chronically and even grossly underreported. As much as 69 percent of injuries and illnesses may never make it into the Survey of Occupational Injuries and Illnesses (SOII), the nation's annual workplace safety and health "report card" generated by the Bureau of Labor Statistics (BLS). If these estimates are accurate, the nation's workers may be suffering three times as many injuries and illnesses as official reports indicate. Despite these reports, OSHA has failed to address the problem, relying on ineffective audits to argue that the numbers are accurate.

Experts have identified many reasons for underreporting. Twenty percent of workers—including public employees and those who are self-employed—are not even counted by BLS. Work-related illnesses are difficult to identify, especially when there are long periods between exposure and illness, or when work-related illnesses are similar to other non-work-related illnesses. In addition, recent changes in OSHA's recordkeeping procedures have affected the accuracy of the count of musculoskeletal disorders (MSDs). Finally, some employers are confused about reporting criteria and OSHA staff is often not well-trained to provide accurate advice.

But a major cause of underreporting, according to experts, is OSHA's reliance on self-reporting by employers. Employers have strong incentives to underreport injuries and illnesses that occur on the job. Businesses with fewer injuries and illnesses are less likely to be inspected by OSHA; they have lower workers' compensation insurance premiums; and they have a better chance of winning government contracts and bonuses. Self-reporting allows employers to use a variety of strategies that result in underreporting of injuries and illnesses:

- Workers report widespread intimidation and harassment when reporting injuries and illnesses. Reports, testimony and news accounts show that many employers have fired or disciplined workers who report injuries and illnesses or complain

about safety hazards. Others have added “demerits” to an employee’s record for reportable injuries or illnesses or for absenteeism that allegedly result from “safety violations.”

A recent *Charlotte Observer* series, “The Cruellest Cuts,” details the experiences of poultry workers who were disciplined, harassed and fired for reporting injuries, like shattered ankles, numb hands from tens of thousands of repetitive motions every day, and serious knife cuts. Many of their injuries often never appeared in the plant’s OSHA injury and illness logs. Steelworkers have described a problem called “bloody pocket syndrome,” where workers hide their injuries until after their shift to avoid being disciplined.

- Employers have been reported to provide inadequate medical treatment and force workers back to work too soon after serious injuries – sometimes right after surgery – so that their injuries will not be properly recorded.
- While they may be well-intentioned, widespread and popular safety incentive programs which provide awards for a period of time without a recordable injury, can have the effect of putting pressure on workers not to report their injuries.

Keeping track of the number of workplace injuries and illnesses that occur every year in the United States is not just an exercise in paperwork. For individual employers and workers, accurate counting of workplace injuries and illnesses is essential to identify and address safety and health hazards and to ensure that workers receive appropriate medical treatment. On a national level, accurate records are important to evaluate the state of worker health and safety in the country so that OSHA can effectively allocate its scarce resources, accurately target its inspections and evaluate the effectiveness of its efforts.

Several studies in the 1980s identified serious problems in the system of recordkeeping for injuries, illnesses and fatalities. As a result of those studies, significant changes were made in the way that fatality data were collected, and other changes were made in employers’ reporting requirements. Twenty years later, as more evidence of underreporting is generated, it is time to take another serious look at the recordkeeping system.

This report reviews the importance of accurate recordkeeping, evidence that injuries and illnesses are significantly underreported, the reasons why injury and illness statistics are underreported, methods that some employers use to discourage reporting, other measures that may be more helpful for OSHA and employers to identify workplace safety problems, and OSHA’s failure to address these problems adequately.

In compiling this report, majority staff has conducted interviews with a large number of employers, employees and labor representatives and has reviewed numerous academic studies, news articles and investigations, employer safety programs, and federal and state reports and investigations.

Introduction

The Occupational Safety and Health Act of 1970 requires the Department of Labor to collect and compile statistics on the extent of occupational injuries, illnesses and fatalities in the United States. Employers are also required to keep accurate records of workplace injuries, illnesses and deaths. But extensive evidence from academic studies, media reports and worker testimony show that work-related injuries and illnesses in the United States are chronically underreported. A number of reports blame much of this phenomenon on intimidation and harassment of workers in retaliation for reporting injuries.

This report reviews the importance of accurate recordkeeping, evidence that injuries and illnesses are significantly underreported, the reasons why injury and illness statistics are underreported, methods that some employers use to discourage reporting and OSHA's failure to address these problems.

Why is Accurate Recordkeeping Important?

The lack of accurate surveillance information leads to the inability to allocate appropriate resources, the inability to initiate and prioritize targeted interventions, and the inability to evaluate the effectiveness of those interventions.

-- Professor K D Rosenman, Department of Medicine, Michigan State University

For individual employers and workers, accurate counting of injuries, illnesses and other safety and health indicators is essential to identify the root causes of workplace incidents and illnesses, to address unsafe workplace conditions, to ensure that workers get appropriate medical treatment and to establish an effective management safety system.

In addition, accurate recordkeeping is essential on the national policy level to ensure that the goals of the Occupational Safety and Health Act, to ensure safe workplaces, are fulfilled:

- **Targeting of OSHA Inspections:** OSHA relies on accurate injury and illness data to target its inspections at the most dangerous worksites. Inaccurate data mean that OSHA may not be inspecting high hazard facilities.
- **Setting OSHA's priorities:** OSHA needs information on where workers are getting injured, sick and killed, in order to identify high-hazard industries where aggressive enforcement programs may be required, and to determine what new standards are needed and how to target its compliance assistance efforts.

- **Judging the effectiveness of OSHA programs:** An accurate and reliable assessment of the extent of occupational injuries, illnesses and fatalities is essential to enable policy makers to determine whether OSHA's programs are succeeding or failing and where improvements can be made.

Under the Bush Administration, OSHA has been criticized by Congress, the media, labor unions and citizens for failing to fulfill the original mandate of the Occupational Safety and Health Act. Numerous Congressional hearings have been held over the past year to oversee the performance of OSHA and the DOL. At almost every hearing where top OSHA or DOL officials have appeared, their main and often only defense against every issue raised – failure to issue standards, failure to issue promised guidelines, favoring voluntary programs over mandatory standards and enforcement, or failure to enforce ergonomic violations – has been that injuries, illnesses and fatalities have been going down, so the agencies must be doing something right.

Congresswoman McCarthy. I am asking, do you feel that you have enough inspectors to do the work that needs to be done around the country?

Assistant Secretary Foulke. I would say that we are obviously doing the job we need to be doing, because if you look today, the most recent data that we have, we had the lowest injury, illness and fatality rates ever.

-- Hearing on the Combustible Dust Explosion and Fire Prevention Act of 2008, March 12, 2008

- **Determining the state of workplace safety and health in this country:** There is no doubt that the state of health and safety in this country has improved since OSHA was created. But far too many workers are still killed and injured on the job. According to government statistics, 16 workers are killed in this country every day of the year from falls, trench collapses, getting caught in machinery, electrocutions, explosions, violence, and vehicle crashes.¹ NIOSH estimates that ten times that number die from occupational diseases such as cancer or respiratory diseases². In addition, over 11,000 workers are injured every day – one every seven seconds.³ Are workplace safety trends still improving? Could we be doing better? What are the research needs? Accurate statistics are necessary to make these determinations.

Background: The Recordkeeping System

¹ Bureau of Labor Statistics, *Census of Fatal Occupational Injuries*, (2006), at http://www.bls.gov/iif/oshwc/cfoi/cfoi_revised06.pdf

² Kyle Steenland, Carol Burnett, Nina Lalich, et al., *Dying for Work: The Magnitude of US Mortality From Selected Causes of Death Associated With Occupation*, 43 AM. J. OF INDUSTRIAL MED. 461, (2003).

³ Bureau of Labor Statistics, *Survey of Occupational Injuries and Illnesses*, at <http://www.bls.gov/iif/oshwc/osh/os/osnr0028.pdf>.

The Occupational Safety and Health (OSH) Act requires employers to keep accurate records of workers' injuries and illnesses, and mandates OSHA to develop regulations "requiring employers to maintain accurate records of...work-related deaths, injuries and illnesses."⁴ OSHA establishes definitions and recordkeeping guidelines for employer reporting of injuries, illnesses and fatalities. Employers must only record injuries and illnesses if they involve lost work time, medical treatment other than first aid, restriction of work or motion, loss of consciousness, or transfer to another job. Employers are responsible for keeping a log of injuries and illnesses (OSHA 300 Log). The log must be available to employees and their representatives, and the Annual Summary of the log must be posted in the workplace each year from February 1 to April 30. In addition, the employer must investigate the circumstances of all cases recorded in the log and prepare an incident report outlining the factors that led to the incident.⁵

Under the OSH Act, the Secretary of Labor is charged with the responsibility to "develop and maintain an effective program of collection, compilation an analysis of occupational safety and health statistics," and to compile accurate statistics on work-related injuries and illnesses.⁶ This charge has been delegated to BLS.⁷

The BLS selects a representative number of employers to report injury and illness data for use in creating the annual Survey of Occupational Injuries and Illnesses (SOII). The SOII constitutes the nation's official annual workplace injury and illness "report card." But the SOII excludes millions of workers, including self-employed individuals, farms with fewer than 11 employees, employees of federal, state and local government agencies, and private household workers.⁸

After a number of Congressional hearings on underreporting in the 1980s and 1990s, the National Academy of Sciences⁹ and the Keystone Institute¹⁰ conducted studies on the effectiveness and accuracy of OSHA recordkeeping. The NAS study found serious and willful underreporting among major corporations and looked at remedies to the problem.

As a result of this work, the method of collecting workplace fatality statistics was changed. Since 1992, workplace fatality statistics have been collected in a different manner than injuries and illnesses. Although employers are required to report all fatalities to OSHA, the BLS also makes independent efforts to establish the number of workers killed on the job each year. This program, called the Census of Fatal Occupational Injuries (CFOI), also uses such sources as death certificates, workers' compensation

⁴ Occupational Safety and Health Act of 1970, 29 U.S.C. § 657.

⁵ Occupational Safety and Health Administration, Recording and Reporting Occupational Injuries and Illnesses, 29 C.F.R. § 1904 (1994).

⁶ Occupational Safety and Health Act of 1970, 29 U.S.C. § 673.

⁷ Occupational Safety and Health Administration, Recording and Reporting Occupational Injuries and Illnesses, 29 C.F.R. § 1904 (2003).

⁸ Bureau of Labor Statistics, *Occupational Safety and Health Summary Data* (February 05, 2002), at <http://www.bls.gov/iif/oshsum1.htm>.

⁹ NATIONAL ACADEMY OF SCIENCES, COUNTING INJURIES AND ILLNESSES IN THE WORKPLACE: PROPOSAL FOR A BETTER SYSTEM, (Earl S. Pollack & Deborah Gellerman Keimig, eds. 1987).

