OSHA: Challenges in Maximizing Effectiveness of a Public Health Agency

David Michaels, PhD, MPH
Assistant Secretary of Labor for Occupational Safety and Health
Fallen workers are remembered at Capitol

CHARLESTON, W.Va. -- A safe working environment and stronger enforcement of labor laws were called for Saturday by numerous policymakers from across the state.

“Workers are making money for the companies, but the companies aren’t taking care of their workers,” said Kenneth Perdue, president of the state AFL-CIO.

Workers Memorial Day reminder for local workplace fatalities

The message presented at the Memorial Day ceremony held the previous evening in Lafayette hit very hard for a few of the people who attended.

“Nobody goes to work to die,” Cox, AFL-CIO Community Liaison and organizer of the event, said. “Every worker has the right to work in a workplace and be safe on the job.”

Cox cited a report from the U.S. Bureau of Labor Statistics that showed 4,547 workers were killed by traumatic injuries in America’s workplaces in 2010 and an estimated 50,000 to 60,000 died from occupational diseases.

Workers killed on job recognized
Rate of Fatal Work Injuries per 100,000 Workers
1970 - 2010

1970: 18
1975: 15
1980: 13
1985: 11
1990: 9
1995: 5
2000: 4.3
2005: 4
2010: 3.6
OSHA’s Continuing Mission

- More than 4,000 Americans die from workplace injuries every year.
- Perhaps as many as 50,000 workers die from illnesses in which workplace exposures were a contributing factor.
- More than 3 million cases of non-fatal workplace injuries and illnesses annually.
- The annual cost of occupational injuries and illnesses totals more than $170 billion.
OSHA levels the playing field for responsible employers competing with those who are trying to cut corners and costs on worker safety.
Distribution of Employers, by Commitment to Workplace Safety

[Graph showing the distribution of employers by OSH commitment level]
Distribution of Employers, by Commitment to Workplace Safety

Number of Employers

OSH Commitment

LITTLE

GREAT

OSHA
Deterrence Theory

- OSHA has a range of tools and deterrence strategies, appropriate for different employers and different situations.

- Given (very) limited resources, OSHA’s challenge is to apply the most efficient mix in order to maximize the abatement of hazards, and therefore the prevention on injuries, illnesses and fatalities.
OSHA Standards Save Lives

• 1978 Cotton Dust Standard
  virtually eliminated brown lung disease

• 1987 Grain Handling Standard
  grain bin explosions reduced 42%

• 1989 Excavation & Trenching Standard
  fatalities reduced 35%

• 1991 Bloodborne Pathogens and 2001 Needlestick Safety & Prevention Act
  Hepatitis B infections in healthcare workers reduced 90%
OSHA Standards

But do OSHA standards kill jobs?
Vinyl Chloride Exposure Limit Is Opposed by Plastics Industry

By JANE E. BRODY
Special to The New York Times

WASHINGTON, June 25 — Representatives of the plastics industry pressed today for a relaxation of proposed Federal rules governing worker exposure to vinyl chloride, a chemical that has been linked to 21 cases of a rare, fatal liver cancer.

Industry spokesmen said that the proposed standard was medically unnecessary, technologically unfeasible and would lead to the loss of as many as 2.2 million jobs.

At the opening of what is expected to be a long Labor Department hearing on the proposed new standard of no exposure to detectable levels of the widely used chemical, industry spokesmen clashed with representatives of labor and Government and university scientists who testified that even stricter standards than those

This standard, according to the industry plan, would gradually reduced to a daily average of 10 parts per million with maximum exposure of 50 parts per million by October 1976.

Somewhat stricter standards were proposed for workers engaged in the synthesis of vinyl chloride, a sweet-smelling gas. But for those workers who fabricate polyvinyl chloride for any of thousands of consumer and industrial products, the industry said that no vinyl chloride standards should be applied.

Scientists from the National Institute for Occupational Safety and Health noted, however, that earlier this month two cases of angiosarcoma of the liver were uncovered in employees in fabrication plants in Connecticut.

