
Abolishing OSHA

Thomas J. Kniesner and John D. Leeth

Workers at the Pymm Thermometer Company, the second largest manufacturer of mercury thermometers in the United States, had no respirators or protective clothing, and worked in a building with little outside ventilation. Worst of all were the conditions in a windowless room in the cellar where people recycled mercury from old thermometers. Exposure to mercury can permanently damage vital internal organs such as the brain, lungs, liver, and kidneys. The basement recycling room was filled with broken glass and noxious fumes from puddles of mercury on the floor. In 1987 more than half of the Pymm Thermometer Company's 100 workers, and some of their children, showed signs of mercury poisoning. One Pymm worker appeared to have permanent brain damage. Until a former employee tipped off health and safety inspectors, the federal government's Occupational Safety and Health Administration (OSHA) was unaware of the mercury recycling room, but for five years the agency had known of other serious health problems suffered by Pymm's employees.

At first glance, the Pymm Thermometer Company story might suggest to policymakers

that OSHA should be given bigger budgets, more personnel, and greater authority to go after employers that endanger worker safety. But the end of the story and the accompanying analysis suggest just the opposite: that OSHA can never be expected to be effective in promoting worker safety; that an expanded OSHA will cost jobs as well as taxpayer dollars; and that other means currently keep workplace deaths and injuries low and can reduce them even more.

OSHA originally cited Pymm in 1981 for mercury-fume levels five times greater than normal, levels that could cause severe neurological damage or death. The agency fined Pymm \$1,400 and ordered it to eliminate the mercury-fume hazard within six months. Five years after the original elimination order, by which time three additional OSHA inspections had taken place, the company still had not installed the ventilation equipment necessary to reduce mercury exposure to permissible levels.

The Pymm situation would have continued unchanged, except for the negative publicity that resulted when the company fired Vidal Rodriguez. After doctors treated Mr. Rodriguez for a fractured elbow, they reported to the health departments of both New York City and New York State that Mr. Rodriguez suffered from mercury poisoning. An asthmatic who was no longer able to walk without a cane, Mr. Rodriguez applied for workers' compensation

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benefits and was quickly fired by Pymm. Newspaper accounts of Mr. Rodriguez's case included expressions of concern by city and state health departments over the working conditions at the Pymm Thermometer Company. OSHA still did nothing. Eventually, an article describing the agency's dismal enforcement record goaded OSHA into reinspecting Pymm in 1985.

The jobless Mr. Rodriguez, who lived only one block from the thermometer plant, met the safety inspectors on the street and gave them the details of the basement mercury-recycling operation. The safety inspectors searched the building for more than a day to find the hidden mercury-recycling room; although the inspectors said that the working conditions were a "nightmare," they fined the Pymm Thermometer Company only \$30,100 for 16 violations of federal workplace safety and health standards. A year later, two months after New York State indicted Pymm's owners for assault for exposing workers to the high mercury levels, OSHA again inspected the plant and issued another \$75,000 in citations. Even with federal involvement, health and safety inspectors initially overlooked the deadly working conditions at Pymm and then let stand serious health threats for over five years.

As the case of the Pymm Thermometer Company demonstrates, OSHA inspectors are often reluctant to close down a company, or even impose dramatic fines, when they find serious violations of health and safety standards. Other case histories underscore that the situation at Pymm was far from unique. OSHA inspectors frequently overlook dangerous working conditions, and even when they find serious health and safety violations, inspectors often cannot compel firms to eliminate the hazards discovered. To encourage timely compliance, administrators often slash assessed penalties, further reducing the already minor economic incentives for firms to observe health and safety standards. Firms realize that it is unlikely that they will be inspected: recent inspection rates mean that the typical American worker can expect to see an OSHA inspector once every 75 years, or once every 13 years if working in a hazardous job. And if they are inspected, firms can avoid paying severe fines by simply agreeing to abide by OSHA's regulations in the future.

In spite of the ineffectiveness of OSHA, the agency still can impose costs that are far out of proportion to any additional worker protection it

provides. The answer is not to give OSHA more money, personnel, and power. In fact, work-related deaths have been declining since before the creation of OSHA in 1970. And there is no indication that OSHA's actions have led to any significant reductions in injuries on the job. Most protection on the job comes from state workers' compensation rules and programs, and tort law.

