

# Reducing Occupational Health Disparities in Massachusetts: From Data to Action



**Letitia Davis, ScD, Kerry Souza, MPH**

Occupational Health Surveillance Program  
Bureau of Health Information, Statistics, Research and  
Evaluation  
Massachusetts Department of Public Health



## Today's Presentation

- Overview of the Occupational Health Surveillance Program
- Occupational health disparities among racial and ethnic groups in Massachusetts
- Translating data to action



## Occupational Health Surveillance Program\*

- Tracks work-related injuries and illnesses in Massachusetts
- Uses this information to target intervention and prevention activities
- Places special emphasis on reaching underserved worker populations

\*Funded by the National Institute for Occupational Safety and Health.



## Occupational Health Surveillance Activities

- Targeted surveillance systems for reportable work-related conditions
  - Fatal occupational injuries
  - Work-related asthma
  - Work-related injuries to teens
  - Sharps injuries to hospital workers
  - Hospitalized burns
  - Adult lead poisoning
- Use of large population-based data sets - hospital data, cancer registry, BRFSS, Youth Health Survey, workers' compensation data



## Burden of Occupational Injuries and Illnesses in Massachusetts

- 1-2 workers killed on job each week
- ~ 4 of every 100 workers injured/made ill each year\*
- Over 3,200 hospitalizations and 86,000 emergency department visits for work-related conditions each year\*

\*Conservative estimates



## This burden is not born equally... What are occupational health disparities?

Differences in the incidence of work-related illnesses, and injuries that occur by socioeconomic and demographic characteristics including **race, ethnicity, and immigrant status**



## The Massachusetts Workforce 3.2 million

- 6% Black
- 6% Hispanic
- 6% Asian
- 17% foreign born –  
up from 8% in 1980

Source: Current Population Survey, 2006



## Why do minority and immigrant workers experience disparities?

Minorities and  
immigrants are:

- More likely to  
work in  
dangerous jobs



## Leading Occupations in Massachusetts by Race/Ethnicity






**HISPANIC**

- Nursing aides
- Janitors & cleaners
- Grounds maintenance
- Maids
- Truck drivers

**BLACK**

- Nursing aides
- Janitors & cleaners
- RNs
- Cashiers
- Maids

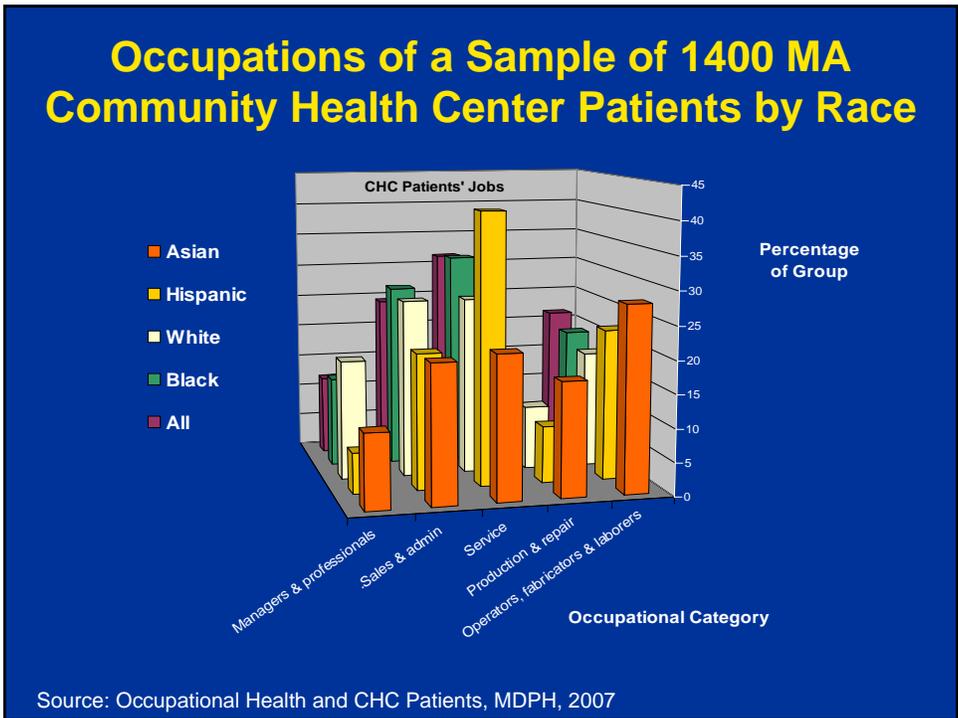
**ASIAN**

- Computer engineers
- Medical scientists
- Waiters & waitresses
- Physicians
- Cashiers

