

# **Keeping Pace With the Changing World of Work**

**Alf Nachemson Memorial Lecture  
11/15/2012**

**Michael Silverstein, MD, MPH**

# **Four Themes From the Expert Advisory Panel Report**

- Prevention as the organizing principle**
- Worker vulnerability in a changing workplace requires a multipronged approach**
- Government can't be in every workplace**
- Evidence based changes must be made**

**Lead poisoning is  
not just a disease...**



**It is a crime**

**Dr. Robert Klein,  
Boston City Hospital, 1971**

**The stress should not be on economic aid for landlords but on changing society so children's lives and brains are valued more than landlords' financial well being...Almost nowhere are the sanitary codes vigorously enforced. This lack is a major contributor to the deterioration of housing.**

**Dr. Robert Klein, Pediatrics, 50:2 1972**

## **Dr. Klein's Advice**

- **Always aim for prevention: Prevention trumps treatment**
- **Search for the most basic underlying causes**
- **Intervene in the most potent ways possible**
- **Evaluate whether the intervention worked**

**“There are no single levers or changes...that would effect significant improvements on their own... The Panel made an effort to find the best mix of high value opportunities for change. These opportunities touch on the continuum of prevention and enforcement activities from education in schools and proactive prevention initiatives, right through to the need for effective enforcement in situations where safety standards are breached.”**

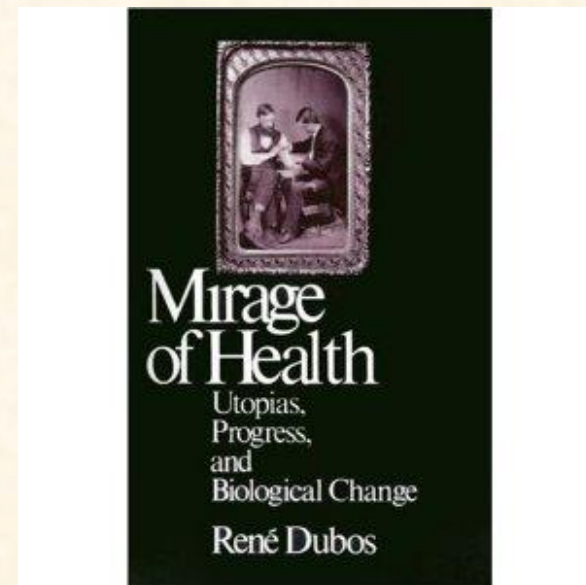
**“ I shall always be thankful for the training in scientific method I had...but I have never doubted the wisdom of my decision to give it up and devote myself to work which has been scientific only in part, but human and practical in greater measure...”**

Exploring the Dangerous Trades,  
Alice Hamilton



**As long as mankind is made up of independent individuals with free will, there cannot be any social status quo. Men will develop new urges, and these will give rise to new problems, which will require ever new solutions. Human life implies adventure, and there is no adventure without struggles and dangers.**

**Rene Dubos, Mirage  
of Health, 1959**





**“Through pride we are  
ever deceiving  
ourselves. But deep  
down below the surface  
of the average  
conscience a still, small  
voice says to us,  
something is out of  
tune.”**