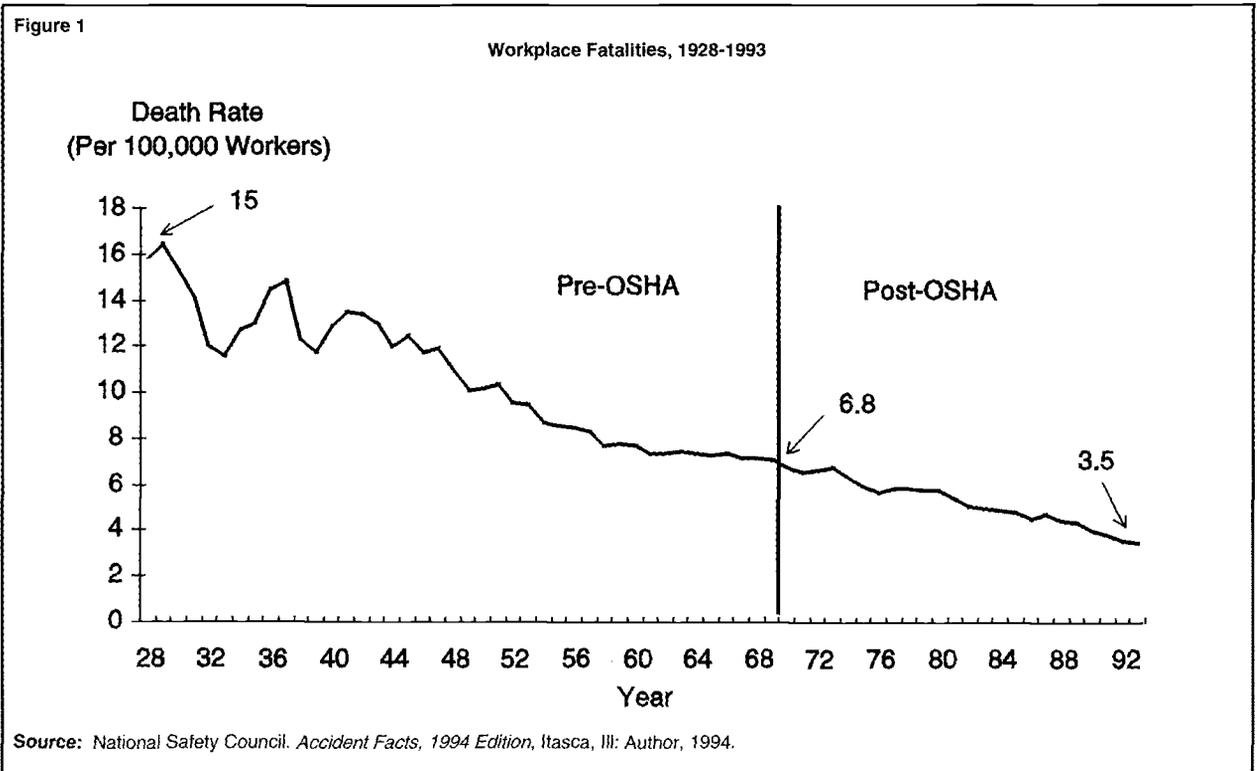
Rather than wasting more resources on an agency that cannot be effective, policymakers would do better to shut down OSHA and allow state and local officials to better utilize their own means to ensure worker safety.

U.S. Workplace Safety Policy

OSHA is the most recently constructed pillar of the U.S. safety policy system, which also includes the set of tort laws, state workers' compensation insurance programs (workers' comp.), and the research and public education concerning the causes and consequences of work hazards by the National Institute of Occupational Safety and Health (NIOSH). Interwoven with the four pillars of safety policy are the labor-market forces establishing the wage premiums, known as compensating wage differentials, that workers require to accept job-related health hazards.

U.S. safety policy has evolved sequentially because of the perceived deficiencies of each previous government effort. The initial common-law tort system was largely supplanted by state workers' comp. legislation on the grounds that courts' after-the-fact negligence determinations failed to prevent injuries, left too many workers uncompensated for injuries, and created too much uncertainty regarding payment of damages. The general erosion of the purchasing power of workers' comp. benefits, due to inflation that outpaced legislated benefit increases and the dramatic rise of injuries in the 1960s, built the momentum that passed the Occupational Safety and Health Act of 1970.

In addition to creating OSHA and NIOSH to conduct the research necessary for OSHA to establish specific mandatory workplace guidelines, the 1970 act also established the National Commission on State Workmen's Compensation Laws, which spurred many states in the 1970s to modify their workers' comp. programs and raise income-replacement benefits. In turn, the increases in benefits have raised the cost of buying workers' comp. coverage and may have



resulted in increased filing of fraudulent claims for benefits. Concern over cost containment and safety incentives in the workplace health and safety policy system are larger today than at any time in recent memory.

With an annual budget of about \$300 million, OSHA is about one 20th the size of the Environmental Protection Agency. The federal government has six times more fish and game inspectors than workplace health and safety inspectors. Given the comparatively limited federal commitment to worker health and safety regulation, one might expect a high and growing frequency of workplace accidents and diseases.

Workplace Accidents

How safe were workplaces before OSHA's creation, and how safe are they now? Figure 1 shows that the frequency of workplace deaths has actually declined dramatically over the past 64 years. In 1928, for every 100,000 workers there were about 16 workplace fatalities. By 1993 the rate of fatalities had fallen about 80 percent, to 3.5 per 100,000 workers. As a point of reference, in 1993 the chance of dying in an accident at home was over two times greater (8.7/100,000) than the chance of dying in an accident at work.