**WHITE**

- Secretaries
- Managers & admin.
- Supervisors in retail sales
- RNs
- Salespersons

Source: Current Population Survey: 2005-07

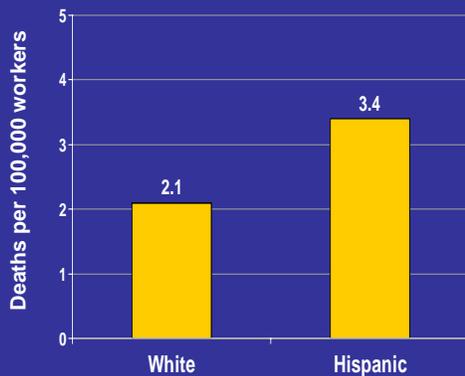




## Why do minority and immigrant workers experience disparities?

- ✓ Dangerous jobs
- Racism
- Long work hours/pressure
- Low awareness of rights and resources
- Burden of immigration status
- Language barriers/literacy
- Cultural differences
- Poorer occupational health care

## Hispanic workers are at high risk of fatal occupational injury in Massachusetts



Source: Massachusetts Census of Fatal Occupational Injuries, 2003-06

**MMWR**  
Morbidity and Mortality Weekly Report  
www.cdc.gov/mmwr

Weekly June 6, 2008 / Vol. 57 / No. 22

**Work-Related Injury Deaths Among Hispanics — United States, 1992-2006**

Hispanics are among the fastest growing segments of the U.S. workforce (1). In 2006, an estimated 11.6 million workers in the United States were Hispanic, 50% of whom were foreign born (2). To document work-related injury deaths among Hispanic workers in the United States, CDC, the Bureau of Labor Statistics (BLS), and certain state agencies analyzed data from 1992-2006. This report summarizes the results of this analysis, which indicated that, during 1992-2006, a total of 11,363 Hispanic workers died from work-related injuries. The death rate for Hispanic workers increased during this period, however, the rate was consistently higher than the rate for all U.S. workers, and the proportion of deaths among foreign-born Hispanic workers increased over time. During 2003-2006, 50% of Hispanic worker deaths occurred in the construction industry. Additional efforts are needed to reduce the risk for death among Hispanic workers because of potential increases in their employment, involvement in work with high risk for injury, susceptibility to miscommunication caused by language differences, and other potential risks associated with culture and economic issues.

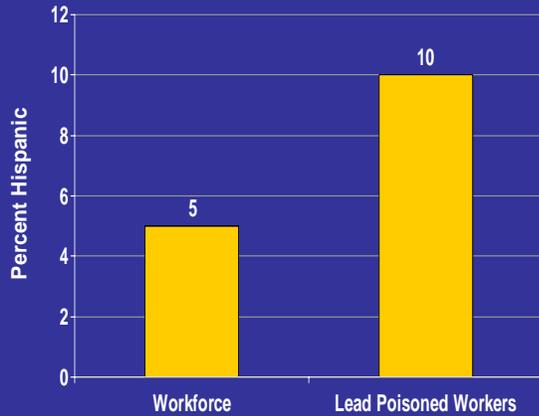
The BLS Census of Fatal Occupational Injuries (CFOI) collects data on fatal occupational injuries from multiple federal, state, and local sources, including death certificates, worker's compensation reports, medical examiner reports, and police reports. Approximately 10% of cases are recorded as lost time independent injuries (3). To be included in CFOI, the incident must have been confirmed at the time of the event, engaged in a legal work activity, or present at a site as a job requirement. CFOI excludes deaths that occurred during a worker's normal commute to and from work and deaths related to occupational illness. A jurisdiction is classified as Hispanic if documentation is available indicating that the decedent was of Mexican, Puerto Rican, Cuban, or Central or South American descent, or of other Spanish culture or origin, regardless of race. Deaths of undocumented workers are included in the report; otherwise data are presented only for the period 2001-2006 because, in 2001, workers aged 16 years using estimates of employed civilian workers from the BLS Current Population Survey (CPS) (2). CPS is a monthly survey of approximately 50,000 households that uses a combination of in-person and telephone interviews with a single person reporting for all household members. Undocumented persons are included in CPS.