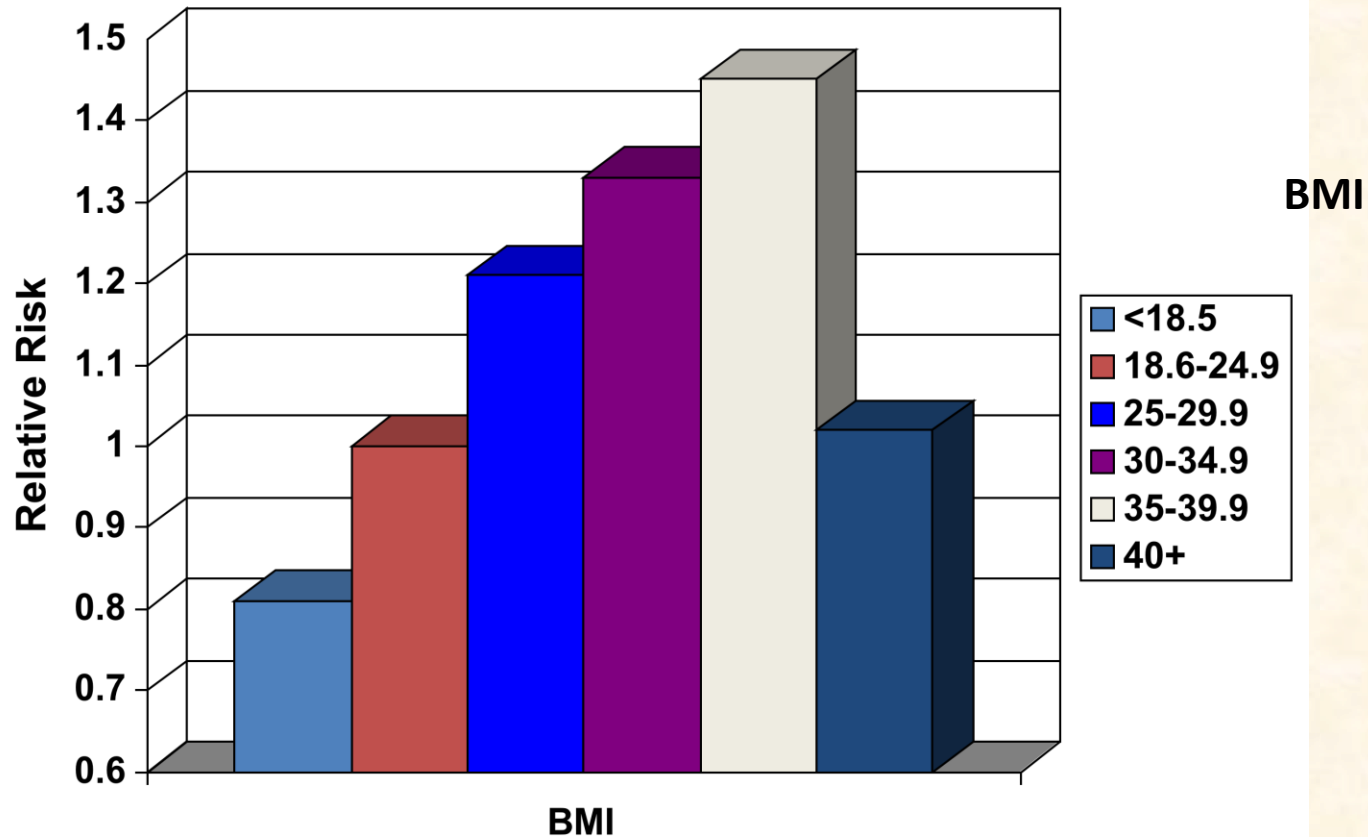
Carl Jung



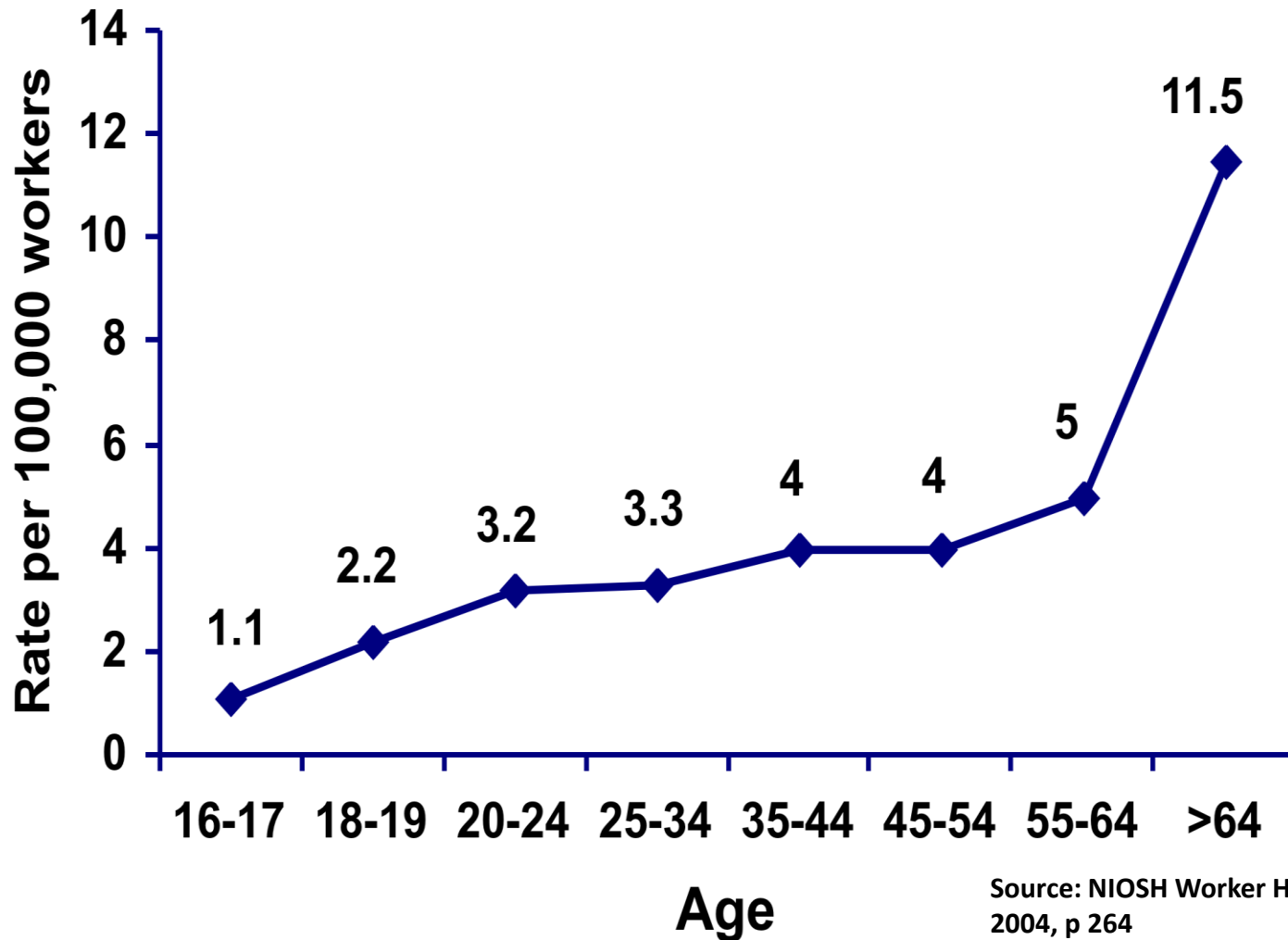
# The Changing World of Work

- **Older, heavier, sicker**
- New chemicals
- Work related musculoskeletal disorders
- From manufacturing to services & health care
- Vulnerable workers
- Non-traditional work
- Declining union representation
- Changing expectations