Because of how it is pieced together from multiple sources, the National Safety Council's data may undercount U.S. workplace fatalities. The Bureau of Labor Statistics (BLS) has also calculated workplace fatality rates since the late 1930s, but the scope of its survey has changed so dramatically that one should not use the BLS data to identify a time trend. Nevertheless, the BLS's recent data are the most reliable source of information on fatal workplace accidents in the United States. The BLS has conducted two censuses of fatal occupational injuries using data from death certificates, workers' comp. claims, medical examiners' records, autopsy reports, motor vehicle accident records, and OSHA and Mine Safety and Health Administration fatal injury reports. For 1992 and 1993, the BLS estimated that the average worker in the United States faced a five in 100,000 chance of dying in a work-related accident. Although higher than the National Safety Council estimate for 1992 and 1993, the BLS figure leaves unchanged the conclusion that workers currently face greater hazards at home than at work.

More interestingly, the BLS also found that 40 percent of recent workplace fatalities were from transportation accidents (almost half the fatal transportation accidents were highway accidents), and about 20 percent of workplace fatalities were from assaults and other violent acts

(over 80 percent were homicides and 15 percent were suicides). In other words, only 40 percent of workplace fatalities were caused by dangers thought by most to be unique to the workplace, such as the classic example of falling into a machine. The leading causes of work-related deaths in recent years, transportation accidents and assaults, are unlikely to be reduced much by OSHA inspections.

The self-employed face a much higher chance of dying at work than wage and salary workers, which also has consequences for the effectiveness of OSHA. Although the self-employed are now about 9 percent of the workforce, in the period studied by the BLS they suffered about 20 percent of all workplace fatalities. Differences between the occupational distributions of the self-employed and wage and salary workers partially explain the higher fatality rate for the self-employed; compared to wage and salary workers, the self-employed are more likely to work in agriculture and construction, relatively high-risk sectors, and they are less likely to work in manufacturing, a relatively low-risk sector. The self-employed are also more likely to be managers of food-serving and lodging services and sales supervisors and proprietors, which are occupations where the risk of being a homicide victim during a robbery is higher. In addition to the sources of work-related deaths, the overrepresentation of workplace fatalities among the self-employed indicates that OSHA's ability to reduce work-related deaths is severely limited.

The time-series of data on nonfatal workplace injuries and illnesses paints a somewhat different picture than the data on fatal injuries. Figure 2 (page 50) shows nonfatal workplace injuries and illness since 1973, which was the first year firms were required to report industrial accidents and diseases. Unlike death rates, injuries and illnesses do not show a marked decline over time. Since 1975 the pattern of nonfatal workplace injuries and illnesses follows the business cycle closely. Injuries and illnesses rose slightly during the business upturn of the late 1970s, fell during the recession of the early 1980s, and then rose again during macroeconomic expansion of the 1980s.

OSHA's Effect on Workplace Safety

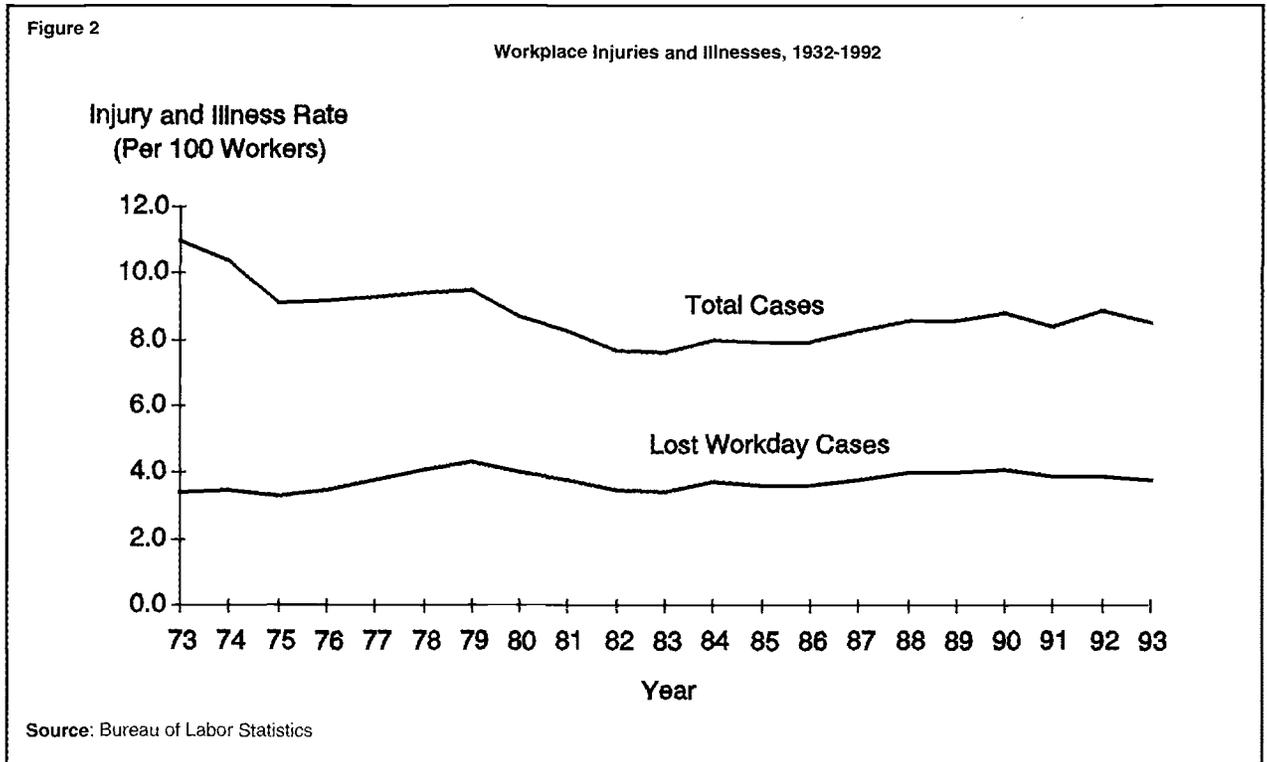
Because the rate of workplace deaths has, in fact, fallen by about half since 1970, from 6.8 per 100,000 workers in 1970 to 3.5 per 100,000 workers in 1993, both Robert Reich, the secretary of labor, and Joseph Dear, the assistant secretary of