¹⁰ The Keystone Center, *The Keystone National Policy Dialogue on Work-Related Illness and Injury Recordkeeping, Final Report*, (1989).

records, news accounts, and employer and police reports to Federal and State agencies to verify the accuracy of workplace fatality statistics. Consequently, CFOI is considered to be more accurate and reliable than SOII. Prior to the launch of CFOI in 1992, workplace fatality estimates made by various organizations varied greatly from 3,000 to 11,000 deaths nationally per year.¹¹

Also as a result of these studies, OSHA developed the Site Specific Targeting program (SST) in the mid 1990s, designed to target inspections at the most dangerous workplaces. In order to do this, OSHA developed the OSHA Data Initiative (ODI), which enables the agency to annually collect injury and illness information directly from employers in 80,000 larger establishments in high hazard industries, excluding the construction and maritime industries (determined by previous reported injury and illness rates.) The companies with the highest rates within those industries are among those selected for targeted inspections.¹²

The Status of Recordkeeping: An Academic Research Review

Numerous studies have found that the Bureau of Labor Statistics Survey of Occupational Illnesses and Injuries (SOII) drastically underestimates the number of workplace injuries and illnesses suffered by American workers each year. Studies also question the extent of the downward trend reported by the SOII.

According to the studies cited below, the BLS annual survey may fail to report nearly 70 percent of lost-work time injuries and illnesses. Although the SOII portrays dramatic decreases in the rate of worker injury and illness throughout the last decade, independent analyses suggest that actual occupational injury and illness rates have remained constant or declined only modestly in recent years.¹³⁻¹⁴ In fact, one study demonstrates that changes in OSHA's recordkeeping requirements—rather than a real reduction in workplace injuries and illnesses—have contributed significantly to the decline in injuries and illnesses reported in the SOII.¹⁵

Simply put, the SOII cannot be trusted as a gauge of the safety of American workplaces. As a result of its reliance on the flawed employer-based system underlying the SOII, OSHA may be failing to inspect dangerous workplaces, leaving many American workers at risk of injury, illness and exploitation.

¹¹ Guy Toscano & Janice Windau, *The Changing Character of Fatal Work Injuries*, MONTHLY LABOR REV., October 1, 1994, 17, at <http://www.bls.gov/opub/mlr/1994/10/art2full.pdf>

¹² Occupational Safety and Health Administration, *Site-Specific Targeting 2008 (SST-08)*, CPL-08-03 (CPL 02) (May 19, 2008), at http://www.osha.gov/OshDoc/Directive_pdf/CPL_02_08-03.pdf.

¹³ Lee S. Friedman & Linda Forst, *Occupational Injury Surveillance of Traumatic Injuries in Illinois, Using the Illinois Trauma Registry: 1995-2003*, 49 J. OCCUPATIONAL & ENVTL. MED. 401, (2007).

¹⁴ Lee S. Friedman & Linda Forst, *The Impact of OSHA Recordkeeping Regulation Changes on Occupational Injury and Illness Trends in the US: a Time-series Analysis*, 64 OCCUPATIONAL ENVTL. MED. 454, (2007).

¹⁵ *Id.*

Estimates of the BLS undercount vary, but it is clear that the SOII misses a significant number of workplace injuries and illnesses.

- Researchers at Michigan State University found that the SOII missed up to 68 percent of work-related injuries and illnesses occurring annually in Michigan from 1999 to 2001. After comparing BLS statistics to a number of other databases, the researchers found that the OSHA logs captured only around 31 percent of illnesses and 33 percent of injuries reported in other databases.¹⁶
- Another study that compared the SOII with worker's compensation records in six states estimates that the SOII missed almost 340,000 lost-time injuries in the sampled industries from 1998 to 2002. At most, the BLS survey reported 76 percent of all injuries in the six states in the sampled industries. Many more injuries and illnesses were reported to the state workers' compensation system than to the BLS.¹⁷
- A study of the Denver International Airport (DIA) construction project provides evidence that the SOII may underestimate injury and illness rates in the construction industry by over 50 percent. The researchers used workers' compensation and payroll data to estimate the total number of lost-work-time injuries during the project. It found that the overall injury rate for the DIA project was more than twice the rate reported by BLS for the construction industry during the project years.¹⁸
- One study estimates that the SOII misses between 33 and 69 percent of all work-related injuries and illnesses when the excluded categories of workers (e.g. government employees and the self-employed) are included in the count. In developing their estimate, the researchers took into account relative job risks and previous studies' findings regarding injury and illness underreporting in specific job categories.¹⁹
- Another analysis finds that for 1998, the actual number of workplace injuries and illnesses for private industries currently included in the BLS survey was 40 percent higher than the SOII estimate. If government employees and the self-employed are included, then the occupational injury and illness estimate for 1998 risks to 80 percent higher than the BLS estimate. The researchers used the National Health Interview Survey, conducted by the National Center of Health

¹⁶ Kenneth D. Rosenman, Alice Kalush, Mary Jo Reilly, et al., *How Much Work-Related Injury and Illness is Missed by the Current System?*, 48 J. OCCUPATIONAL & ENVTL. MED. 357, (2006).

¹⁷ Leslie I. Boden & Al Ozonoff, *Capture-recapture Estimates of Nonfatal Workplace Injuries and Illnesses*, 18 ANNALS OF EPIDEMIOLOGY 261, (2008).

¹⁸ Judith E. Glazner, Joleen Borgerding, Jan. T. Lowery et al., *Construction Industry Rates May Exceed National Estimates: Evidence from the Construction of the Denver International Airport*, 34 AM. J. INDUSTRIAL MED. 105, (1998).

¹⁹ J. Paul Leigh, James P. Marcin, & Ted R. Miller, *An Estimate of the U.S. Government's Undercount of Nonfatal Occupational Injuries*, 46 J. OCCUPATIONAL & ENVTL. MED. 10, (2004).

Statistics, to estimate injury rates and then compared their findings to the BLS estimates.²⁰

The annual downward trend reported in the SOII is also questionable.

- While BLS figures show a consistent 37.4 percent decline in workplace injuries in Illinois between 1998 and 2003, an analysis employing Illinois Trauma Registry (ITR) data demonstrates a fairly level rate of traumatic workplace injuries in the state over the same period. The researchers argue that since the ITR is based on trauma center records from across the state and does not depend on employer self-reporting, it likely reflects a more accurate picture of the trends in occupational injuries than the SOII.²¹
- A study by NIOSH researchers using data from non-fatal hospital emergency department (ED) admissions finds that “no substantial reduction was observed in the overall number and rate of ED-treated occupational injuries/illnesses during 1996-2004.” This finding stands in contrast to the SOII, which documented a decline in injuries and illnesses for those years.²²

Not only do the findings of this study bring into question the BLS’s reported decline in injuries and illnesses, but it also brings into question the total number of injuries and illnesses reported by the BLS. First, the authors point out that workers suffering from chronic occupational illnesses rarely go to emergency rooms for treatment (and that these illnesses are difficult to ascribe to previous workplace exposures). Second, previous studies show that emergency room admissions account for only around one-third of all occupational injuries and illnesses²³ implying that the real rate may be closer to 7.5 per 100 workers, rather than the 5.0 reported by BLS.

- According to researchers at University of Illinois at Chicago, 83 percent of the reported decrease in occupational injuries and illnesses in the US from 1992 to 2003 was caused by changes in recordkeeping rules in the 1990’s and early 2000’s, and only 17 percent of the decrease over that time were actually due to a true decrease in injuries and illnesses.²⁴

Ergonomic injuries are significantly underreported.

²⁰ Gordon Smith, Helen Wellman, Gary Sorock, et al., *Injuries at Work in the US Adult Population: Contributions to the Total Injury Burden*, 95 AM. J. PUB. HEALTH 1213, (2005).

²¹ Friedman & Forst, *supra* note 13.

²² S.J. Derk, S.M. Marsh & L.L. Jackson, *Nonfatal Occupational Injuries and Illnesses—United States, 2004*, MORBIDITY & MORTALITY WEEKLY REPORT (April 27, 2007), at <http://www.cdc.gov/MMWR/preview/mmwrhtml/mm5616a3.htm>.

²³ S.J. Derk, S.M. Marsh & L.L. Jackson, *Nonfatal Occupational Injuries and Illnesses Among Workers Treated in Hospital Emergency Departments—United States, 2003*, MORBIDITY & MORTALITY WEEKLY REPORT (April 28, 2006), at <http://www.cdc.gov/MMWR/preview/mmwrhtml/mm5516a2.htm>.

²⁴ Friedman & Forst, *supra* note 14.

In February 2008, the *Charlotte Observer* published a six-part series called “The Cruellest Cuts: The Human Cost of Bringing Poultry to Your Table.” The *Observer* reported on the unsafe conditions in poultry plants in North and South Carolina, focusing on pressures on workers not to report injuries. According to the report, House of Raeford's 800-worker poultry processing plant in West Columbia, S.C., reported no musculoskeletal disorders over four years, although twelve employees who worked at the plant during that time said they suffered pain brought on by MSDs and two said they had surgery for carpal tunnel at company expense.

Similarly, House of Raeford's Greenville, S.C., plant has boasted of a five-year safety streak with no lost-time accidents. But the *Observer* reported that the plant kept that streak alive by bringing injured employees back to the factory hours after surgery.²⁵

According to Tom Armstrong, a University of Michigan professor who has studied the prevalence of MSDs in poultry processing, “it’s highly unlikely a large poultry plant could go consecutive years without a case of carpal tunnel or tendonitis. ‘I’d be skeptical of the record-keeping in a situation like that.’”²⁶

Other studies have confirmed the *Observer*'s conclusions that MSDs are underreported.

- In developing OSHA's ergonomics standard in 2000, OSHA cited extensive peer-reviewed studies that documented extensive and widespread underreporting on the OSHA Log of occupational injuries and illnesses in general. Based on this evidence as well as evidence and testimony submitted during the hearing and public comment process, OSHA concluded that work-related MSDs such as back injuries, carpal tunnel syndrome, and tendonitis were being substantially underreported on OSHA Logs and that the number of lost-time, work-related MSDs quantified in the Agency's risk assessment on the basis of the BLS data was understated by at least a factor of two.²⁷
- A recent *American Journal of Industrial Medicine* study has confirmed OSHA's findings that ergonomic injuries are underreported. Using worker's compensation and physician reporting data from Connecticut, researchers estimate that from 1995 to 2001, the actual number of work-related upper-extremity MSDs in Connecticut was as much as six times higher than reported in the SOII. The researchers also conclude that there is no evidence to support the overall declines in MSDs indicated by the BLS survey.²⁸
- A study of hotel workers in Las Vegas showed that more than three-quarters suffered work-related pain which was severe enough for over 80 percent to take

²⁵ Kerry Hall, Ames Alexander & Franco Ordonez, *The Cruellest Cuts: The Human Cost of Bringing Poultry to Your Table*, CHARLOTTE OBSERVER, Feb. 10, 2008, at 1A.

²⁶ *Id.*

²⁷ OSHA Ergonomics Program; Final Rule, 29 C.F.R. § 1910 (2000, amended June 30, 2003).

²⁸ Tim Morse, C. Dillon, E. Kenta-Bibi et al., *Trends in Work-related Musculoskeletal Disorder Reports by Year, Type, and Industrial Sector: A Capture-Recapture Analysis*, 48 AM. J. INDUS. MED. 40, (2005).

pain medication and over 60 percent to see a doctor. Yet two thirds of those workers did not report their injuries to their supervisors.²⁹

Why Are Injuries And Illnesses Underreported?