# Weight (BMI) and Worker Compensation Claims



# Workplace Fatalities and Age



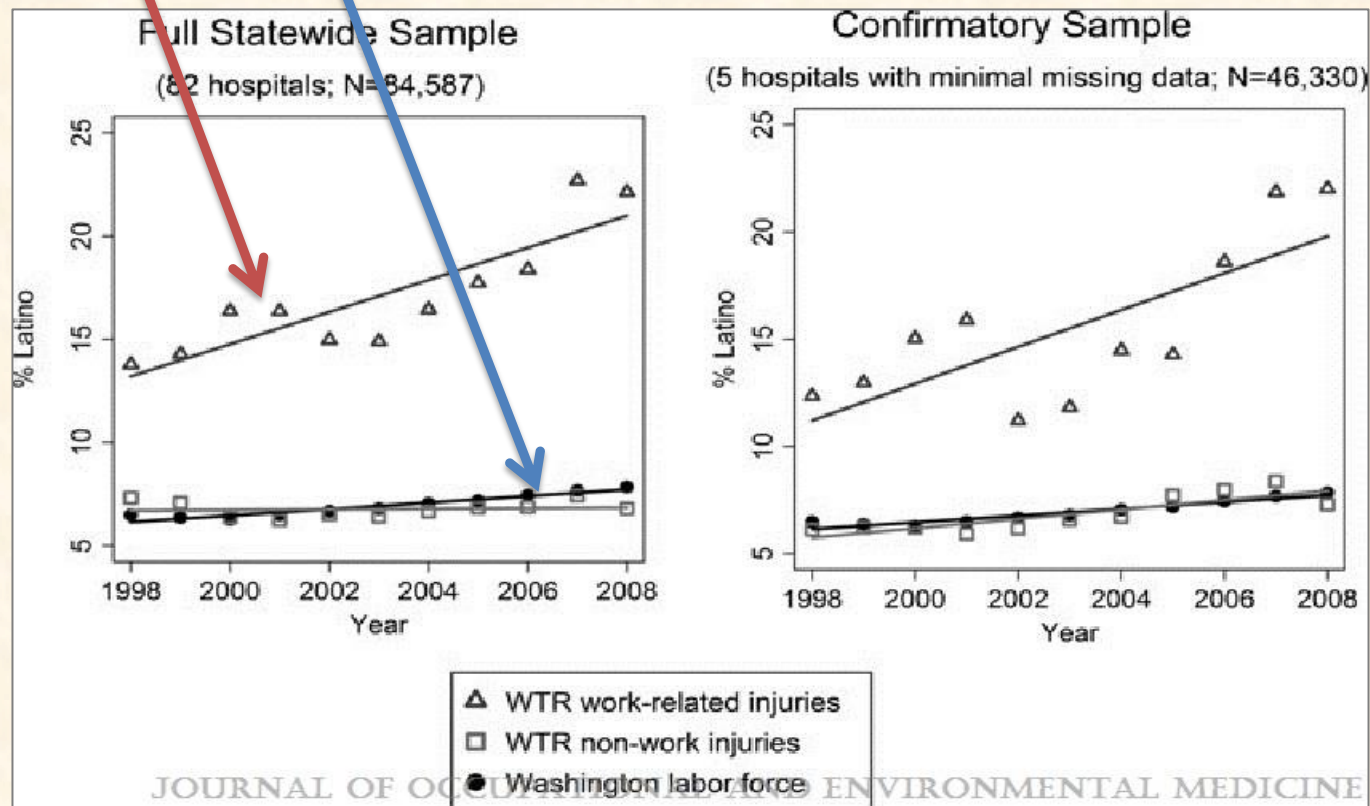
Source: NIOSH Worker Health Chartbook, 2004, p 264

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# Percent of Latinos among those with work related injuries