labor for occupational safety and health, have credited OSHA with reducing workplace fatalities by 57 percent over that period. But that is misleading. Figure 2 shows no downward trend in either the total frequency of workplace injuries or the frequency of injuries resulting in at least one lost workday. Figure 1 shows that the workplace fatality rate began its downward trend well before the creation of OSHA. The trend was fueled in large part by improvements in safety technology and changes in the occupational distribution of labor. Specifically, the pre-OSHA drop in the frequency of workplace fatalities from 1947 to 1970 was 70 percent larger than the post-OSHA drop from 1970 to 1993. OSHA might actually have slowed the downward trend in fatal injuries.

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The 1978 cotton dust standard is usually mentioned as OSHA's greatest success story. The cotton dust standard established a maximum exposure limit on the amount of respirable cotton dust particles allowed in the work environment. The goal was to reduce the incidence of byssinosis, or brown lung disease, among textile workers. The standard dictated a set of costly engineering controls on cotton dust exposure, medical surveillance of workers for signs of byssinosis, and the use of respirators in some situations. The frequency of brown-lung disease has fallen from 20 percent of the workforce in 1978 to 1 percent seven years later. Judged by the one-dimensional metric of reducing illness, the cotton dust standard has been successful.

Whether the cotton dust standard is a success on an economic basis is another matter. Most of the actual illnesses prevented by the dust standard were relatively minor. The least severe category of byssinosis involves only occasional chest tightness or breathing difficulty on the first day of the workweek, yet the yearly cost of eliminating such a mild illness is about 40 percent of what workers are willing to pay to avoid a serious workplace injury. OSHA also ignored much cheaper methods of reducing illnesses in favor of



engineering controls. Personal protective equipment such as masks and worker rotation would have been equally effective in preventing byssinosis but considerably less expensive than the engineering standards adopted. As evidence of the inefficiencies created, we note that the engineering controls required by OSHA reduced the stock market value of cotton firms by 23 percent.

To get a more accurate picture of OSHA's impact on workplace health and safety, one must control for factors unrelated to OSHA that also affect industrial accidents and diseases. Numerous sophisticated econometric studies have attempted to isolate the effect of OSHA on workplace safety. Studies vary widely in terms of samples used, risk measurements examined, and OSHA enforcement activities studied. In total, multivariate statistical studies suggest that OSHA has a small positive impact on worker safety.

One of the most widely cited studies, by Wayne Gray and John Scholz in the 1993 edition of *Law and Society Review*, examined a large national cross-section of establishments from 1979 to 1985. The study determined that OSHA inspections with penalties reduced lost workdays due to injuries by 22 percent over three years. Although a 22 percent reduction may appear impressive, remember that only a few firms have

ever been inspected by OSHA, and only a third of all inspections have resulted in fines. Considering the frequency of inspections and the fraction of companies found violating OSHA standards when inspected, OSHA's abatement efforts have reduced workplace injuries in total by less than 1 percent.

Injuries may have been reduced by more than 1 percent because the threat of OSHA inspections and fines encouraged firms not yet inspected to install additional safety equipment or institute new safety programs. Based on the results from a study by W. Kip Viscusi in the *Rand Journal of Economics* (Winter 1986), the deterrence effect of OSHA lowered injuries by another 1.5 to 3.6 percent. Combining Gray and Scholz's figure with Viscusi's, then, indicates that OSHA has reduced injuries by no more than 4.6 percent. OSHA's impact, however, may be considerably smaller than 4 to 5 percent, considering that the majority of studies have found neither an abatement nor a deterrence effect from OSHA inspections.

Finally, estimates from a study by Robert Hahn and John Hird published in the *Yale Journal on Regulation* place the cost of OSHA's current health and safety standards at \$11 billion per year—based on either changes in input pro-

ductivity or expenditures on OSHA-mandated capital equipment. A back-of-the-envelope calculation, using the range of estimates of OSHA's effectiveness in reducing injuries and the implicit values workers place on safety, indicates that OSHA produces safety benefits of zero to \$3.6 billion a year. The most optimistic figures show OSHA currently creating three times more costs than it generates in benefits.