There are a number of reasons that injuries and illnesses are underreported to OSHA and the BLS. Many categories of workers are not counted by the BLS. Some workers do not want to get caught up in the slow difficult workers' compensation process. Others are not aware that their injury or illness is work-related or reportable, or do not report because they are afraid of being stigmatized. Some employers find OSHA's recordkeeping criteria confusing. But of far more concern are the incentives that employers have to underreport, and actions that some employers take to intimidate and harass workers who report injuries and illnesses.

Certain categories of workers, accounting for a significant portion of the workforce, are excluded from the survey.

Government workers, the self-employed, and farms with fewer than 11 employees are excluded from the SOII, further exacerbating the survey's undercount of occupational injuries and illnesses. These uncounted workers, over whom OSHA has limited jurisdiction, amount to over 20 percent of the total workforce. Government workers alone—including police officers, firefighters and public works employees who often work in high-risk conditions—accounted for over 14 percent of the labor force in 2007.³⁰

Occupational illnesses are particularly difficult to identify as work-related.

Workers, employers and medical professionals often fail to detect the work-relatedness of occupational diseases such as asthma, heart disease, liver and kidney disorders and MSDs. This problem is particularly difficult with diseases that have long latency periods (the time between exposure and disease). For certain cancers, for example, twenty to thirty years may pass from the time of workplace exposure to the time of diagnosis. In addition, diseases such as asthma that are similar to non-occupational diseases are difficult to connect to workplace exposures.³¹ Most physicians receive little training in occupational disease recognition and often fail to connect disease with work.³²⁻³³

The United States has no comprehensive occupational health data collection system, making it particularly difficult to collect occupational illness statistics. Many states have no mandates requiring health care professionals to report cases of occupational injury or

²⁹ Theresa Scherzer, Reiner Rugulies, & Niklas Krause, *Work-related Pain and Injury and Barriers to Workers' Compensation Among Las Vegas Hotel Room Cleaners*, 95 AM. J. PUB. HEALTH 483, (2005).

³⁰ Bureau of Labor Statistics, *Current Population Survey* (2007), at <http://ftp.bls.gov/pub/special.requests/lf/aat12.txt>.

³¹ Ruth Ann Romero Jajosky et al., *Surveillance of Work-Related Asthma in Selected U.S. States Using Surveillance Guidelines for State Health Departments—California, Massachusetts, Michigan, and New Jersey, 1993–1995*, MORBIDITY & MORTALITY WEEKLY REP. (June 25, 1999), at <http://www.cdc.gov/MMWR/preview/mmwrhtml/ss4803a1.htm>.

³² P.J. Landrigan & D.B. Baker, *The Recognition and Control of Occupational Disease*, 266 JAMA 676, (1991).

³³ M.B. Lax, *Occupational disease: Addressing the Problem of Under-Diagnosis*, 6 NEW SOLUTIONS 81, (1996).

illness, and numerous studies have noted inadequate reporting even in those states that have a mandate.³⁴

Immigrants are less likely to report workplace injuries and illnesses.

- Immigrant workers, among the most vulnerable to employer exploitation, face many barriers in reporting workplace injuries and illnesses and in obtaining appropriate medical care. They often confront language problems and are more likely to work in jobs that do not provide health insurance or paid sick leave. If they are undocumented, they may fear employer retaliation that could result in the loss of their jobs or even deportation.³⁵⁻³⁶
- A study by researchers at the Wake Forest University School of Medicine found that injury and illness rates for Latino poultry workers in six counties in western North Carolina exceeded rates reported by plants to OSHA. The researchers suggested that many factors could contribute to the lack of injury and illness reporting by immigrants, including language barriers, fear of losing a job, incentive programs that reward low rates of absenteeism, and lack of access to health care.³⁷
- Researchers at the UCLA Labor Occupational Safety and Health Program surveyed a group of 75 immigrants in the Los Angeles area who worked in low-wage, low skill jobs. They found that only 63 percent of the workers who experienced an injury reported it, and many of the workers knew others who did not report injuries that they suffered.³⁸
- Even with unionization, immigrant workers may hesitate to report injuries and illnesses. Seventy-five percent of unionized hotel workers in a 2005 study reported work-related pain, but only 20 percent filed workers' compensation claims. The fear of getting "in trouble" or being fired was among the primary concerns for workers who did not report their injuries.³⁹

Workers are often reluctant to apply for workers' compensation.

Workers are often discouraged from filing workers' compensation complaints because of the difficulty of the system and because employers sometimes discourage workers from applying for workers' compensation.⁴⁰

³⁴ Lenore S. Azaroff, Charles Levenstein & David Wegman, *Occupational Injury and Illness Surveillance: Conceptual Filters Explain Underreporting*, 92 AM. J. PUB. HEALTH 1421, (2002).

³⁵ Jajosky, *supra* note 31.

³⁶ Marianne P. Brown, Alejandra Domenzain, & Nelliana Villoria-Siegert, *Voices from the Margins: Immigrant Workers' Perceptions of Health and Safety in the Workplace* (December 2002), at <http://www.iosh.ucla.edu/publications/voicesreport.pdf>.

³⁷ Sara A. Quandt, Joseph G. Grzywacz, Antonio Marin et al., *Occupational Illnesses and Injuries Among Latino Poultry Workers in Western North Carolina*, 49 AM. J. INDUS. MED. 343, (2006).

³⁸ Brown, Domenzain, & Villoria-Siegert, *supra* note 36.

³⁹ Scherzer, Rugulies & Krause, *supra* note 29.

⁴⁰ Azaroff, Levenstein, & Wegman, *supra* note 34.

Long waiting periods, insufficient wage replacement and fights over the work-relatedness of occupational illnesses can discourage workers from utilizing the workers' compensation system, particularly if they are covered by health insurance.⁴¹

The system is particularly difficult for immigrant workers who may not be aware that they are covered by the workers' compensation system. For low income workers, the waiting periods, disputes and low wage replacement can mean unemployment and financial disaster.

The musculoskeletal disorder column has been taken off of the OSHA 300 Log.

In 2001, OSHA published a change in recordkeeping requirements that would have required employers to check a special box on their injury/illness logs if an injury was an MSD.⁴² This information would enable OSHA to better understand the magnitude and distribution of work-related MSDs, and would also provide a useful analytical tool at the establishment level. The Bush administration then delayed the effective date, and eventually repealed the provision altogether.

Although employers are still required to record on the log MSDs that are work-related and result in lost work time, some fear that the elimination of the specific reporting requirement has led to even more severe underreporting of MSDs.⁴³ This problem is compounded by the fact that employers and physicians may fail to diagnose an MSD as work-related because many work-related musculoskeletal disorders mimic non-occupational disorders.

Some workers and employers do not understand the reporting system.

Some experts who advise corporations on injury and illness reporting rules note that many employers are confused about reporting criteria and OSHA staff is often not well-trained to provide accurate advice.⁴⁴

In addition, some mental health care workers who are assaulted by patients may not report their injury to workers' compensation or their employer, believing that such

⁴¹ *Id.*

⁴² The former Log (200 Log) included a column devoted to "repeated trauma" cases, which were defined as including noise-induced hearing loss cases as well as cases involving a variety of other conditions, including certain musculoskeletal disorders. Hearing Loss and MSD's were separated into two columns in the original 300 Log.

⁴³ AFL-CIO, *Comments of the American Federation of Labor and Congress of Industrial Organizations on OSHA'S Proposed Delay of the Effective Date of Employer Injury and Illness Recordkeeping Requirements for Musculoskeletal Disorders and Hearing Loss* (March 20, 2002) (on file with Committee staff); AFSCME, *Comments of the American Federation of State County and Municipal Employees on OSHA's Proposed Delay of the Effective Dates for Employer Injury and Illness Recordkeeping Requirements Related to Musculoskeletal Disorders and Hearing Loss* (August 30, 2002) (on file with Committee Staff).

⁴⁴ Interview by Committee staff with Steve Newell, Senior Consultant, ORC Worldwide (June 13, 2008).

assaults are “part of the job.”⁴⁵ According to interviews with committee staff, health care workers in understaffed institutions feel that if they take time off for injuries, their patients will be left without care.⁴⁶

Employers have an incentive to underreport.

There are many incentives built into the injury and illness reporting system for some employers to underreport injuries and illnesses.

1. Low injury and illness rates decrease the chance of being inspected by OSHA.

As described above, OSHA’s Site Specific Targeting Program (SST) targets employers with high injury and illness rates for inspection. The system is based on employer self-reporting of injuries and illnesses. The higher an employer’s rate, the more likely the employer is to receive an OSHA inspection. The program therefore provides incentives for some employers to cheat.

In addition, OSHA’s Ergonomic Enforcement Plan, which relies on the lost workday rate reported by employers, also provides employers with an incentive to underreport. If an employer reports a low rate of ergonomic injuries and has an ergonomic program on the books, “OSHA will determine whether to conclude the ergonomics portion of the inspection.”⁴⁷

Duke University researcher Hester Lipscomb, however, points out in a study of African-American women poultry workers, that

Unfortunately, this approach fails workers such as the women in our study who were in industries where under-reporting of injuries has been suggested. Not only was the validity of the data on which injury rates were based questioned; the establishments have an economic incentive to under-report in order to avoid evaluations.⁴⁸

2. Low numbers of injuries and illnesses decrease workers’ compensation expenses.

Under workers’ compensation programs, employers must often pay the entire cost of treatment, unlike regular health insurance which involves co-pays. In addition, work-related injuries and illnesses can raise employers’ workers’ compensation premiums.

3. Low injury and illness rates can earn businesses bonuses and incentives.

⁴⁵ L. Erickson & S.A. Williams-Evans, *Attitudes of Emergency Nurses Regarding Patient Assaults*, 26 J. EMERGENCY NURSING 210, (2000).

⁴⁶ Phone Interviews by Committee Staff with Worker Representatives, Washington, D.C. (May 2008).

⁴⁷ Occupational Safety and Health Administration, *OSHA’s Ergonomic Enforcement Plan*, at http://www.osha.gov/SLTC/ergonomics/enforcement_plan.html.

⁴⁸ H.J. Lipscomb, J.M. Dement, C.A. Epling, M.A. McDonald, and A.L. Schoenfisch, *Are We Failing Vulnerable Workers? The Case of Black Women in Poultry Processing In Rural North Carolina*, 17 NEW SOLUTIONS 1-2 (2007).

States and other public entities sometimes offer bonuses to contractors who can show exemplary safety records upon completion of projects. Contractors with better safety records also have a better chance of winning government contracts.⁴⁹

4. Low injury and illness numbers look good to the public and to customers.

Companies may boast to their customers, stockholders and the surrounding community about the number of days they have gone without a recordable injury.⁵⁰ In addition, high injury and illness numbers make employers ineligible for certain OSHA award programs such as the Voluntary Protection Program.⁵¹

Methods used by employers to discourage accurate reporting.

Evidence compiled from worker interviews, labor union reports, academic studies and media investigations show that employer actions – some intentional and some unintentional – can discourage workers from reporting injuries and illnesses. As described below, these actions include directly intimidating and harassing workers, discouraging workers from receiving appropriate medical attention that might trigger the recording of an injury on the OSHA log and bringing seriously injured workers back to work immediately after surgery to ensure that no lost work-time is recorded that may raise workers compensation rates.