Work-related injury deaths among Hispanic workers during 1992-2006 totaled 11,363 (Figure 1), approximately 13% of all U.S. work-related injury deaths during that period. Median age of Hispanic decedents was 39 years, compared with a median age of 42 years for all workers. Approximately 97% of Hispanic decedents were male. The annual work-related injury death rate for Hispanic workers exceeded the rate for all U.S. workers every year during 1992-2006, with the exception of 1993. In 2006, the work-related injury death rate for Hispanic workers was

**NOTES:**  
1. 2007 Hospital Discharge Statistics Among Hispanics — News, 2006.  
2. 2007 Public Health Consequences of a False Positive Latent Tuberculin Test Result for Brevard, a Florida, Georgia, and Michigan, 2005.  
3. Bureau of Workers' Compensation, 2007.

DEPARTMENT OF HEALTH AND HUMAN SERVICES  
CENTERS FOR DISEASE CONTROL AND PREVENTION

## Hispanic workers are over-represented in the MA Occupational Lead Registry\*

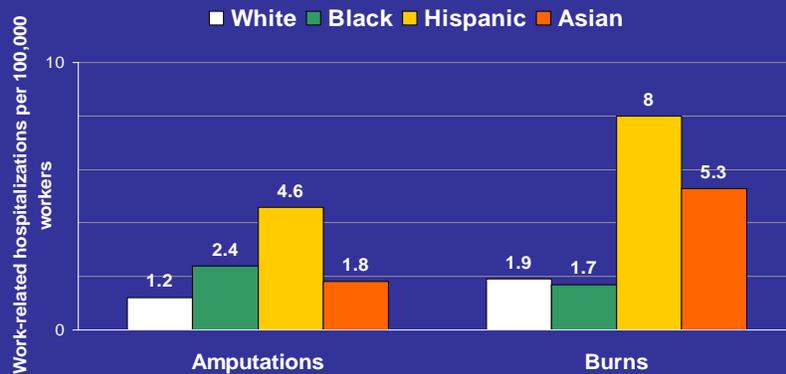


### Health Effects

- Hypertension
- Cognitive dysfunction
- Renal failure
- Adverse reproductive outcomes
- "Take home lead"

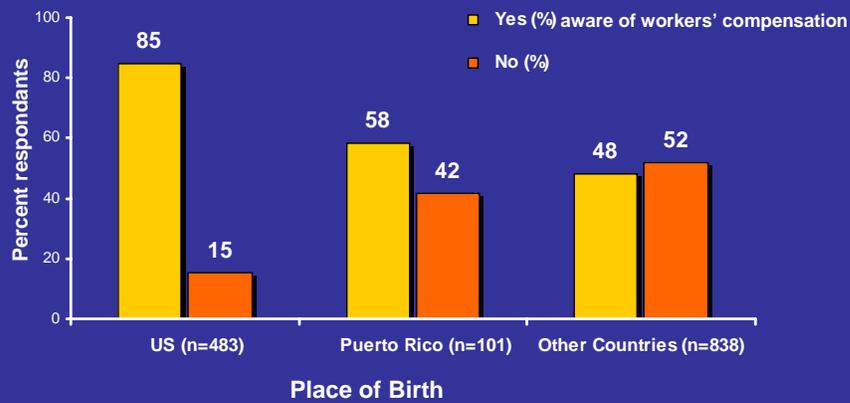
\*Blood lead levels of 40 µg/dl or greater:  
Source: Massachusetts Occupational Lead Registry: 1996-2001

