

***Health Disparities are an Occupational Health Issue***

Although occupational health is generally not included in the discussion of health disparities by local, state or federal agencies, there are both historical and current examples of occupational health disparities that underscore that occupational health should be included in programs to address health disparities. This oversight in addressing occupational health disparities has occurred despite the many examples in the medical literature of a disproportionate occurrence of work-related injuries and illnesses among minority and immigrant populations (Table 1), the estimated economic costs of occupational injuries and illnesses in low-wage workers of \$15 billion for medical care and another \$24 billion for lost productivity (Leigh, 2012), the history of tragedies among minority and immigrant workers such as the Triangle shirtwaist factory fire in 1911 in New York City where 146 mostly female immigrant textile workers died, and the current differences in the predominant jobs performed by different racial groups (Table 2).

**Table 1. Examples of Occupational Respiratory Health Disparities**

Condition	Results	Reference
<b>Lung Cancer</b> Chromium Smelter Workers	80 vs 15 increased risk, AA vs C 3.08 vs 1.94 increased risk, AA vs C	US PHS, 1953; Rosenman and Stanbury 1996
Coke Oven Workers	8.18 times increased risk for AA	Lloyd, 1971
Uranium Miners	28.6 times increased risk for Navajo Indians	Gilliland et al, 2000
<b>Silicosis</b> Tunnel Workers	Acute Silicosis among AA	Cherniak, 1986
Foundry Workers	Silicosis incidence 5.5 increased risk for AA	Rosenman et al, 2012
South African Gold Miners	Silicosis prevalence, AA 71.6% vs. C 6.88%	Irwig and Rocks, 1978
<b>Work-Related Asthma</b> All Workers	Incidence of WRA, AA 4.8 vs C 2.5	Stanbury and Rosenman, 2014
All Workers	Prevalence of WRA, AA 12.53%, H 10.43%, C 8.3%	MMWR, 2012

\*AA=African American, C=Caucasian, H=Hispanic

Table 1 shows examples of increased lung cancer, silicosis and work-related asthma in minority populations in selected industries. Industrial hygiene studies showing increased exposure among minorities working in the same workplaces as Caucasians, along with lower cigarette smoking rates for the minority workers supports the assertion that these findings of increased prevalence and incidence are associated with increased exposure to causal agents in the workplace (Mazumdar et al 1975; Rosenman et al, 1996; Brugge and Goble, 2002). Table 2 shows the 10 most common occupations in Michigan by racial/ethnic groups. The most common occupation for Caucasians is drivers (2.8%), for African Americans, nursing/home aides (4.6%), for Asians, engineers (9.8%), and for Hispanics, agricultural workers (9.8%) (Stanbury and Rosenman, 2014).

Discriminatory hiring practices, which explain the historical examples of occupational health disparities, are now illegal. Reasons why there continue to be marked differences in the distribution of the races across occupations include residential clustering by race with geographic limitations on the availability of jobs, and differences in educational attainment. In addition to variations in exposures by occupation, disparities related to work occur because of a disconnect between occupational health and safety interventions and certain worker populations; barriers created by social, cultural, and economic issues including language, literacy, and marginal economic status (e. migrant farm workers or construction day laborers, who are predominately Hispanic) all act to limit the effectiveness of these interventions among minority working groups.

Although work-related health disparities have been identified by high profile events and research studies, there is no ongoing nationwide surveillance system to track these trends. Data on race (white, black or African-American, Asian, other and multiple race) and Hispanic ethnicity from the official national system that tracks occupational injuries and illnesses (the annual Survey of Occupational Injuries and Illnesses (SOII), which is conducted by the Bureau of Labor Statistics) is not presented in official publications because reporting of these data elements by employers is voluntary and is missing in 37% of the submitted records. Michigan’s workers’ compensation system, like most states, does not collect information on race or ethnicity.

**Table 2. Ten Most Common Occupations for African American, Asian, Caucasian and Hispanic Workers, Michigan 2011.\***

<p><b>Hispanic Workers (# employed: 161,489)</b>            Agricultural workers (9.8%)            Assemblers and fabricators (4.1%)            Grounds maintenance workers (3.1%)            Retail salespersons (3.0%)            Janitors (2.8%)            Cooks (2.5%)            Food preparation workers (2.2%)            Packers and packagers, hand (2.2%)            Waiters/waitresses (1.9%)            Secretaries (1.8%)</p>	<p><b>African American Workers (# employed: 435,105)</b>            Nursing/home health aides (4.6%)            Janitors (3.1%)            Assemblers and fabricators (3.1%)            Personal and home care aides (2.8%)            Cashiers (2.8%)            Laborers (2.5%)            Customers service reps (2.4%)            Retail salespersons (2.3%)            Cooks (2.2%)            Bus drivers (2.1%)</p>
<p><b>Asian Workers (# employed: 129,414)</b>            Mechanical engineers (9.8%)            Software developers (7.5%)            Postsecondary teachers (4.3)            Computer/information systems managers (3.9%)            Physical therapists (3.9%)            Managers (3.4%)            Nurses (3.1%)            Cooks (2.9%)            Accountants (2.9%)            Physicians (2.7%)</p>	<p><b>Caucasian Workers (# employed: 3,558,662)</b>            Drivers/sales workers and truck drivers (2.8%)            Cashiers (2.4%)            Retail salespersons (2.4%)            Secretaries (2.3%)            Managers, all other (2.1%)            Nurses (2.1%)            Elementary/middle school teachers (2.1%)            Supervisors of retail sales workers (1.9%)            Waiters/waitresses (1.6%)            Assemblers and fabricators (1.5%)</p>

\* Rankings of most common occupations are from the 2011 Current Population Survey, U.S. Bureau of Census (<http://www.census.gov/people/io/methodology>). Percentages in the table represent the percent of all employed members within that race/ethnicity group who work in that particular occupation. (Table adapted from Stanbury and Rosenman, 2014)

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The changes needed in current surveillance systems, if we are to be able to assess the occurrence of current and future occupational health disparities, involve adding race to surveillance systems that collect information on work-related injuries and illnesses and adding information on occupation and industry to surveys/medical records that collect medical and race data. Potential changes would include: 1) requiring the reporting of race in the annual Bureau of Labor Statistics employer-based survey on injuries and illnesses; 2) adding race as a core variable in state workers' compensation data systems; 3) adding industry and occupation to the core module of the annual Behavioral Risk Factor Surveillance System (BRFSS) survey administered in the 50 states; and 4) routinely collecting information about occupation/employer in medical records and making collection of such information a requirement for future meaningful use incentives as part of the transition to electronic medical health records. Successful implementation of the above changes will not only allow for the generation of valuable data on occupational health disparities but will also allow for development of targeted interventions to address disparities that are identified.

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### TEMPORARY WORK AND OCCUPATIONAL HEALTH

MSU has developed three documents to help understand the respective occupational safety and health responsibilities of the temporary staff agency and the host employer:

**Temporary Employee Safety & Health: Responsibilities of the Temporary Staffing Agency & the Host Employer** (<http://www.oem.msu.edu/userfiles/file/Resources/TempAgencySafetyResponsibilityFinal.pdf>)

**Safety and Health Resources for Temporary Staffing Agencies in Michigan**  
(<http://www.oem.msu.edu/userfiles/file/Resources/ResourcesTemporaryStaffingAgencies.pdf>)

**Hazard Alert: Temporary Worker Safety - A Shared Responsibility.**  
(<http://www.oem.msu.edu/userfiles/file/Resources/TemporaryWorkerHA17.pdf>)

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\*PS Remember to report all cases of occupational disease!

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