Direct intimidation of workers: The direct intimidation of workers to discourage reporting of injuries and illnesses takes many forms, both subtle and overt. Reports, testimony and news accounts show that many employers discourage reporting and retaliate against workers who report injuries and illnesses or complain about safety hazards. Disciplinary actions and intimidation may include job loss, pay cuts, denial of overtime or promotion opportunities, and/or harassment.

Workers in many industries have expressed their fear that reporting an injury or illness could cause them to lose their job. This fear is particularly acute in industries like poultry and meatpacking that rely heavily on immigrant workers, a population particularly vulnerable to employer exploitation.

⁴⁹ Elizabeth Douglass, *Edison Says Safety Data Were Rigged*, L.A. TIMES, October 22, 2004, at A1; Occupational Safety and Health Administration, *State Incentives Promoting Voluntary Compliance* (Aug. 2, 2007), at http://www.osha.gov/dcsp/osp/oshspa/2002_report/state_incentives.html.

⁵⁰ Los Angeles County Metropolitan Transportation Authority, *Metro Gold Line Eastside Extension is More Than 80 Percent Complete* (May 23, 2008), at http://www.metro.net/news_info/press/Metro_087.htm; North Poll Workshop, *North Pole Workshop Boasts Stellar Safety Record; Rest of Area Logs Injuries* (Dec. 25 2007), at <http://www.ohsonline.com/articles/56997>; National Semiconductor Corporation, *National Semiconductor Achieves One Million Hours of Manufacturing with No Lost Time Injuries* (Apr. 29, 2002), at <http://www.national.com/news/item/0,1735,758,00.html>; GlaxoSmithKline, *Corporate Responsibility Report 2005* (Mar. 24, 2006), at http://www.gsk.com/responsibility/cr_report_2005/employees/hs-injury-illness-rate.htm; Holz Rubber Co., *Holz Rubber Company Achieves No Lost-Time Injuries for One Year* (Nov. 1 2005), at <http://news.thomasnet.com/companystory/474094>.

⁵¹ Occupational Safety and Health Administration, *Recognizing Excellence in Safety and Health Voluntary Protection Programs* (March 15, 2007), at http://www.osha.gov/dcsp/vpp/vpp_kit.html.

- California state auditors and OSHA investigators identified repeated instances of worker intimidation and harassment intended to discourage occupational injury and illness reporting during the Kiewit-Pacific/FCI Constructors/Manson Construction—A Joint Venture (KFM) San Francisco Bay Bridge reconstruction project.⁵²
- In 2008, the *Charlotte Observer*'s "The Cruellest Cuts" report documented how the North Carolina poultry industry exploits immigrant workers' fears of deportation to suppress reporting of painful and debilitating injuries. The newspaper interviewed more than 50 workers no longer employed at the poultry processing firm House of Raeford and ten of those reported that they were fired after reporting injuries.⁵³
- At the Smithfield Packing Co. pork slaughterhouse in Tar Heel, North Carolina, workers reported being harassed and even terminated after reporting injuries and describe managers denying that injuries happened at work. In 2002, Melvin Grady tore his Achilles tendon when he slipped on a stairway at the Smithfield plant. According to Grady, Smithfield denied that the claim was work-related and informed Grady that he could not receive workers' compensation benefits. The company sent him "short-term disability" payments for several weeks after he had surgery on his leg. In December 2002, Smithfield demanded that Grady provide a doctors' note giving him permission to work without restrictions. When Grady, still recovering from his surgery, could not get the note from his doctor, Smithfield terminated him.⁵⁴

Teresa Nieto stated that after a frozen hog carcass fell onto her back, she received only cursory care from the plant clinic. According to Nieto, upon returning to work, her supervisor and a member of the plant's security team confronted her, threatening that they would send her to court for "acting up" and that no hog had fallen on her.⁵⁵

- Workers in the steel industry report that they risk their jobs when they report safety hazards or even minor injuries. Steelworkers describe "bloody pocket syndrome" where workers who may have as little as a cut on their hand will hide it, fearing retaliation, and wait until after their shift to go to the hospital.⁵⁶

⁵² California State Auditor, *San Francisco-Oakland Bay Bridge Worker Safety: Better State Oversight Is Needed to Ensure That Injuries Are Reported Properly and That Safety Issues Are Addressed*, Report 2005-119 (February 9, 2006), at www.bsa.ca.gov.

⁵³ Hall, Alexander & Ordóñez, *supra* note 25.

⁵⁴ Human Rights Watch, *Blood, Sweat, and Fear: Workers' Rights in U.S. Meat and Poultry Plants* (January 2005), at <http://www.hrw.org/reports/2005/usa0105/usa0105.pdf>

⁵⁵ Research Associates of America, *Packaged with Abuse: Safety and Health Conditions at Smithfield Packing's Tar Heel Plant 9* (January 2007), at http://www.smithfieldjustice.com/Documentos/Annual_Report/Static%20copy%20of%20Safety%20and%20Health%20Report.pdf

⁵⁶ Will Buss, *Steelworkers Perform Myriad of Tasks Consolidation Forces, Workers To Learn Different Tasks*, Belleville News-Democrat, April 4, 2005, at 1B.

- A contractor on the Colorado-to-Ohio Rockies Express natural gas pipeline is facing allegations from former safety inspectors that the company used threats, intimidation and attempted bribery to skirt safety requirements. The inspectors have stated that the company hid worker injuries and, in order to meet ambitious project deadlines, cut corners that endangered worker safety.⁵⁷
- Rose Roddy was told by the Vice President of Human Resources at Peerless-Premier Appliance Co. that she would be deemed “industrially unemployable” by the company if she continued to suffer injuries on the job because she had suffered 14 “injuries” over her 24-year employment with the company – including “exposure to gas fumes” and “carbon monoxide exposure.”⁵⁸
- Buzzi Unicem USA has a policy that describes measures that may be taken against an employee for a “safety rule” violation that results in “‘medical treatment’ for injuries or illnesses by a licensed physician or other health care giver.”⁵⁹ The “program,” involving three steps, places responsibility for accidents or illnesses squarely on the worker’s shoulders. Step three results in the employee’s termination.

Bringing seriously injured workers right back to work: To avoid lost work-time which will raise workers’ compensation rates, employers may bring employees who have suffered injuries back to work immediately for “light duty” work – even after major surgery.

- The KFM San Francisco Bay Bridge Project investigation provides an example of this employer tactic. After suffering a major knee injury, Arne Paulson was carried onto tugboats for months by co-workers so that no “lost time” or “restricted work” was recorded.⁶⁰
- During his testimony before the Committee in 2007, Keith Ludlum, an employee at Smithfield Packing’s Tar Heel plant, told the story of a worker who broke his leg on the job. The worker, who required a full leg cast, was informed that he had to return to work the day after the accident or he would lose his job. Since he reported to work the next day, Smithfield avoided reporting a lost work day due to injury on its OSHA log.⁶¹

Discouraging appropriate medical attention: Employers may discourage workers

⁵⁷ Tom Beyerlein, *Concerns About Pipeline Were Ignored, Inspectors Say*, Dayton Daily News (May 18, 2008), at <http://www.daytondailynews.com/search/content/oh/story/news/local/2008/05/18/ddn051808pipelineinside.html>.

⁵⁸ Letter to Rose Roddy from Phyllis K. Schleicher, Vice President of Human Resources, Peerless-Premier Appliance Co. (January 10, 2003) (on file with committee staff).

⁵⁹ Memorandum on Buzzi Unicem USA, Safety and Health Rule Infraction Guidelines (March 31, 2006) (on file with committee staff).

⁶⁰ Erik N. Nelson, *Bay Bridge Worker Lost Job Due to Knee Injury*, INSIDE BAY AREA, August 24, 2006.

⁶¹ *Strengthening America’s Middle Class Through the Employee Free Choice Act Hearing Before the House Comm. on Education and Labor, Subcomm. on Health, Employment, Labor, and Pensions*, 110th Cong. (2007) (written testimony of Keith Ludlum, employee of Smithfield Packing Co.).

from receiving appropriate medical attention in order to avoid triggering an injury or illness report. Employers often have their own on-site health care staff that is trained in which treatments do and do not constitute first aid because injuries requiring treatment beyond first aid are recordable.⁶² Injuries requiring only first aid are not recordable.

Some workers have turned to a company health clinic only to be sent back to the production line with minimal treatment. Others have been discouraged from receiving treatment from anyone but the company doctor. Several case studies provide the stories of workers who were discouraged from receiving appropriate medical attention.

They'd say, "Oh, you're not hurting." They made me feel that I was bothering them to go to the nurse, that I was supposed to take the pain.

— Charlotte Outerbridge, *The Cruellest Cuts: The Human Cost of Bringing Poultry To Your*

- House of Raeford poultry worker Celia Lopez's hands began to hurt so badly that she could barely keep working after lifting and weighing thousands of turkey breasts each day. The first aid attendant and physician's assistant at the plant kept giving her pain relievers but refused to send her to a doctor. Finally, months later she went to a doctor and was diagnosed with carpal tunnel syndrome. The doctor who performed the surgery said that had she come in earlier, before the damage was so severe, she might have avoided surgery.⁶³
- After Smurfit-Stone employee Francisco Pulido severed his left pinkie to the first knuckle, he was taken to Pinnacle Urgent Care, where he had to wait for the clinic to open because it was after hours. Pulido was finally treated, but not until he began to go into shock from "extreme pain." Smurfit-Stone then suspended Pulido for 3 days.

CalOSHA later fined the company \$3,700 for failing to properly train its employees. Smurfit Stone and Pinnacle managers are being prosecuted because they "allegedly discouraged employees from reporting on-the-job injuries and filing workers' compensation claims, threatened them with suspensions and terminations for trying to file claims, and engaged in other improper practices in an apparent attempt to reduce the packing company's insurance costs."⁶⁴

Meanwhile, as a current and former manager faced insurance fraud charges, Smurfit-Stone trumpeted its "incredible record of safety achievement" and celebrated its "safest year in company history in 2007."⁶⁵

⁶² Azaroff, Levenstein, & Wegman, *supra* note 34.

⁶³ Ames Alexander, Franco Ordonez & Kerry Hall, *Workers Say They're Denied Proper Medical Care*, CHARLOTTE OBSERVER, Feb. 12, 2008.

⁶⁴ Jim Johnson, *New Charges in Salinas Workers' Comp Case*, THE MONTEREY COUNTY HERALD, January 3, 2008.

⁶⁵ *Smurfit-Stone Completes Safest Year in Company History*, PRNEWswire, February 5, 2008.

Discouraging physicians from reporting injuries or diagnosing illnesses: When workers must receive treatment, employers may “bargain” with or even threaten doctors to prevent the diagnosis of a recordable injury or illness.

- On the KFM San Francisco Bay Bridge project, welder Chris Hallstrom told Cal/OSHA that one of KFM’s safety managers would always accompany him into the exam room when being seen by a doctor for a work-related injury. The safety managers would attempt to “bargain over the wording of the work status report and the job restrictions” to try to avoid the triggering of a report.⁶⁶
- The American College of Occupational and Environmental Medicine, representing 5,000 doctors, recently sent a letter to OSHA stating that doctors are routinely pressured to under-treat and mistreat workplace injuries and illnesses. For example, an employer may pressure doctors to treat a cut with bandages instead of stitches to avoid a triggering a report of an injury. Treatment with stitches is considered “medical attention beyond first aid” and renders the injury reportable, while treatment with bandages is considered “first aid” and not reportable.⁶⁷

“No fault” absentee policies: Some companies give employees a fixed number of days off for all purposes, including sick and vacation leave and recuperation from a workplace injury or illness. If workers use up all permissible days, they may be terminated, even if they miss days due to work-related injuries.