## Minority workers experience higher rates of hospitalizations for some work-related injuries



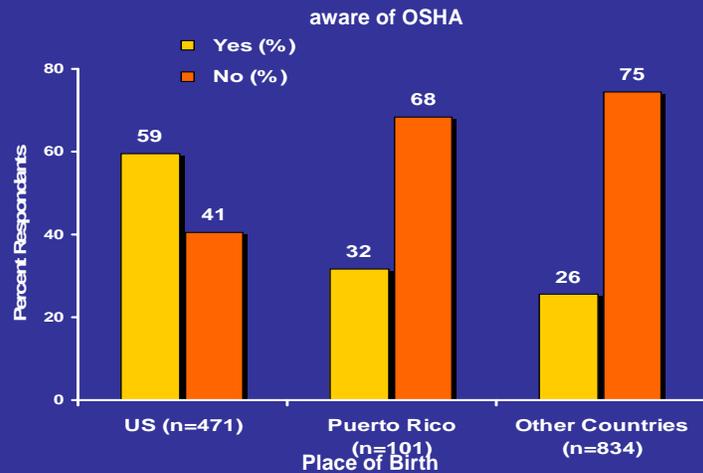
Source: DHCFP Hospital Discharge Data Set: 1996-2000; race and ethnicity were mutually exclusive categories in this data set during this time period.

## Awareness of workers' compensation varied by place of birth – community health center patients



Source: Occupational Health and CHC Patients, MDPH, 2007

## Likewise, awareness of OSHA was lowest among foreign born



Source: Occupational Health and CHC Patients, MDPH, 2007



## What can we conclude about occupational health disparities ?

- Data reveal disparities by race, ethnicity and immigrant status in MA similar to findings in other studies
- Critical to address the contribution of working conditions to racial and ethnic disparities in health

## From Data to Action - Massachusetts FACE (Fatality Assessment Control and Evaluation)

- Investigations of targeted deaths: Hispanic and immigrant worker deaths
- Dissemination of alerts in relevant languages
- Community task force

**Fire Safety Alert**

Occupational Health Surveillance Program Massachusetts Department of Public Health  
Office of the State Fire Marshal Department of Fire Services

March 2006

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**Wood Floor Sanders Killed When Floor Finishing Product Catches Fire-Massachusetts**

Wood floor finishing can expose workers, building occupants, and homeowners to fire hazards. In Massachusetts, three wood floor sanders died within a 19 month period (September 2004 - July 2005) in two separate fires when the flammable lacquer floor sealer they were using caught fire. The sealer used in these incidents was highly flammable (flash point 9°F/-13°C). All three of the fatally injured workers were Vietnamese immigrants.

**Incident 1:** Two floor sanders died from burns and two were seriously burned while they were refinishing wood floors in a three-family house. The house caught fire while the workers were applying a lacquer sealer that was ignited by a pilot light in a gas stove. At the time of the fire, windows were closed and no other means of ventilation were being used.

**Incident 2:** One floor sander died from burns and another received minor burns while finishing wood floors that they installed in a single family house. The house caught fire while the workers were applying a lacquer sealer that was ignited by a pilot light on a gas hot water heater. The heater was located in a closet on the same level of the house where the floors were being finished. At the time of the fire, the front door was open, but windows were closed and no other means of ventilation were being used.

**HOW CAN YOU HELP PREVENT FIRE DURING FLOOR FINISHING?**

Use less flammable wood floor finishing products (products with flash points greater than 100°F/38°C) for indoor applications.

Extinguish all open flames and other ignition sources before beginning work.

- Extinguish gas appliance pilots (on stoves, hot water heaters, heating units, clothes dryers, and other appliances).
- Turn off and unplug cycling electrical appliances (such as refrigerators, air conditioners, heating units, hot water heaters) and other electrical devices.
- Do not light or smoke cigarettes while you are working.
- Do not turn light switches on or off during the floor finishing process; turn off power to work area, if possible.

**FLAMMABLE**

**What is the flash point of a liquid?**

The flash point is the lowest temperature at which a liquid produces enough vapor to catch fire in the presence of a flame or other ignition source. The lower the flash point, the more flammable the liquid. A product's flash point can be found on the Material Safety Data Sheet (MSDS), or product label or by asking the product manufacturer.



## From Data to Action - Community Health Center Occupational Health Project

- Build capacity of community health centers to identify and address occupational health needs of patients
- Amend data collection systems to include occupational information
- Train providers and staff
- Build intranet resources for providers and patients.



Thank You.

[www. Mass.gov/dph/ohsp](http://www.Mass.gov/dph/ohsp)