Reinventing OSHA?

The Democrats' Way. Vice President Al Gore's Task Force on Reinventing Government left no stone unturned, OSHA included. According to the task force, a new, improved OSHA would emphasize partnerships with business, common-sense regulations, and results instead of red tape.

The success of the Maine 200 program has paved the way for an increased partnership between OSHA and business. In 1993 the 200 companies in Maine with the highest number of injuries were offered the choice to either set up a worker safety program in tandem with OSHA or face increased monitoring by OSHA inspectors. Made an offer too good to refuse, most companies chose the worker safety program. After two years employers were able to identify 14 times more hazards than could have been identified by OSHA inspectors, and six out of 10 Maine employers involved reported reduced injury and illness rates.

A reinvented OSHA would use two approaches to encourage firms to establish safety programs. The first follows the pattern set by the Maine 200 effort—firms will be offered the choice between a partnership with OSHA or stepped-up enforcement of safety and health standards. The second approach is less intrusive: firms with strong safety programs, as judged by OSHA, would face lower fines for OSHA violations than firms with weak or nonexistent safety programs. As further encouragement, OSHA would also focus scheduled inspections on only a few of the top hazards for firms with effective safety programs. The move towards common-sense regulation is an effort to eliminate obsolete, duplicative, or confusing safety and health standards.

In addition to rewriting regulations, the new and improved OSHA would allow firms greater flexibility in meeting safety and health targets. Instead of mandating the design of equipment or the work process, OSHA would set performance

goals and allow firms to determine how best to achieve the desired outcomes. In addition, the Gore Task Force recommends that OSHA identify ways to improve communication among workers, employers, and the government concerning hazards in the workplace.

The final Gore Task Force recommendation affecting OSHA, which is to eliminate red tape and emphasize effectiveness, indirectly acknowledges the complaints of small business owners who have argued that OSHA inspectors have been less concerned with safety and more concerned with issuing citations. Until recently, OSHA inspectors were evaluated by the number of violations found; consequently, inspectors fined companies for minor paperwork violations

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and for failures to put up required OSHA posters and warnings for common consumer products. OSHA reinvented the Democrats' way would evaluate inspectors based on success at finding and eliminating workplace hazards. OSHA has also directed inspectors to encourage firms to eliminate workplace hazards quickly by agreeing to reduce proposed fines for speedy compliance. OSHA will also attempt to target inspections away from relatively safe toward relatively more hazardous companies. Inspectors will concentrate on investigating employers with an above-average frequency of workplace injuries and illnesses relative to their industry or with a record of serious and repeated OSHA violations.

The Gore Task Force recommendations are a serious effort to improve workplace safety and health regulation in the United States. Will they be implemented, and, if implemented, would they be effective?

A comparison of the United States and Canada provides additional evidence of the likely impact of strengthening OSHA enforcement powers. The Canadian system of worker protection against injury is stronger than that in the United States. For instance, Quebec province allows workers to

refuse hazardous tasks, requires firms to establish joint workplace safety committees with labor unions, and makes firms initiate accident-prevention programs. The Commission de la Santé et de la Sécurité du Travail, Quebec's equivalent of OSHA, spends over four times more per worker in prevention activities than OSHA. Even with more innovative safety measures and a much greater level of enforcement, the Quebec system of workplace regulation has been no more successful than OSHA in improving worker safety and health.

The Republicans' Way. The Republicans also propose to reinvent OSHA, and in many respects their program differs from the Gore Task Force's recommendations only by a matter of degree. In

OSHA as originally conceived in 1970 is withering away. Since 1980 the real expenditure per worker on safety-standards enforcement by OSHA at both the state and federal levels has fallen by a third.

June, Rep. Cass Ballenger (R-N.C.) introduced the "Safety and Health Improvement and Regulatory Reform Act of 1995." Like the Gore Task Force, Representative Ballenger and other Republicans argue that OSHA fines should be reduced for firms making legitimate efforts to correct safety and health problems. But Representative Ballenger's proposal goes further than the Gore Task Force by arguing that fines should be lowered from \$70,000 to \$7,000 for all but the most egregious violations of safety and health regulations. The Republicans recommend that all companies be given the chance to correct alleged deficiencies before they are fined, not just companies with OSHA-approved safety programs.

To make workplace regulations understandable, the Republicans would repeal the "general duty clause" of the Occupational Safety and Health Act, which dictates that employers furnish each employee a job "free from recognized hazards that are causing or likely to cause death or serious physical harm." They claim that this clause currently allows OSHA inspectors to enforce nonpublished and poorly understood regulations.

Similar to changes proposed by the Gore Task Force, Republican proposals would encourage OSHA to form more of a partnership with business. Another Republican idea is to allow OSHA to use only 50 percent of its budget for enforcement. By necessity, OSHA would then have to abandon any heavy-handed dealings with business in favor of less coercive techniques.

