Work-Related Health Disparities: Findings and Recommendations from Public Health Surveillance in Michigan

Martha Stanbury, MSPH - Michigan Department of Community Health
Kenneth Rosenman, MD - Michigan State University

Introduction

• Understanding the differential impacts of working conditions on health by racial and ethnic groups is critical for developing policies and programs to address health disparities.

• No nationwide surveillance system that tracks non-fatal work-related injury and illness by race and ethnic groups.

• In Michigan, reports of occupational disease/injury from hospitals, emergency departments, health care providers, poison control center, and laboratories.

• Race/ethnicity information collected (but always available).

Employment Demographics in Michigan, 2009

• 4.3 million workers, 84% were white, 10.5% were black, and 3.7% were Asian. 2.7% were Hispanic.

•Employment data from 2009 Census data show differential employment based on the five most common occupations and the percent of all employed members of that group who work in that occupation.

Hispanic	**African Americans**
Cooks (7.1%)	Nursing aids (4.8%)
Cashiers (3%)	Cashiers (3.6%)
Laborers (2.9%)	Assemblers/fabricators (3.2%)
Drivers (2.8%)	Child care workers (2.5%)
Retail sales (2.7%)	Home care aids (2.4%)
Asian	**White**
Physicians (7.2%)	Drivers (2.7%)
Mechan. engineers (5.7%)	Secretaries (2.6%)
Computer software (5.7%)	Managers: retail sales (2.5%)
Nurses (5.5%)	Nurses (2.3%)
"Personal appearance" workers (4.9%)	Managers, other (2.1%)

1,037 Fatal Traumatic Occupational Injuries in Michigan, 2002-2009

•Rates for Hispanics > whites in 6 of 8 yrs.
•In 2008: 5.8% deaths were Hispanic; rate of 2.3 compared to 1.61 among whites.

Hispanic farm hand in 20s died when shirt entangled in unguarded power take off shaft while making feed.

2,920 Work-Related Asthmatics in Michigan, 1988-2009

•19% confirmed cases were African-American
•Incidence rates: 2.1 higher incidence in African Americans than whites (5.3/100,000 vs. 2.5/100,000)

1,079 Silicotics in Michigan, 1987-2009

•Industries at high risk: foundries and construction.
•41% confirmed cases were African-American
•Six-fold higher incidence in African Americans than whites (8.7/100,000 vs 1.5/100,000)
•Reflects hiring practices and job assignments in foundries.

2,249 Individuals with blood lead >25µg/dl in Michigan, 1998-2010

•Industries at high risk: non-ferrous foundries, construction, and firing ranges.
•22% of workers with highest blood lead levels African-American.
•Clusters of lead poisoning in non-English-speaking workers.

Hispanic workers with lead poisoning in a Michigan brass facility

After a blood lead test of 71 µg/dl (normal < 5 µg/dl) ordered by worker's primary care physician, a Michigan OSHA inspection at his workplace, a small non-ferrous foundry that had never provided blood lead testing for its employees, found multiple violations of the lead standard. Four of the other 6 workers were found to have blood lead levels (> 50 µg/dl). Five of the employees only spoke Spanish.

"Detroit industry", Mural by Diego Rivera at the Detroit Institute of Art

Conclusions

•Work-related health disparities by race and ethnicity exist in work sectors in Michigan.
•Most notable disparities identified:
- Increased incidence silicosis and work-related asthma in African Americans.
- Hispanics fatally injured at work.

•Michigan surveillance data do not fully describe scope of work-related health disparities because race/ethnicity data not always provided by sources of case reports.

Recommendations

•Ensure inclusion of race/ethnicity in health data sets used for public health surveillance.

•Include consideration of occupational health disparity as a cause of disparities in the incidence of cancer and other chronic conditions (e.g., how much of the disparity in lung cancer mortality is due to the overrepresentation of African-Americans in foundries and coke ovens, high risk industries for lung cancer.)

• Include occupation and industry in the Behavioral Risk Factor Surveillance system (BRFSS).

•Collaborate with others focused on overall health disparities to promote awareness of workplace safety and health.

•Expand training in occupational disease for health care providers, especially those working with minorities.

•Expand training in occupational safety and health for high school students, especially vocational students.

•Translate occupational safety and health materials into languages of at-risk immigrant worker groups.

Michigan Department of Community Health MDCH

For a copy of the full report go to **http://bit.ly/p0ou91**.
For more information contact Martha Stanbury at stanburym@michigan.gov

MICHIGAN STATE UNIVERSITY