Bashas’, which operates a food distribution warehouse that distributes food and merchandise to more than 166 grocery stores throughout Arizona, uses a point system for absences and tardiness. Although time lost due to industrial injury is supposed to be excluded from this point system, injured workers report that they have been assessed points and had their pay cut for going to the doctor or missing time due to work-related injuries.⁶⁸

Safety incentive programs and games: Safety incentive programs and games that provide monetary prizes or days off when a work crew succeeds in going “accident free” for a certain time period are marketed as a way to improve worker safety and health by giving workers an incentive to work safely. As described below, however, depending on how an incentive program is structured, reluctance to lose the bonus or peer pressure from other crew members whose prizes are also threatened reduces the *reporting* of injuries and illnesses on the job, rather than reducing the actual number of workplace injuries and illnesses.

⁶⁶ Garrett D. Brown & Jordan Barab, “Cooking the Books”—*Behavior-Based Safety at the San Francisco Bay Bridge*, 17 NEW SOLUTIONS 4 (2007).

⁶⁷ Alexander Ames, *Doctors Feel Push to Downplay Injuries*, CHARLOTTE OBSERVER (April 9, 2008), at <http://www.charlotte.com/217/story/587539.html>.

⁶⁸ Staff Interviews with former Bashas’ Supermarkets Workers, Washington, D.C. (June 10, 2008).

“The incentive plan works against reporting injuries. Everybody trying to keep their jobs—don’t make waves. When you reported injuries, they treated you as a criminal... KFM created an atmosphere where you didn’t want to report.”

— David Roundtree, a welder on the KFM San Francisco Bay Bridge Project

“Traditional” incentive programs – those that offer prizes if no injuries are reported – have also been criticized by OSHA and other accident analysis experts. A 1998 OSHA study concluded that these programs may have a “chilling effect”⁶⁹ on the workplace – creating a hostile working environment. According to Richard Fairfax, director of compliance programs for OSHA, “the fact that some employers use these programs in lieu of formal safety and health programs is of very real concern to us.... There have been cases where injured employees were pressured not only by fellow employees, but by their supervisors, to not report injuries in order to maintain eligibility for safety incentives.”⁷⁰

- Throughout the reconstruction of the eastern span of the San Francisco Bay Bridge in California, Kiewit-Pacific/FCI Constructors/Manson Construction – A Joint Venture (KFM) reported an injury rate 55 to 72 percent below the rates experienced by other major bridge construction projects in the bay. But KFM’s record turned out to be too good to be true. In June 2006, Cal/OSHA issued “Willful” citations against KFM for failing to record at least 13 worker injuries at the bridge, to investigate reported accidents, and to record injuries within the time period required by law.⁷¹

KFM offered monetary incentives to all employees for meeting quality and completion goals, but only if no Log 300 recordable injuries were reported. The program allowed employees to receive substantial bonuses—upwards of \$1,500 in some cases. The career advancement of managers, foreman, and supervisors was also dependent on achieving a clean safety record. If a single worker reported an injury, the entire crew would lose its bonus.⁷²

Pile excavation crew foreman Arne Paulson stated: “It was known by everyone *not* to report any injuries because that would mean no BBQ, no tool prizes, no tool box prizes. Everyone would want to know who ‘lost’ the prizes for the crew, so everyone was terrified to report anything.”⁷³ Welder Mario Armani said the cash “bonus program keeps guys away from reporting accidents, many injuries

⁶⁹ Dennison Associates, *An Analysis of Safety Incentive Programs* (June 1998), (report for the Occupational and Health Administration).

⁷⁰ William Atkinson, *Good Safety Incentives Gone Bad*, MC MAGAZINE (Spring 2002), http://www.precast.org/publications/mc/SafetyArticles/02_Spring_IncentivesGoneBad.htm.

⁷¹ Brown & Barab, *supra* note 66, at 312.

⁷² *Id.*, at 314.

⁷³ *Id.*, at 315.

are not reported, many employees would clean out their own eyes [metal shivers from grinding] or have their co-workers do it.”⁷⁴

- In 2004, the discovery of unreported injuries and illnesses at Southern California Edison caused the company to give back \$35 million in taxpayer funded safety incentive funds received from the state of California over the course of 7 years. The company’s own investigation found that their safety incentive program “may have discouraged the reporting of some incidents” and created pressure not to report injuries.⁷⁵
- A 1998 report by Denison Associates, commissioned by OSHA, found that “there is no evidence that safety incentive programs, standing alone, improve safety. To the contrary, some safety incentive programs adversely affect safety.” The study noted that reports of the success of these programs are based on anecdotes and do not distinguish between reported injury reductions that are due to safer working conditions and those attributable to reporting practices.⁷⁶

Not all safety incentive programs are bad. For example, “non-traditional” programs that provide rewards to workers for attending training classes and safety meetings and identifying and reporting unsafe conditions, close calls and minor injuries can promote safety without discouraging reporting of injuries or unsafe conditions. These programs also require trust between managers and workers so that workers do not fear discipline or accusations that they have hurt productivity when problems are reported.⁷⁷

Manager incentives and bonuses: General foreman, superintendents, craft superintendents, job superintendents and project managers on the California Bay Bridge project received significant monetary awards and “merit cards” essential for salary increases and individual career advancement. But the awards were dependent on no injuries or illnesses being reported. Foremen, fearful of losing their bonuses, would pressure workers not to report, and workers, afraid of angering their foremen, would comply.⁷⁸

Drug testing after every accident or injury: To intimidate workers, employers may require that workers are tested for drugs or alcohol before receiving treatment, irrespective of any potential role of drug intoxication in the incident.

- Smurfit-Stone employee Jesse Vasquez alleges that he was subjected to a drug test at the request of his manager before he could receive treatment for a back injury. His manager is currently facing allegations of workers’ compensation fraud.⁷⁹

⁷⁴ *Id.* at 315.

⁷⁵ Elizabeth Douglass, *Edison Says Safety Data Were Rigged*, L.A. TIMES, October 22, 2004, at A1.

⁷⁶ Denison Associates, *supra* note 69.

⁷⁷ James L. Nash, *Rewarding the Safety Process: “Nontraditional” Incentive Programs Can Improve Safety – Without Making OSHA Nervous*, OCCUPATIONAL HAZARDS, Mar. 1, 2000.

⁷⁸ Brown & Barab, *supra* note 66, 314.

⁷⁹ Johnson, *supra* note 64.

- A study of Las Vegas hotel workers found that 32 percent of workers who reported musculoskeletal injuries said they were forced to take a drug test after reporting their injury to workers' compensation,⁸⁰ even though studies show that these injuries are caused by physical workload, the increase in the workload and ergonomic problems – not drugs.⁸¹

Contractors and contracting out dangerous work: When outside contractors injured or killed, their injuries or deaths are not listed on the main employer's OSHA log, nor do they register in the primary employer's industrial classification.

Almost half of the workers on the BP Texas City refinery site were contractors on the day in 2005 when a massive explosion killed 15 workers. All of the workers killed that day were contractors. None of the fatalities or the injured contractors was listed on BP's OSHA 300 Log, nor did they register in the industrial classification for refineries.⁸²

The lack of site logs is a major problem impacting the effectiveness of OSHA's SST program in petrochemical, chemical and other industries. The SST targets companies in industry classifications that show high injury and illness numbers for priority inspections. But contractor injuries, illnesses and deaths will show in the industry classification of the contractor, not in the industry classification of the site owner, meaning that where contractors suffer a large number of injuries or fatalities, the industry may seem much safer than it actually is.⁸³

The use of outside contractors is growing throughout American industry and has major implications on workplace safety, especially in large complex operations such as the petrochemical and chemical industries. This problem was first noted in the 1991 John Gray Institute report following the catastrophic 1989 explosion at Philips 66 in Pasadena, Texas that killed 23 workers and injured 232 others.⁸⁴

According to the John Gray report, because most facilities did not keep track of the injury and illness records of their contractors, valuable information was unavailable to plant managers "for the purpose of selecting, monitoring and controlling safety outcomes for contract labor." The report noted that the current system does "not provide an accurate reflection of the composition of the experiences of workers in the petrochemical industry." In addition, OSHA did not require the primary employer to keep a site log (an injury and illness log that includes all workers on a site, regardless of employer), making

⁸⁰ Scherzer, Rugulies, & Krause, *supra* note 29.

⁸¹ Niklas Krause, Theresa Scherzer & Reiner Rugulies, *Physical Workload, Work Intensification, and Prevalence of Pain in Low Wage Workers: Results From a Participatory Research Project With Hotel Room Cleaners in Las Vegas*, 48 AM. J. INDUS. MED. 326, (2005).

⁸² U.S. Chemical Safety and Hazard Investigation Board, *Investigation Report: Refinery Explosion and Fire*, Report No. 2005-04-I-Tx (March 2007), at http://www.csb.gov/completed_investigations/docs/CSBFinalReportBP.pdf.

⁸³ Lise Olsen, *Murky Stats Mask Plant Deaths*, HOUSTON CHRONICLE (May 16, 2005), <http://www.chron.com/dispatch/story.mpl/business/3183356.html>

⁸⁴ John Calhoun Wells, Thomas A. Kochan & Michal Smith, *Managing Workplace Safety and Health: The Case of Contract Labor in the U.S. Petrochemical Industry* (July 1991) (report for the Occupational Safety and Health Administration).

this information unavailable to OSHA.

Similarly, construction projects also employ a large number of sub-contractors who keep their own separate injury and illness logs, making it difficult for OSHA to determine the safety performance of large sites or of general contractors. Again, no site log is required by OSHA.⁸⁵

In order to address this problem, the 1989 Keystone Report recommended that “a ‘contractor site log’ (i.e., copies of the subcontractor logs) be maintained for major construction sites and major construction rehabilitation activities.”⁸⁶ Similarly for the petrochemical industry, the John Gray report recommended that “OSHA require plants to collect and record site specific injuries and illness data for all workers on site.”⁸⁷

OSHA does not require construction contractors to maintain a site log, although OSHA’s Process Safety Management Standard does require employers covered by standard to maintain an internal site log, although these are not collected by OSHA as part of its Specific Targeting program (SST), nor by BLS in compiling the SOII or its census of occupational fatalities.⁸⁸

The problem does not only exist in the petrochemical industry. A 2003 *Omaha World-Herald* report portrays the health and safety risks faced by the workers who perform the highly hazardous job of cleaning meatpacking plants each night. Their injuries escaped the notice of the OSHA targeting program because they worked for a cleaning company contracted by the plant owners. Any recordable injury that they suffered was classified not with meatpacking industry statistics, but rather in an industry category that included the professions of housekeepers and office cleaners – a lower-risk category that was not included in OSHA’s inspection targeting list.⁸⁹

Misclassification of workers: When workers are misclassified as “independent contractors” instead of regular employees, the employer can avoid workers’ compensation payments and recording injuries on the OSHA 300 log since self-employed individuals are not covered by these systems. As mentioned above, when employers contract jobs to outside contract employers, injuries among the contract workers do not have to be recorded on the contracting employer’s OSHA log even if they occur at the employer’s site.⁹⁰

According to a 2000 U.S. Department of Labor study, audits of employers in nine states found that between 10 and 30 percent of firms misclassify their employees as

⁸⁵ The Keystone Center, *supra* note 10.