To reorient OSHA inspections toward more hazardous workplaces, the Republicans would force workers to report their concerns about safety and health first to their employer and then to OSHA. Republicans argue that OSHA inspectors now spend too much time investigating false reports of safety hazards. By law, OSHA must evaluate every formal worker complaint. A majority of complaints are groundless, eating up staff resources without producing any improvement in worker health and safety. Since 1989 more than half of the complaint-initiated inspections uncovered no serious violations of OSHA regulations, and nearly a third of such inspections uncovered no violations whatsoever. Although the Republican proposal may be extreme, some effort to differentiate between legitimate and illegitimate complaints should be made to allow inspectors to concentrate on discovering truly hazardous workplaces.

Chronic Problems with OSHA

Questions about OSHA's future effectiveness—and the need for the agency's existence—will persist in spite of proposed reforms. The leading causes of work-related deaths are now highway motor-vehicle accidents and murders by customers and coworkers, which are difficult to control using workplace safety standards. A disproportionate share of work-related deaths occur among the self-employed, who are ill-suited for OSHA's inspection/fine approach. It is also the case that small business owners are the most vocal critics of current operations. At a recent White House conference on small business, a survey of attendees indicated that small businesspeople view OSHA as the second most "frustrating" federal agency to deal with—the IRS was first.

OSHA's recently proposed, and then quickly withdrawn, ergonomic standard demonstrates the continuing problems with the regulatory approach. Repetitive motion disorders can cause serious and permanent health problems. The most well known

of the repetitive motion disorders is carpal tunnel syndrome, an illness caused by strenuous or repeated use of the wrists. In the early stages, carpal tunnel syndrome produces a tingling or intermittent numbness in parts of the hand, and in the later stages, a permanent and painful inability to move the thumb or fingers. The number of repetitive motion disorders has more than quadrupled since 1987 and now represents about 60 percent of all reported industrial illnesses.

OSHA's draft proposal covering repetitive motion disorders was 26 pages with explanations, recommendations, and economic assessments of more than 500 pages. OSHA claimed that the ergonomic protection standard would have saved businesses about \$100 billion annually in lower workers' comp. claims and lost work time and, after subtracting the cost of compliance, would have netted firms \$9.6 billion per year. Business did not accept the government's assessment of the potential net profits to be made from OSHA's approach to reducing repetitive motion disorders. Intense business pressure combined with the threat of congressional intervention forced OSHA to withdraw the draft proposal only a few months after it was released for comment.

Business opposition to OSHA's proposed ergonomics protection standard does not indicate that the business community is unconcerned about repetitive motion injuries. Either out of concern for their workers or to reduce costs of workers' comp. claims, many companies have initiated their own programs to combat the rise of repetitive motion injuries. Unfortunately, extensive training programs and ergonomically designed equipment and work practices have not successfully reduced repetitive motion injuries in all worksites. In some instances, personal factors such as age, obesity, lack of exercise, pregnancy, vitamin deficiencies, and stress may produce more repetitive motion injuries than the work environment. Repetitive motion disorders are also more common among people who face frequent deadlines, have little control over their jobs, and generally do not find their work appealing.

The problem with OSHA's ergonomics protection standard, as noted by the National Coalition on Ergonomics, was that it "assumed that every workplace and every job is a potential disorder waiting to happen." The ergonomics standard demonstrates the fundamental difficulty with the

regulatory approach as practiced by OSHA: the standard would have imposed costs on firms regardless of whether they had problems with repetitive motion disorders or whether their problems could be successfully combated given our limited knowledge of ergonomics.

The Future of Workplace Safety and Health Policy

OSHA as originally conceived in 1970 is withering away. Since 1980 real government expenditure per worker on safety-standards enforcement at both the state and federal levels has fallen by a third. This is due in part to the rapid rate of net job creation in the United States, especially in

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the 1980s. Because the political process is downsizing OSHA at a fairly rapid pace, it is worthwhile to discuss some future directions for the other three pillars of workplace safety policy in the United States.

Workers' Compensation Insurance. The Clinton administration's recent health-care reform proposal would have supplanted the state system of workers' comp. with federalized medical benefits for workplace accidents and diseases. From the standpoint of workplace safety policy, it is fortunate that Mrs. Clinton's health-care reform initiative failed, because it would have reduced the safety incentives of workers' comp. by eliminating the current experience rating of workers' comp. premiums (whereby insurance premiums reflect individual firms' own injury experiences). At over \$55 billion, state-level workers' compensation insurance plans constitute the most influential public policy currently promoting workplace safety, via the experience rating of insurance premiums.

Other than establishing separate risk pools for small businesses, there is little room to expand the experience rating of workers' comp. premiums. Econometric evidence indicates that workers currently find the level of workers' comp. coverage optimal, so it seems unlikely that there will

be any great push for expanding either the level of benefits or extent of coverage.

As a bellwether of the future of workers' comp., consider the case of Oregon. In 1990, the Oregon state legislature passed a package of reforms; they set objective criteria for determining compensability; limited workers' choice of physicians to those participating in certified managed-care programs; mandated workplace safety committees to facilitate worker input on possible quick and effective safety enhancements; and reduced incentives for litigation by requiring objective medical corroboration of injuries.