## Percent of Latinos in the labor force

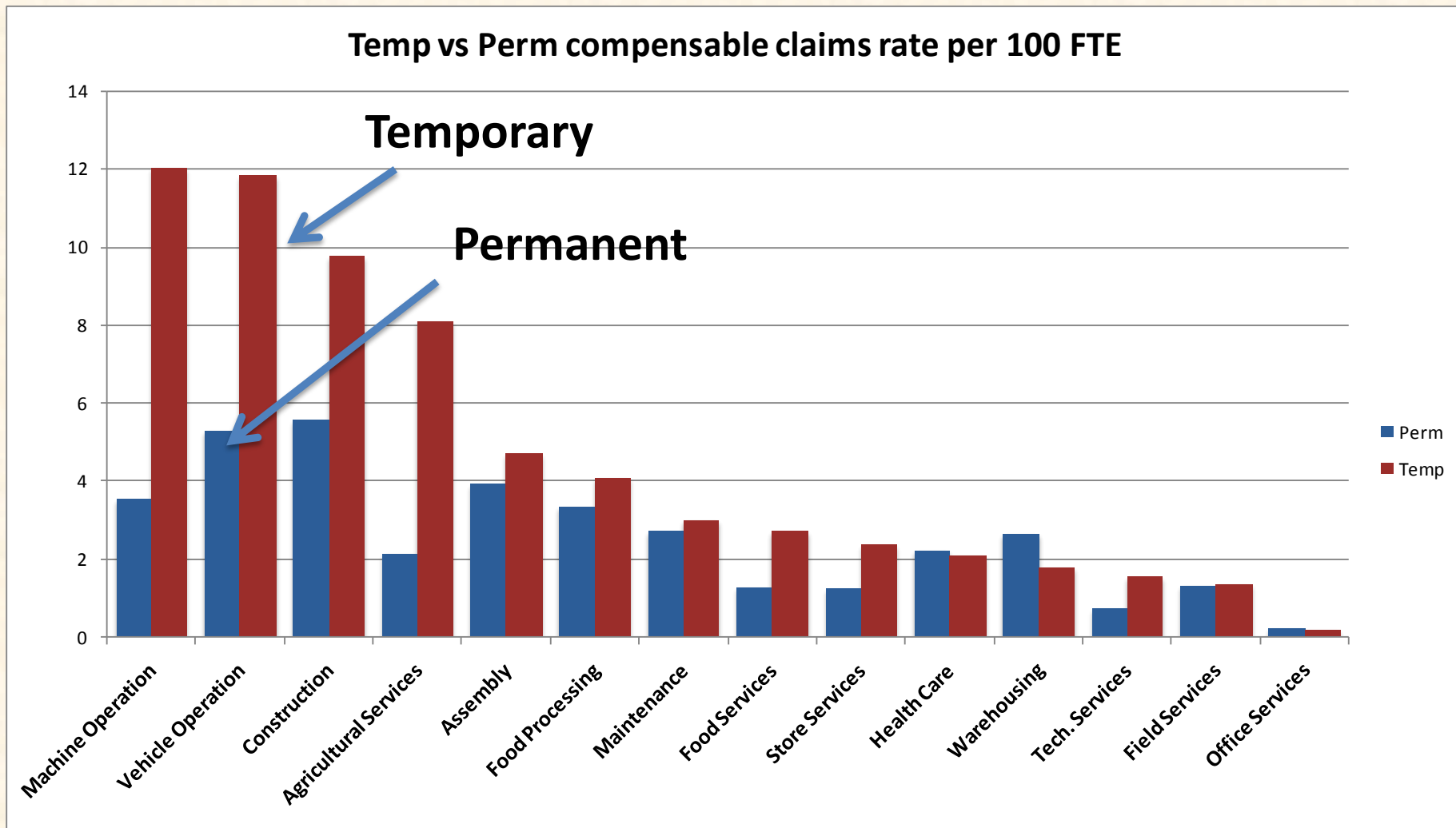


Sears, Jeanne M.; Bowman, Stephen M.; Silverstein, Barbara A. Trends in the Disproportionate Burden of Work-Related Traumatic Injuries Sustained by Latinos. *Journal of Occupational and Environmental Medicine*. 54(10):1239-1245, October 2012. doi: 10.1097/JOM.0b013e31825a34ed

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# Worker Compensation Rates Higher for Temporary Workers in Almost All Industries

