Reducing Occupational Health Disparities in Massachusetts: From Data to Action

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Today’s Presentation

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

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

Occupations of a Sample of 1400 MA Community Health Center Patients by Race

Source: Occupational Health and CHC Patients, MDPH, 2007
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

Deaths per 100,000 workers

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Source: Massachusetts Census of Fatal Occupational Injuries, 2003-2006

*Does not reflect any race data.*

*Data from 2001 include deaths resulting from the September 11 terrorist attacks.*
Hispanic workers are over-represented in the MA Occupational Lead Registry*

- Blood lead levels of 40 µg/dl or greater:

**Health Effects**

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

*Blood lead levels of 40 µg/dl or greater:
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

![Bar chart showing awareness of OSHA by place of birth. US (n=471), Puerto Rico (n=101), Other Countries (n=834).]

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
March 2006

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 10 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 Sanders 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.

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), on product label, or by calling the product manufacturer.

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 pilers (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.
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