Prior to those changes, the Oregon workers' comp. program was headed for a meltdown. Oregon ranked first in the nation in terms of the

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frequency of workers' comp. claims and total cost per worker. The average Oregon firm paid twice the national average to buy workers' comp. coverage, and the cost of premiums was skyrocketing. Over the past five years the cost of workers' comp. premiums in Oregon fell by about 40 percent, fueled by the legislated cost controls and the decline in workplace injuries.

Like Oregon, most states are looking for ways to revamp their workers' comp. programs because of escalating costs. A general movement in other states toward clarifying the link between premium levels and workplace safety can be expected. Separating legitimate from illegitimate workplace injury claims is a major problem now confronting workers' comp. programs in most states, as they struggle to contain insurance-premium inflation. Eliminating fraudulent claims will strengthen the safety incentive in workers' comp. by making a closer link between firms' actual workplace safety and the insurance premiums they pay under workers' comp.

The Legal System. For some firms, the lower workers' comp. premiums and smaller compensating wage differentials that accompany safer workplaces may be insufficient to encourage a suitable concern for worker safety and health. As

the situation at the Pymm Thermometer Company demonstrates, firms may expose workers to extreme hazards, in part because they do not fear legal liability for damages. In 1991 in Hamlet, North Carolina, 25 people died and 55 others were injured in a fire at a poultry processing plant. The needless loss of life happened because the owner of the company locked six of the nine outer doors in an effort to keep flies out of the plant and stop employees from pilfering chickens. In 1989 in Hillsborough County, Florida, 112 farm workers and their families were exposed to Phosdrin, a dangerous pesticide used to control worms, because their employer disregarded labeled instructions to close sprayed fields for 48 hours to anyone not wearing protective clothing. Although many of the workers developed chronic illnesses from the pesticide exposure, efforts by the workers to sue the employer largely failed. As in other states, Florida law is that acceptance of workers' comp. benefits precludes worker suits for damages.

Most of us are outraged by such clear-cut cases of employer negligence. Many argue that OSHA inspection efforts should be expanded to prevent such needless tragedies. In the case of Pymm Thermometer Company, however, OSHA had inspected and discovered violations, yet the shocking conditions persisted for over four years. In light of the agency's record, it is unlikely that a beefed-up OSHA would have prevented the North Carolina employer from locking the fire exits or the Florida employer from exposing workers to a dangerous pesticide.

Many workplace hazards are momentary and require employers and workers to choose the correct course of action quickly to guard against possible harm. Instead of relying on OSHA, policymakers might give more thought to allowing workers to sue their employers for clear-cut cases of negligence.

That would require changes in the no-fault insurance systems currently found in many states. Under such systems, employers are liable for only a portion of the total costs of injuries. Workers receive compensation for medical expenses and income losses, but no compensation for their pain and suffering. Because employers will eliminate workplace hazards if the expected savings from fewer injuries exceed the necessary financial outlays, employers may spend too little for safety under the current limited-liability scheme. Permitting workers to sue for

pain and suffering in situations where employers showed reckless disregard for worker welfare would produce greater safety by making firms bear more of the total costs of injuries.

The Indiana Supreme Court recently ruled that Indiana workers injured on the job can sue their employers for civil damages if the workers can prove their employers intentionally or knowingly harmed them. The Indiana ruling came from a 1991 lawsuit filed by workers who claimed neurological and central nervous system injuries suffered from exposure to PCBs at Westinghouse Electric plants. More generally, econometric evidence from product liability settlements suggests that awards for pain and suffering will have the effect of deterring firms from allowing dangerous practices that could cause injuries.

On the negative side, additional legal actions against employers for work-related injuries will increase administrative and court expenses and add uncertainty to compensation for injured workers. To minimize the legal costs, worker suits could be strictly limited to cases of gross employer misconduct.

Safety and Health Research. Empirical studies show that riskier jobs offer higher wages. All other things being equal, the typical U.S. worker in a job with a likelihood of injury at about the labor market average earns 2 to 4 percent more than a person working in a totally safe job. The added compensation firms must pay to entice workers to accept employment in hazardous worksites provides an incentive for firms to expand their investments in safety programs. Firms weigh the benefits of improved safety—smaller compensating wage premiums, lower costs of purchasing workers' comp., fewer work stoppages, and fewer fines for violating OSHA safety and health standards—against the costs of expanded safety programs. In 1993 firms paid more than \$55 billion for workers' comp. and an estimated \$200 billion for compensating wage differentials to workers for accepting some job hazards. OSHA and the corresponding state-level agencies assessed fines of only \$160 million in 1993. With a ratio of 1,594 to 1, the economic incentives to improve safety by reducing compensating wage differentials and workers' comp. expenses far surpass the safety-enhancing incentives from the relatively small fines imposed by OSHA for violating its standards.