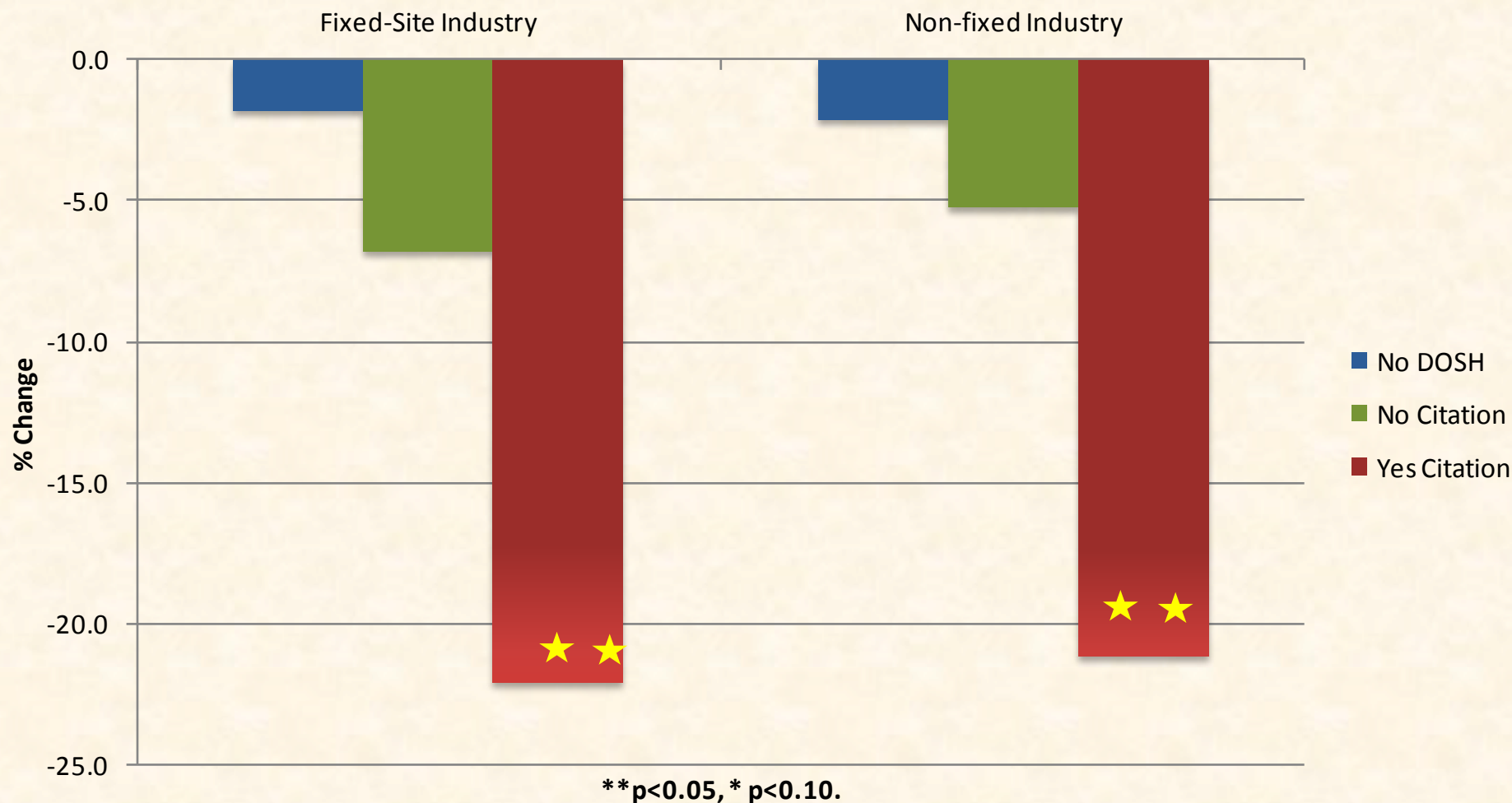




# **The Changing World of Work**

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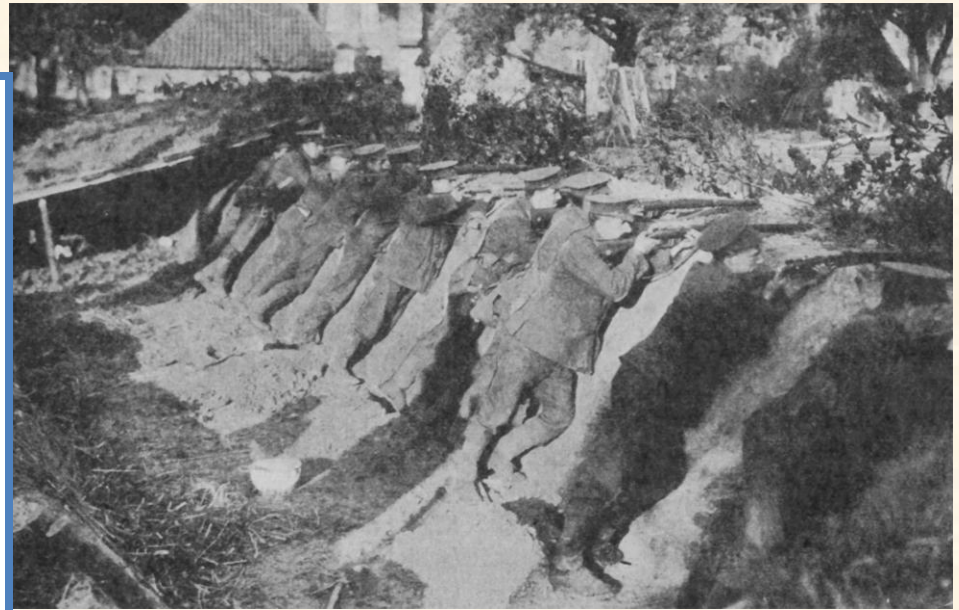
## Changes in Non-MSD Compensable Claims Rate: No DOSH vs DOSH/No Citation vs DOSH/Yes Citation, Fixed-Site and Non-fixed Site



Source: Foley M, Fan ZJ, Rauser E, Silverstein B.; The impact of regulatory enforcement and consultation visits on workers' compensation claims incidence rates and costs, 1999-2008. Am J Ind Med. 2012 Nov;55(11):976-90.