The New York Times
Published: June 26, 1974
Clearly, those actions signify U.S. vinyl producers’ confidence that they have solved the “OSHA problem” that threatened the viability of their industry less than two years ago. They have installed the equipment needed to meet the worker-exposure requirements set by the Occupational Safety and Health Administration, but without inflating production costs to the point where PVC’s growth might be stunted.
OSHA Standards

OSHA standards don’t kill jobs.
They stop jobs from killing workers.
OSHA Standards 2002 - Present

2002
- Exit Routes, Emergency Action Plans, and Fire Prevention Plans

2004
- Commercial Diving Operations
- Fire Protection in Shipyards

2006
- Occupational Exposure to Hexavalent Chromium
- Assigned Protection Factors for Respiratory Protection Equipment

2007
- Electrical Installation Standard
- Personal Protective Equipment Payment

2008
- Vertical Tandem Lifts

2010
- Cranes and Derricks in Construction

2011
- General Working Conditions in Shipyard Employment

2012
- Global Harmonized System
Globally Harmonized System of Classification and Labeling of Chemicals (GHS)

- Biggest visible impact: Look of and information required for labels
- Signal Words, Pictograms
- Precautionary Statements
- Appropriate Hazard Warnings
Modifications to Labels

- Sample Hazard Statements
  - Fatal if in contact with skin
  - Extremely flammable aerosol
  - May cause cancer

- Two Signal Words
  - Danger
  - Warning
200 million visitors to OSHA’s website in FY 2011.
200,000 responses to OSHA 1-800 calls for help.
33,000 e-mail requests for assistance answered.
5,300 outreach activities by Regional & Area Offices.
27,000 small businesses helped through Consultation.
$3.2 million increase over FY 2011 budget for the On-site Consultation Program
A proactive process to help employers find and fix workplace hazards before workers are hurt.
States that Mandate Some Form of Injury and Illness Prevention Program
## Injury and Illness Prevention Programs

Protect Workers and Improve the Bottom Line

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Lost Days /100 Workers

OSHA®
FY 2007 – FY 2011
Inspections Conducted

39,324

FY07

FY11
FY 2007 – FY 2011

Inspections Conducted

<table>
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<tr>
<th>Year</th>
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Measuring Enforcement Effectiveness
March 8, 2011: In Mercerville, OH, an OSHA inspector ordered a worker out of an unshored trench, believing collapse was imminent. Five minutes later, the trench collapsed.

April 20, 2011: A similar incident occurred in Auburn, AL.

June 2002, Cincinnati, OH: An employer, cited for several safety violations, continued to operate as usual. An excavation site caved in, entombing a worker. *Eight hours later,* his body was removed from the trench.

When employers ignore OSHA standards, workers often are injured or killed.
Mercerville, OH
March 8, 2011
10:05 AM
Auburn, AL, April 20, 2011
Cincinnati, Ohio, June 14, 2002
10% Annual Reduction in Injury Rates

for the first two years after a Programmed Inspection with Penalties

YEARS AFTER THE INITIAL INSPECTION 1998-2005
Incentive Programs
Incentive Programs

- If a program primarily consists of awarding benefits to workers who don’t report injuries, that program is flawed.

- Effective safety programs incentivize hazard abatement or other safety-related activities, not whether a worker reported an injury.
Reporting an Injury is a Protected Activity

OSHA will investigate if workers are discouraged from reporting injuries by an employer:

- Disciplining workers, no matter what the circumstances surrounding the injury
- Invoking otherwise ignored safety rules
- Offering incentives for not reporting injuries
Figure 1: Number of annual grain entrapments recorded in the National Grain Entrapment Database and the 5-year average between 2001 and 2010.

Source: 2010 Summary of Grain Entrapments in the United States
Riedel S, Field B. Agricultural Safety & Health Program, Purdue Univ.
Drowned in corn: Grain bin deaths hit record

Feds step up inspections after accident that killed 2 Illinois teens

March 08, 2011|By Judith Graham, Tribune

The three young workers sank into the moving corn that pulled them down like quicksand toward the bottom of the giant grain bin. Wyatt Whitebread, 14, started sinking first. The moving kernels moved past his chest and over his head within a matter of seconds.

"We're going to die," moaned Alex "Alex" Pacas, 19, who had jumped in the sinkhole to try to pull Whitebread out.
Grain Handling Hazards

OSHA response:

- Stepped-up enforcement of grain facilities
- Industry outreach
- Hazard Alert
- Web site
- Fact sheet
- Wallet card
Purdue University researchers report that grain entrapments declined 47 percent in 2011 — a significant drop from the record high in 2010.
OSHA’s Heat Campaign

WATER. REST. SHADE.
The work can’t get done without them.