⁸⁶ The Keystone Center, *supra* note 10.

⁸⁷ John Calhoun Wells, Thomas A. Kochan & Michal Smith, *Managing Workplace Safety and Health: The Case of Contract Labor in the U.S. Petrochemical Industry* (July 1991) (report for the Occupational Safety and Health Administration).

⁸⁸ Occupational Safety and Health Administration Process Safety Management Standard, 29 CFR § 1910.119 (1992).

⁸⁹ Jeremy Olson, and Steve Jordan, *On the Job of Last Resort: Meat Plant Risks Extend to Nightly Clean-up Work*, The Omaha World-Herald, October 12, 2003, at 1A.

⁹⁰ Lise Olsen, *supra* note 83

independent contractors.⁹¹ Employers have a strong economic incentive to misclassify employees as independent contractors. In addition to not paying the employer share of Social Security, Medicare, or unemployment taxes, employers also do not have to provide contractors with workers' compensation insurance.⁹² As a result, injuries suffered by independent contractors – including those who are misclassified – do not go on the employers' logs and do not increase the workers' compensation premiums or the likelihood that they will be inspected by OSHA.

At a March 2007 hearing before the U.S. House of Representatives Committee on Education and Labor, Subcommittee on Workforce Protections, Cliff A. Horn of the Mason Contractors Association of America and John J. Flynn of the International Union of Bricklayers and Allied Craftworkers testified that employee misclassification is widespread in their industries. Flynn pointed out that when employers neglect their responsibility to pay workers' compensation, then the U.S. health care system often absorbs the cost of their care.⁹³

Underreporting Problems in the Railroad Industry

In 2007, the U.S. House of Representatives Committee on Transportation and Infrastructure conducted an in-depth review of railroad employee injury reporting practices in response to evidence of a long history of underreporting and complaints of harassment of employees who report injuries. Committee staff compiled more than 200 individual cases of alleged management harassment following injury reports.⁹⁴

Some of the techniques used by railroad management include:

- **"Risky" employee assessments:** Employees are placed in disciplinary jeopardy by being assigned points for safety incidents, rule infractions, and injuries regardless of the cause, often before an investigation is done.
- **Targeting employees for increased monitoring and testing:** Injured employees are "targeted" for close supervisor scrutiny, where minor rule infractions result in employee termination following injuries.
- **Supervisors discouraging employees from filing accident reports:** Front-line supervisors often try to subtly prevent employees from filing injury reports and/or lost workday reports in an attempt to understate or minimize on-the-job injury statistics

⁹¹ Planmatics, Inc., *Independent Contractors: Prevalence and Implications for Unemployment Insurance Programs* (prepared for U.S. Dep't of Labor) (2000), at <http://wdr.doleta.gov/owsdrr/00-5/00-5.pdf>

⁹² Government Accountability Office, *Employer Arrangements: Improved Outreach Could Help Ensure Proper Worker Classification*, GAO-06-656 (July 2006).

⁹³ *Providing Fairness to Workers Who Have Been Misclassified as Independent Contractors Hearing Before the House Comm. on Education and Labor, Subcomm. on Workforce Protections*, 110th Cong. (2007) (written testimony of Cliff A. Horn of the Mason Contractors Association of America).

⁹⁴ *The Impact of Railroad Injury, Accident, and Discipline Policies on the Safety of America's Railroads Hearing Before the House Comm. on Transportation and Infrastructure*, 110th Cong., (2007).

- **Supervisors attempting to influence employee medical care:** Railroad supervisors are often accused of trying to accompany injured employees to their medical appointments to try to influence the type of treatment they receive. In addition, they try to send employees to company physicians instead of allowing them to choose their own treatment providers.
- **Light duty work programs v. injury leave:** Injured employees are required to come to work, often doing nothing but sitting in an empty room and allowing carriers to minimize the required reporting of lost work days.
- **Availability policies:** These policies require employees to work a certain number of days per year. If the employee cannot work the required number of days, he or she is no longer a full-time employee.
- **Supervisor compensation:** Some companies base management compensation upon performance bonuses, which can be based in part upon recordable injury statistics within their supervisory area.

The report concluded:

Today's railroad regulatory environment is more oriented toward assigning blame to a single individual, without a thorough examination of the underlying causes that led that single individual to commit an error. This approach is apparent in both railroad internal investigations of injury accidents, as well as FRA regulatory reports.⁹⁵

Behavioral Safety: Bad for Safety, Bad for Recordkeeping Accuracy

The theoretical underpinning of many safety programs that rely on discipline or rewards is the belief that most workplace accidents are caused by the unsafe behavior of workers. Rewarding good behavior or punishing bad behavior, according to this philosophy, can prevent accidents.

But experts in analyzing accident causation note that, since workers are human and inevitably make errors, the consequence of rewards or punishment is often a failure to report incidents, rather than a reduction of injuries and illnesses. Most have rejected the theory of the “careless worker” and the behaviorist theory for the following reasons:

- In order for an accident to happen, an unsafe condition must be present. These may range from conditions like slippery floors or objects that are too heavy for workers to lift safely, to management system errors such as allowing or encouraging frequent deviation from safe procedures, not providing training to

⁹⁵ *Id.*

workers, ignoring past warnings and close calls and lack of oversight by supervisors or enforcement agencies.

One of those conditions is pressure for more production. Andrew Hopkins, a sociologist and safety analyst, explains:

Production pressures routinely lie behind unsafe actions by workers in this way. Despite all the company rhetoric about putting safety first, the experience of many workers, not all, is that production takes precedence over safety....Such pressures are particularly intense when pay systems are tied to production, so that lost time is lost pay, or where there are quotas, with penalties for not achieving the quota.⁹⁶

Where such conditions exist, punishing the worker will not prevent future accidents. The most effective solution is to identify and address the root cause of the problem, which in this case is too much emphasis on increased production at the expense of safety.

- While there is almost always a human element involved in accidents, most incidents (major and minor) have many complex causes and human error is almost never one of the *root* causes. Worker errors are generally the *consequences* – or last link in a causal chain, not the *causes* themselves.⁹⁷⁻⁹⁸

Following the catastrophic 2005 explosion at BP's Texas City refinery that killed 15 workers, BP immediately fired several workers and managers. The initial results of the BP's internal investigation blamed the accident on the "surprising and deeply disturbing" actions of these employees.⁹⁹ The 2007 Chemical Safety Board investigation report, however, found a multiplicity of causes for the explosion, including cost-cutting at the top of the corporation that affected safety conditions, outdated equipment, malfunctioning valves and indicators, worker fatigue, poor training, locating trailers too close to hazardous areas and ignoring numerous warnings and "near misses."¹⁰⁰

Similarly, the commission that was assembled to investigate the 2003 Columbia space shuttle disaster criticized managers' tendency to blame the actions of individual workers (or even single causes) when investigating accidents:

Many accident investigations do not go far enough. They identify the technical cause of the accident, and then connect it to a variant of "operator error" – the line worker who forgot to insert the bolt, the

⁹⁶ Andrew Hopkins, *What Are We To Make Of Safe Behaviour Programs?*, 44 SAFETY SCIENCE 583, (2006).

⁹⁷ *Id.*

⁹⁸ *Improving Workplace Safety: Strengthening OSHA Enforcement of Multi-Site Employers Hearing Before the House Comm. On Education and Labor, Subcomm. on Workforce Protections*, 110th Cong. (2007) (written testimony of Frank A. White, Senior Vice President, ORC Worldwide).

⁹⁹ T.J. Aulds, *BP Blames Employees for Fatal Blasts*, THE GALVESTON COUNTY DAILY NEWS, May 18, 2005.

¹⁰⁰ U.S. Chemical Safety and Hazard Investigation Board, *supra* note 88.

engineer who miscalculated the stress, or the manager who made the wrong decision. But this is seldom the entire issue. When the determinations of the causal chain are limited to the technical flaw and individual failure, typically the actions taken to prevent a similar event in the future are also limited: fix the technical problem and replace or retrain the individual responsible. Putting these corrections in place leads to another mistake – the belief that the problem is solved.¹⁰¹

- Blaming workers for accidents can make safety problems worse.

Programs that have the result of discouraging workers from reporting incidents that may be predictive of future or more serious accidents can have a detrimental effect on worker safety. The Chemical Safety Board, in its report on the 2005 BP Texas City explosion that killed 15 workers, noted that one thing missing at BP was a “reporting culture where personnel are willing to inform managers about errors, incidents, near-misses, and other safety concerns.” When workers were not encouraged to report, managers did not investigate incidents or take appropriate corrective action.¹⁰²

Instead of punishing pilots or other workers for the “errors” that they make, the Federal Aviation Authority has taken a completely different approach to addressing the problem of preventing accidents, according to a recent report by the U.S. House Transportation Committee:

Recognizing these human factors and complex accident causation principles, the FAA began to promote and establish voluntary reporting programs such as NASA's Aviation Safety Reporting System ("ASRS"), where anyone in the aviation system could report a mistake or a violation and receive immunity from the finding of a civil penalty violation. In addition, the FAA has established a 'Voluntary Self Disclosure' program where both organizations and individuals can disclose a violation, cease and desist from the unsafe practice, develop a corrective action plan, and be immune from civil penalty action. The dramatic improvement in U.S. air safety over the last two or more decades has been directly linked to the implementation of these "non-punitive" principles in the regulatory environment.¹⁰³

Not all incentive programs are detrimental, as mentioned above, nor is all safety-related discipline a problem if it is actually justified. There are situations where despite repeated training, frequent warnings and consistent enforcement of safety policies, there is clear, willful disregard of an established rule by workers or managers and some disciplinary action from the employer may be necessary. In rare cases OSHA has chosen not to cite an

¹⁰¹ Columbia Accident Investigation Board, *Columbia Accident Investigation Board Report Volume I*, 97, (2003), at http://caib.nasa.gov/news/report/pdf/vol1/full/caib_report_volume1.pdf

¹⁰² U.S. Chemical Safety And Hazard Investigation Board Investigation Report, *supra* note 88.

¹⁰³ *The Impact of Railroad Injury, Accident, and Discipline Policies on the Safety of America's Railroads Hearing Before the House Comm. on Transportation and Infrastructure*, 110th Cong., (2007).

employer, based on “unavoidable employee misconduct,” recognizing that the employer had no control over an employee’s actions and had done everything in its power to ensure safe working conditions.

Some employers, however, try to blame workers for the incident, even though the employer has legal responsibility for safety in the workplace and other factors are almost always to blame. For example, according to a former supervisor, Cintas, a large industrial laundry company, has a company policy to write up a disciplinary action immediately after every accident – before any investigation is done.¹⁰⁴

After an employee is hurt or killed, the employer often blames the worker for not following proper procedures, although further investigation generally finds that procedures are rarely followed (with full knowledge of supervisors), or workers have not been trained in the procedures, or the procedures are so old that they do not match the actual working conditions.¹⁰⁵

Other organizational factors such as fatigue or work overload can also explain a worker’s failure to follow proper procedures. Many workers report, for example, that while the *written* procedures may say to shut off a machine and wait for maintenance to come and repair it, the *unwritten* rule is to do anything necessary to make the production quota by the end of the day or face disciplinary action.