For compensating wage differentials to provide the necessary labor market incentive for

firms to provide the economically optimal working environments, worker knowledge of work-related health risks is essential. Evidence indicates that workers quit hazardous jobs more frequently than relatively safe jobs. Increases in the probability of an accident also cause workers to search for new jobs and reduce job tenure. Economist W. Kip Viscusi estimates that about one-third of all workers leaving jobs do so upon learning of risks associated with the job. Workers do have fairly accurate information on the frequency of workplace accidents, and even when they do not initially have the correct impression of the hazards they will face on a job, workers reevaluate their beliefs relatively quickly.

Some critics argue that health-related hazards are more difficult for workers to evaluate than accident-related hazards and, in turn, that market mechanisms such as compensating wage differentials do not provide firms with the appropriate motivation to eliminate or reduce health hazards. Certainly, workers have a modicum of knowledge of risk—as demonstrated by the fact that they demand the regularly observed compensating wage differentials for exposure to risk. However, because of the public goods aspect of basic research and information provision, in general the government has played a role in trying to uncover and disseminate information on the causes and consequences of workplace health hazards. But that does not preclude market mechanisms to deal with lack of knowledge, especially with a workforce more conscious of health and safety concerns.

Workers do react to new information about job-related hazards. In a study by Viscusi and Charles O'Connor published in the *American Economic Review* in 1984, workers told that they would soon be working with sodium bicarbonate, a safe chemical, reduced their assessment of workplace hazards by 50 percent. Workers told that they would be working with either asbestos or TNT increased their assessments of workplace hazards by 200 percent. No workers required extra compensation to handle the sodium bicarbonate, but workers demanded an extra \$3,000 to \$5,000 per year to handle the dangerous asbestos or TNT. No workers said that they would quit their jobs because they would be handling sodium bicarbonate, but a majority of workers said that they would quit because they would be handling asbestos or TNT.

Although information can influence industrial

safety by adjusting workers' risk perceptions and their willingness to work in a given setting, the information must be presented in a way that permits informed judgments. Recent research on consumer behavior shows the extreme importance of the manner in which information is presented. In particular, informational overload can occur if precautionary labels present too much information or if too many products have precautionary labels. Warning workers against relatively small risks, such as the risk of cancer from silica (sand), may actually reduce workplace safety by convincing workers that warning labels are irrelevant. A proliferation of hazard warnings in the workplace will prove counterproductive if workers are led to view all activities or products as equally dangerous.

Conclusion

We all would like safe jobs, just as we would like a clean environment, no automobile deaths, and no crime. Unfortunately, a riskless society is not free. People are generally unwilling to accept the severe restrictions on personal freedoms plus the monumental economic expense needed to create a society free of all risks to personal health and safety. Unlike the cartoon economist who is ridiculed for knowing the price of everything and the value of nothing, we believe our discussion has demonstrated that we are aware of both the price and the value of greater workplace safety. We contend that citizens generally favor a perspicacious government where policy costs and benefits are concerned—they want an efficient government, one that does not pay more for something than it is worth, including the cost of saving a statistical life.

We have discussed the directions in which the U.S. workplace safety policy system is moving. One policy direction is toward a withering away of OSHA in the long run, coupled with an immediate pruning of OSHA's approach of standard-setting, inspections, and fines. We have also noted the possibility of taking greater advantage of the ability of NIOSH to develop worker exposure and activity guidelines and disseminate its research findings. Another policy direction we described is the improved safety incentives for firms that will be a byproduct of reducing the number of fraudulent workers' comp. claims paid. Our discussion has

emphasized what is happening now and what can be done immediately, without the annoying, but always popular, call for further study as a precondition for policy reform.

Telling OSHA horror stories is fun for many people. Some stories are blatant exaggerations, and we are obligated to correct the story that OSHA regulations prevent dentists from returning teeth to young children to put under their pillows for the tooth fairy. OSHA standards only require dentists to treat extracted teeth as hazardous wastes within the workplace. Nothing prevents a dentist from returning a tooth to the person from whom it was extracted. Of course, we are sympathetic to dentists who may be reluctant to return "hazardous wastes" to small children because, were a child infected by a blood-borne disease from a returned tooth, the dentist could face a costly legal battle trying to avoid liability for damages in an increasingly litigious United States.

Perhaps a good direction for workplace safety policy would be to phase out OSHA—if the agency cannot be shut down at this time—with an immediate revision of OSHA's current approach to standard-setting, inspections, and fines. State policymakers in the meantime should work to reform their workers' comp. programs. Insurance rules, when set by companies subject to market forces, protect safety in the most cost-effective manner. As important, state policymakers should reform their tort law systems to allow workers to seek redress from employers in true cases of negligence and reckless endangerment.

Selected Readings

- Kniesner, Thomas J. and Leeth, John D. *Simulating Workplace Safety Policy*. Boston: Kluwer Academic Publishers, 1995.
- Loeser, John D.; Henderlite, Stephen E.; and Conrad, Douglas A. "Incentive Effects of Workers' Compensation Benefits: A Literature Synthesis." *52 Medical Care Research and Review* (1995).
- Viscusi, W. Kip. *Fatal Tradeoffs, Public and Private Responsibilities for Risk*. New York: Oxford University Press, 1992.