**All the other nations...had double labour; for the sides of the trench fell in continually... since they made the width no greater at the top than it was required to be at the bottom. But the Phoenicians... began by making the trench at the top twice as wide...and then as they dug downwards approached the sides nearer and nearer together.**

**The Histories of Herodotus,  
The Persian Wars Book 7  
Polymnia, c. 484 - 425 BC**



# **“The System”**

- **Few inspectors, many workplaces**
- **Few consequences**
- **One hazard at a time**
- **Catch me if you can – an honor system**
- **Who’s the employer**

# Penalties Compared

OSHA	Substantial probability of serious physical harm or death	\$7000 max, \$900 average
OSHA	Knowing disregard or plain indifference to serious risk	\$70,000 max, \$34,000 average
Agriculture	Willful violation of the Fluid Milk Promotion Act	\$130,000 max
FCC	Indecent content	\$325,000 max
EPA	Tampering with public water system	\$1,000,000 max

**2001: Sulfuric acid tank explosion at Delaware oil refinery.**

- Refinery worker Jeff Davis killed. OSHA penalty \$175,000
- Thousands of dead fish & crabs. EPA penalty \$10,000,000.

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# **A Different Paradigm**

- **Every workplace with a comprehensive safety and health program**
- **Requirement to find and fix hazards**
- **Annual or periodic program certification**
- **Modified role for government agency**
- **New private-public partnership for inspections**



## **Dr. Klein's Advice**

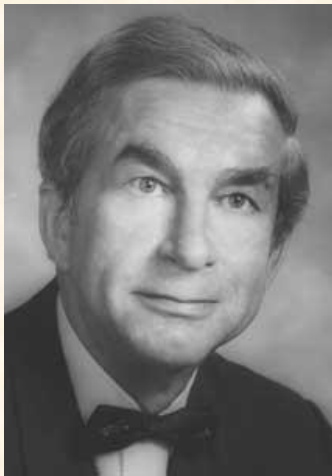
- **Always aim for prevention: Prevention trumps treatment**
- **Search for the most basic underlying causes**
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Everyone, and that includes you and me, is at some time careless, complacent, overconfident, and stubborn. At times each of us becomes distracted, inattentive, bored and fatigued. We occasionally take chances. We misunderstand, we misinterpret and we misread. As a result of these and still other completely human characteristics, we sometimes do not do things or use things in ways that are expected of us.

**Alphonse Chapanis**

Because we are human and because all these traits are fundamental and built into each of us, the equipment, machines and systems that we construct for our use have to be made to accommodate us the way we are, and not vice versa."



**Alphonse Chapanis**

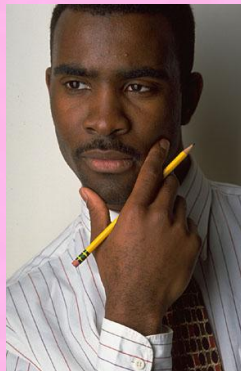
**Science**



**Political  
Process**

**Policy**

**Values**



## **Issue:** Workplace Violence in State Mental Hospitals

**Science:** Risk factors and preventive measures... Restraining patients will protect workers

**Values:** Worker safety & patient safety ...  
could worker safety = patient abuse?

**Politics:** Families, Unions, Trial lawyers,  
Legislature, Governor

Society entrusts regulatory and enforcement agencies with awesome powers. They can impose economic penalties, place liens upon or seize property, limit business practices, suspend professional licenses, destroy livelihoods...How regulatory and enforcement agencies use these powers fundamentally affects the nature and quality of life in a democracy.

**Malcolm Sparrow, The Regulatory Craft**



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