- After Eleazar Torres Gomez was pulled into a 300 degree oven and killed while attempting to unjam an industrial laundry conveyor at a Cintas industrial laundry in Tulsa Oklahoma in 2007, the company immediately blamed him for his own death. According to a Cintas press release,

Although the investigation is still ongoing, it is clear that our partner did not follow established safety rules which would have prevented this tragic accident. Unfortunately, the partner climbed on top of a moving conveyor to dislodge a jam, contrary to all safety training and procedures, and fell into a dryer.¹⁰⁶

OSHA later issued a \$2.8 million citation against Cintas, finding that “management at the Cintas Tulsa laundry facility ignored safety rules that could have prevented the death of this employee.”¹⁰⁷ According to press reports, the OSHA investigation found that because workers were under a lot of pressure to keep the lines moving, they routinely tried to unjam the machines while they were still running, with management’s full knowledge.¹⁰⁸

¹⁰⁴ Phone Interview by Committee staff with former Cintas Supervisor, Washington, D.C. (May 17, 2008).

¹⁰⁵ Hopkins, *supra* note 96.

¹⁰⁶ Cintas, *Media Statement Regarding: March 6 Incident in Tulsa, OK* (March 22, 2007), at http://www.cintas.com/Company/News_Media/press_releases/Tulsa_OK.aspx

¹⁰⁷ Occupational Safety and Health Administration, *U.S. Department of Labor's OSHA Proposes \$2.78 Million Fine Against Cintas Corp. Following Tulsa, Okla., Employee Death in Industrial Dryer* (August 16, 2007), at http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=NEWS_RELEASES&p_id=14397.

¹⁰⁸ James Bandler and Kris Maher, *House Panel to Examine Cintas Plants' Safety Record*, WALL ST. J., Apr. 23, 2008, at B1.

- When a Caterpillar worker at the company's Peoria plant was injured after being shocked while repairing a machine, he and his co-workers were disciplined for not following proper "lockout-tagout" procedures, even though the machine had been miswired during a previous modification and there was no written procedure that applied.¹⁰⁹
- Brent Churchill, a lineman for Central Maine Power, was electrocuted in 2000 after failing to put his insulating gloves on before reaching for a 7,200 volt cable. Because of mandatory overtime, Churchill had slept a total of five hours over the previous two and a half days. His death lent momentum to the passage of the passage in Maine of the country's first law limiting the number of hours an employee can be required to work.¹¹⁰

OSHA's Role in Ensuring Accurate Reporting

OSHA audits. OSHA conducts recordkeeping audits which, according to the agency, indicate that injury and illness logs are a reasonably accurate reflection of those injuries and illnesses actually reported by employees at work. Under the program, OSHA inspectors interview a "sample of employees" about reporting procedures and look for mistakes and inconsistencies by reviewing medical records, workers' compensation records, insurance records and, "if available," payroll absentee records, company safety incident reports and company first aid logs.¹¹¹

But OSHA's auditing method may miss those workers who are afraid to report or choose not to report an injury or illnesses to the employer, to workers' compensation or to insurance. Unless OSHA's "sample of employees" identifies workers who have suffered unreported injuries or illnesses *and* who are not afraid to talk to the OSHA compliance officer, OSHA audits will not identify those missing injuries or illnesses, nor the reasons that they have not been reported.

The California Bay Bridge Auditors' Report identified the same problem when it questioned whether employer injury reports are accurate, noting that CalOSHA "does not have a process to verify the reasonable accuracy of the annual injury reports employers are required to maintain", that CalOSHA "has no legal requirement to collect these reports" nor a "systematic process to detect injuries that go unrecorded."¹¹²

Finally, as noted above, by making ergonomic inspections dependent on recorded MSDs, OSHA's Ergonomics Enforcement Program actually rewards employers for underreporting their ergonomic injuries.

¹⁰⁹ Interview by Committee Staff with Caterpillar Employee, Washington, D.C. (June 3, 2008).

¹¹⁰ Mary Williams Walsh, *As Hot Economy Pushes Up Overtime, Fatigue Becomes a Labor Issue*, N.Y. TIMES, Sept. 17, 2000, at 32.

¹¹¹ Occupational Safety and Health Administration, *Audit and Verification Program of Occupational Injury and Illness Records*, CPL-02-00-138 (January 12, 2006), at

http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=DIRECTIVES&p_id=3329.

¹¹² California State Auditor, *supra* note 52.

Other OSHA procedures. Paragraph 11(c) of the Occupational Safety and Health Act makes it a violation of the Act to “discharge or in any manner discriminate against any employee because such employee has filed any complaint or instituted or caused to be instituted any proceeding under or related to” the Act.¹¹³

There is, however, no specific mention of employer actions that would discourage reporting. This section of the OSH Act is rarely used against such actions, although Paragraph 1904.36 of OSHA’s recordkeeping regulation notes that Paragraph 11(c) also applies to discrimination against an employee for reporting a work-related fatality, injury or illness. The recordkeeping regulation itself, however, does not explicitly prohibit discouragement of reporting, forcing workers to go through the ineffective and time consuming 11(c) process.¹¹⁴

¹¹³ Occupational Safety and Health Act, 29 U.S.C. § 660.

¹¹⁴ Occupational Safety and Health Administration, Recording and Reporting Occupational Injuries and Illnesses, 29 C.F.R. § 1904 (Jan. 19, 2001).

Other Measures Can Be Used To Target Unsafe Workplaces

Injury, illness, and fatality rates are not the only way – or even the best way in many cases – to assess and ensure workplace safety. In petroleum refineries, chemical plants, and other complex operations dependent on process safety, records of process upsets, “near miss” reports, audit results, equipment inspections and reports of small chemical releases are much better indicators of potential hazards than counts of slips, trips and falls that comprise most injury reporting.¹¹⁵

These “leading indicators” – observations that can help predict safety problems – can be just as important and more useful than “lagging indicators” – looking at the injuries that have already occurred in preventing future incidents. But these leading indicator measures are not usually recorded by employers and if recorded, are not monitored by OSHA or BLS.¹¹⁶⁻¹¹⁷

At a U.S. House of Representatives Committee on Education and Labor hearing last year on the catastrophic explosion at BP’s Texas City refinery, it was revealed that both the company and OSHA were using only injury statistics to assess the safety of refineries. Yet many experts agree that these statistics are meaningless when attempting to determine how likely it is that a refinery may experience a catastrophic explosion. Much better are “process safety” indicators: how well the company follows up on near misses; how well the company maintains its equipment and how willing the company is to shut down a process when there are problems.¹¹⁸

In addition, workplace illnesses are especially difficult to count. Many work-related illnesses mimic the flu or other common household maladies. Others may cause serious disease like cancer or heart disease many years or decades after workers were exposed. The injury and illness statistics that OSHA currently collects are therefore almost useless in targeting inspections at workplaces where employers are exposed to workplace health hazards.¹¹⁹

Conclusion

¹¹⁵ John Calhoun Wells, Thomas A. Kochan & Michal Smith, *Managing Workplace Safety and Health: The Case of Contract Labor in the U.S. Petrochemical Industry* (July 1991) (report for the Occupational Safety and Health Administration).

¹¹⁶ *Improving Workplace Safety: Strengthening OSHA Enforcement of Multi-Site Employers Hearing Before the House Comm. On Education and Labor, Subcomm. on Workforce Protections*, 110th Cong. (2007) (written testimony of Frank A. White, Senior Vice President, ORC Worldwide).

¹¹⁷ U.S. Chemical Safety and Hazard Investigation Board Investigation Report, *supra* note 88.

¹¹⁸ *The BP-Texas City Disaster and Worker Safety Hearing Before the House Comm. on Education And Labor*, 110th Cong. (2007).

¹¹⁹ NATIONAL ACADEMY OF SCIENCES, *supra* note 9.

Although the Occupational Safety and Health Act of 1970 requires the Department of Labor to collect and compile statistics on the extent of occupational injuries, illnesses and fatalities in the United States, and requires employers to keep accurate records of workplace injuries, illnesses and deaths, strong evidence from academic studies, media reports and worker testimony cast serious doubt on the accuracy of these numbers.

This report has reviewed the importance of accurate recordkeeping, evidence that injuries and illnesses are significantly underreported, the reasons why injury and illness statistics are underreported, methods that some employers use to discourage reporting, and OSHA's failure to address these problems.

If policy makers are going to be able to assess the success or failure of this country's efforts to address the problem of workplace death and injury, accurate statistics are essential. And if workers are to have faith in the system, they must also have faith that OSHA and policy makers are aware of the hazards that workers face and the injuries and illnesses they suffer.

It is incumbent on the Occupational Safety and Health Administration and Bureau of Labor Statistics, working with other agencies and experts, to assess the full extent of this problem and develop solutions.

Appendix 1: House Hearings on Worker Health and Safety, 110th Congress

"The BP-Texas City Disaster and Worker Safety"

Full Committee

Thursday, March 22, 2007

"Protecting the Health and Safety of America's Mine Workers"

Full Committee

Wednesday, March 28, 2007

"Have OSHA Standards Kept up with Workplace Hazards?"

Subcommittee on Workforce Protections

Tuesday, April 24, 2007

"Evaluating the Effectiveness of MSHA's Mine Safety and Health Programs"

Full Committee

Wednesday, May 16, 2007

"Workplace Safety: Why do Millions of Workers Remain without OSHA Coverage?"

Subcommittee on Workforce Protections

Tuesday, May 24, 2007

"The S-MINER Act (H.R. 2768) and the Miner Health Enhancement Act of 2007 (H.R. 2769)"

Subcommittee on Workforce Protections

Thursday, July 26, 2007

"Why Weren't 9/11 Recovery Workers Protected at the World Trade Center?"