Educational Resources

Heat illness can be deadly. Every year, thousands of workers become sick from heat exposure on the job. Some of these workers even die. These illnesses and deaths are preventable.

Who is affected? Workers exposed to hot and humid conditions are at risk of heat illness, especially those doing heavy work tasks or using bulky protective clothing and equipment. Some workers might be at greater risk than others if they have not built up a tolerance to hot conditions, are in poor physical condition, are older, or if they have heart disease, high blood pressure, or are taking certain medications.

What is heat illness? The body normally cools itself by sweating. During hot weather, especially with high humidity, sweating isn’t enough. Body temperature can rise to dangerous levels if precautions are not taken. Heat illnesses range from heat rash and heat cramps to heat exhaustion and heat stroke. Heat stroke can result in death and requires immediate medical attention.

How can heat illness be prevented? Remember three simple words: water, rest, shade. Drinking water often, taking breaks, and limiting time in the heat can help prevent heat illness. Employers should include these prevention steps in worksite training.
POSTERS

Health effects of heat
Two types of heat illness:

Heat Exhaustion

Heat Stroka

Watch out for early symptoms. You may need medical help. People react differently — you may have just a few of these symptoms, or most of them.

Stay safe and healthy!
WATER. REST. SHADE. The work can’t get done without them.

1. Break water even if you aren’t thirsty — every 15 minutes.

2. In the shade.

Watch out for each other.

Wear hats and light-colored clothing.

“Easy does it” on your first days of work in the heat. You need to get used to it. Rest in the shade — at least 5 minutes as needed to cool down.

Los efectos del calor
Dos tipos de enfermedades por calor:

Agotamiento

Insuficiencia

Evite los primeros síntomas. Podrían necesitar atención médica. Las personas reaccionan de diferentes maneras. Podrían tener unos cuantos de estos síntomas o la mayoría de ellos.

¡Manténganse seguros y sanos!
AGUA. SOMBRAS. DESCANSOS. Sin ellos no se puede trabajar.

1. Tomen agua aunque no tengan sed — cada 15 minutos.

2. Descansos en la sombra.

No deben sudar mucho durante los primeros días que trabajan en el calor. Tienen que acostumbrarse. Tomen descansos en la sombra — por lo menos 5 minutos para refrescarse.

OSHA
National Weather Service
Heat Advisories now include:

TO REDUCE RISK DURING OUTDOOR WORK THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION RECOMMENDS SCHEDULING FREQUENT REST BREAKS IN SHADED OR AIR CONDITIONED ENVIRONMENTS. ANYONE OVERCOME BY HEAT SHOULD BE MOVED TO A COOL & SHADED LOCATION. HEAT STROKE IS AN EMERGENCY. CALL 911.
Heat Safety Tool

- Calculates heat index for worksite location
- Displays “risk level” for work at that heat index
- Lists protective measures to reduce risk of heat illness

New mobile phone app provides critical information for reducing risk of heat illness during outdoor work

Water ☼ Rest ☼ Shade

osha.gov/SLTC/heatillness
States that Mandate Some Form of Injury and Illness Prevention Program
Injury and Illness Prevention Programs
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[OSHA logo]
Residential Fall Protection
On-site Consultation and OSHA Compliance Assistance Outreach

- OSHA Regional and Area Office Outreach Activities on Residential Construction Fall Protection
  - 536 Outreach activities

- OSHA On-site Consultation Program Activities on Residential Construction Fall Protection
  - 1,175 Total Site visits
  - 250 Training sessions
  - 200 Presentations
  - 625 Other outreach activities
Each year over 750 construction workers die on the job in the U.S.

Falls are leading cause of deaths in construction — about 1/3 of all construction fatalities

Of the 255 deaths from falls in construction in the US in 2011, 90 were from roofs, 68 from ladders and 37 from scaffolds
Nail Gun Safety

A Guide for Construction Contractors
Distracted Driving

http://youtu.be/kztPC6kqzfi
Distracted Driving

http://www.osha.gov/distracted-driving/index.html
OSHA was “…the instrument of a revolutionary law. I always looked upon it as insuring Americans of a new right in the Bill of Rights — the right to a safe and healthful workplace.”

Morton Corn, PhD, CSP
OSHA Assistant Secretary
Ford Administration