Full Committee

Wednesday, September 12, 2007

"Workplace Tragedies: Examining Problems and Solutions"

Subcommittee on Workforce Protections

Monday, January 14, 2008

"H.R. 5522, The Combustible Dust Explosion and Fire Prevention Act of 2008"

Full Committee

Wednesday, March 12, 2008

"Improving Workplace Safety: Strengthening OSHA Enforcement of Multi-Site Employers"

Subcommittee on Workforce Protections

Wednesday, April 23, 2008

Appendix 2: Glossary

ACOEM – American College of Occupational and Environmental Medicine
ASRS – Aviation Safety Reporting System
BLS – Bureau of Labor Statistics
CalOSHA – California OSHA
CFOI – Census of Fatal Occupational Injuries
CPS – Current Population Survey
DOL – Department of Labor
ED – Emergency Department
FAA – Federal Aviation Administration
FRA – Federal Railroad Administration
GAO – Government Accountability Office
IRS – Internal Revenue Service
ITR – Illinois Trauma Registry
MSDs – musculoskeletal disorders
NEISS – National Electronic Injury Surveillance System
NHIS – National Health Interview Survey
NIOSH – National Institute for Safety and Health
ODI – OSHA Data Initiative
OSHA – Occupational Safety and Health Administration
SOII – Survey of Occupation Injuries and Illnesses
SST – OSHA’s Site-Specific Targeting program

Appendix 3: Academic Study Tables

Appendix 3: Academic Study Table

Author(s)		Title/Journal	Data Used	Methods	Results
Leslie I. Boden and Al Ozonoff	2008	Capture-recapture Estimates of Nonfatal Workplace Injuries and Illnesses, <i>Annals of Epidemiology</i> (Vol. 18, pg. 500)	Bureau of Labor Statistics Survey of Occupational Injuries and Illnesses (SOII) and workers' compensation records, 1998- 2002	The researchers linked individual case records for establishments reporting to the BLS and individual case records from workers' compensation data for 1998 to 2002 from six states: Minnesota, Wisconsin, New Mexico, Oregon, Washington and West Virginia. They employed capture-recapture analysis, a statistical technique often used in epidemiological studies involving several overlapping, but incomplete data sources, to estimate the proportion of injuries reported.	SOII missed almost 340,000 lost-time injuries in the sampled industries from 1998 to 2002. At most, the BLS survey reported 76 percent of all injuries in the six states in the sampled industries.
Lee S. Friedman and Linda Forst	2007	Occupational Injury Surveillance of Traumatic Injuries in Illinois, Using the Illinois Trauma Registry: 1995-2003, <i>Journal of Occupational and Environmental Medicine</i> (Vol. 49, pg. 401)	Illinois Trauma Registry (ITR)	The researchers used the ITR, which provides detailed, complete data on severe occupational injuries, to estimate the number of Illinois workers who suffered work-related nonfatal traumatic injuries from 1995 to 2003. Since the ITR is a population-based registry and does not depend on employer reporting, it likely reflects a more accurate picture of the trends in occupational injuries than the SOII.	The rate of traumatic workplace injuries in Illinois from 1995 to 2003 was fairly constant. This contradicts the BLS figures, which show a consistent 37.4 percent decline in workplace injuries in the state over the same period.

Lee S. Friedman and Linda Forst	2007	The Impact of OSHA Recordkeeping Regulation Changes on Occupational Injury and Illness Trends in the US: a Time-series Analysis, <i>Occupational Environmental Medicine</i> (Vol. 64, pg. 454)	BLS Survey of Occupational Injuries and Illnesses, 1992-2003	Two changes in OSHA recordkeeping have impacted the agency's data collection. An OSHA recordkeeping rule, first applied in 1995, limited OSHA's access to employer documentation by requiring that all injury and illness data collection occur through mail or electronic transmissions. In 2002, OSHA introduced a new injury and illness reporting form that eliminated the specific category on the reporting form for musculoskeletal disorders. The researchers employed a joint-point regression analysis using SOII time series data to estimate the impact of these recordkeeping changes on the trends in injury and illnesses.	83 percent of the decline in occupational injuries and illnesses reported from 1993 to 2002 can be attributed to the changes in OSHA's recordkeeping.
Kenneth D. Rosenman, Alice Kalush, Mary Jo Reilly et al.	2006	How Much Work-Related Injury and Illness is Missed by the Current System?, <i>Journal of Occupational and Environmental Medicine</i> (Vol. 48, pg. 357)	Bureau of Labor Statistics Survey of Occupational Injuries and Illnesses (SOII), workers' compensation records, OSHA Annual Survey, OSHA Integrated Management Information System, Occupational Disease Report for Michigan, 1999-2001	The researchers matched company and individual records from the SOII to company and individual records in four other Michigan databases: worker's compensation, OSHA Annual Survey, OSHA Integrated Management Information System, and the Occupational Disease Report. They used capture-recapture analysis, a statistical technique often used in epidemiological studies involving several overlapping but incomplete data sources, to estimate the proportion of injuries and illnesses reported	The SOII missed up to 68 percent of work-related injuries and illnesses occurring annually in Michigan from 1999 to 2001. The researchers estimated that the BLS captured only around 31 percent of illnesses and 33 percent of injuries.

Tim Morse, C. Dillon, E. Kenta-Bibi et al.	2005	Trends in Work-related Musculoskeletal Disorder Reports by Year, Type, and Industrial Sector: A Capture-recapture Analysis, <i>American Journal of Industrial Medicine</i> (Vol. 48, pg. 40)	Workers' compensation and physician reporting data for Connecticut, 1995-2001	Using worker's compensation and physician reporting data from Connecticut, the researchers estimated the number of work-related upper-extremity musculoskeletal disorders (MSDs) in Connecticut from 1995 to 2001.	The actual number of upper extremity MSDs was as much as six times higher than reported in the SOIL. The researchers conclude that there is no evidence to support the overall declines in musculoskeletal disorders indicated by the BLS survey.
Sara A. Quandt, Joseph G. Grzywacz, Bless Burke et al.	2006	Occupational Illnesses and Injuries among Latino Poultry Workers in Western North Carolina, <i>American Journal of Industrial Medicine</i> (Vol. 49, pg. 343)	Survey data on 200 Latino poultry workers in six counties in western North Carolina	The researchers conducted face-to-face interviews with a representative sample of Latino poultry workers in six western North Carolina counties, collecting data on occupational and psychological health, safety training, and the safety climate inside the processing plant.	Injury and illnesses rates for the Latino poultry workers exceeded rates reported by plants to OSHA. 47 percent of those interviewed reported "poor" or "fair" health. The researchers suggest that many factors could contribute to the lack of injury and illness reporting by immigrants, including language barriers, fear of losing their job, incentive programs that reward low rates of absenteeism, and lack of access to health care.

Theresa Scherzer, Reiner Rugulies, and Niklas Krause	2005	Work-related Pain and Injury and Barriers to Workers' Compensation Among Las Vegas Hotel Room Cleaners, <i>American Journal of Public Health</i> (Vol. 95, pg. 483)	Researcher –collected survey data on unionized hotel room cleaners	The researchers surveyed 941 unionized hotel room cleaners in Las Vegas, NV about work-related pain, injury, disability, and reporting.	Even with unionization, immigrant workers may hesitate to report injuries and illnesses. 75 percent of the workers reported work-related pain, but only 31 percent of reported the pain to management. Only 20 percent filed workers' compensation claims. A fear of getting "in trouble" or being fired was among the primary concerns for workers who did not report their injuries.
Gordon Smith, Helen Wellman, Gary Sorock et al.	2005	Injuries at Work in the US Adult Population: Contributions to the Total Injury Burden, <i>American Journal of Public Health</i> (Vol. 95, pg. 1213)	National Health Interview Survey (NHIS), 1997-1999	Used the NHIS, which includes information on the work-relatedness of injuries, to develop an estimate of the annual at-work injury rate in the U.S. The researchers compared their results to the BLS statistics.	For 1998, the actual number of workplace injuries and illnesses for private industries, currently included in the BLS survey, was 1.4 times higher than the SOII estimate. If government employees and the self-employed are included, then the occupational injury and illness estimate for 1998 rises to 1.8 times the BLS estimate.

S.M. Marsh, S.J. Derk, and L.L. Jackson	2004	Nonfatal Occupational Injuries and Illnesses Among Workers Treated in Hospital Emergency Departments—United States, <i>Morbidity and Mortality Weekly Report</i> (Vol. 55, pg. 449)	National Electronic Injury Surveillance System (NEISS), Bureau of Labor Statistics Survey of Occupational Injuries and Illnesses (SOII) and Current Population Survey	The researchers employed NEISS and CPS to estimate the rate of emergency department (ED)-treated workplace injuries from 1996 to 2004. They compared their findings to the SOII numbers.	There was no substantial reduction in the overall number and rate of ED-treated occupational injuries/illnesses from 1996 to 2004. This finding stands in contrast to the BLS survey, which illustrates a decline in injuries and illnesses for those years. The study reports a rate of work injuries of 2.5 for every 100 workers in 2003. In 2003, the reported BLS rate was 5.0 for every 100 workers. These numbers suggest that 50 percent of workplace injuries resulted in hospitalization - which clearly is not the case. In addition, the study reports a total of 3.4 million injuries and illnesses in 2003 that resulted in hospitalizations, while the BLS total of all injuries and illnesses for 2003 was 4.4 million. That would mean that only 1 million out of 4.3 million injuries did not need hospitalization, also clearly not the case.
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J. Paul Leigh, James P. Marcin, and Ted R. Miller	2004	An Estimate of the U.S. Government's Undercount of Nonfatal Occupational Injuries, <i>Journal of Occupational and Environmental Medicine</i> (Vol. 46, pg. 10)	Bureau of Labor Statistics Survey of Occupational Injuries and Illnesses (SOII)	To estimate underreporting, the researchers employed separate models for six broad categories of workers: workers included in the SOII, federal government employees, agricultural workers, state and local government employees, non-agricultural self-employed workers, and "other" individuals not covered by the SOII. In developing the models, the researchers made assumptions about the risk of injury in each job category and the likely degree of underreporting given previous studies' findings. This produced varying estimates for each of the six models.	SOII missed between 33 and 69 percent of all work-related injuries and illnesses, when categories of workers currently excluded from the SOII, like government workers, are included in the count.
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Lenore Azaroff, Charles Levenstein, and David H. Wegman	2002	Occupational Injury and Illness Surveillance: Conceptual Filters Explain Underreporting, <i>American Journal of Public Health</i> (Vol. 92, pg. 1421)	Previous research and reporting on workplace injuries and illnesses	The researchers modify a “filter model” developed for Australia to explain the documentation of work-related injuries and illnesses in the United States.	The model, which relies on previous research, yields significant insight into the sequence of events in injury and illness reporting and the factors that could lead to a failure to report injuries and illnesses at each stage. For example, many factors could prevent the worker from reporting an injury to their supervisor, including the fear of disciplinary action. An injury may not be recorded as a “lost time” incident because a worker, unaware of workers’ compensation benefits, relied on sick leave to recover from an accident.
Marianne P. Brown, Alejandra Domenzain, and Nelliana Villoria-Siegert	2002	Voices From the Margins: Immigrant Worker’s Perceptions of Health and Safety in the Workplace, UCLA Labor Occupational Safety and Health Program, at http://www.losh.ucla.edu/publications/voicesreport.pdf	Researcher-collected survey data on immigrant workers	The researchers surveyed 75 immigrants in the Los Angeles area working in low-wage, low skill jobs in several industries, including the hotel, restaurant, and garment industries. They asked the workers about their opinions, perceptions, and experiences around workplace health and safety.	Only 63 percent of the workers who experienced an injury reported it, and many of the workers knew others who did not report injuries that they suffered. Nearly all of the workers had concerns about their risk of on-the-job injury.
Judith E. Glazner, Joleen Borgerding, Jan T. Lowery et al.	1998	Construction Industry Rates May Exceed National Estimates: Evidence from the Construction of the Denver International Airport, <i>American Journal of Industrial Medicine</i> (Vol. 34, pg. 105)	Bureau of Labor Statistics Survey of Occupational Injuries and Illnesses (SOII), payroll records, workers’ compensation	Used workers’ compensation and payroll data to estimate the total number of lost work-time injuries during the Denver International Airport (DIA) construction project.	The overall injury rate for the DIA project was more than twice the rate reported for the construction industry by the SOII during the project years.

