Fatal Work-Related Injuries — United States, 2005–2009

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Introduction

In 2012, the U.S. civilian labor force comprised an estimated 155 million workers (*1*). Although employment can contribute positively to a worker's physical and psychological health, each year, many U.S. workers are fatally injured at work. In 2011, a total of 4,700 U.S. workers died from occupational injuries (*2*). Workplace deaths are estimated to cost the U.S. economy approximately $6 billion annually (*3*). Identifying disparities in work-related fatality rates can help public health authorities focus prevention efforts. Because work-related health disparities also are associated with social disadvantage, a comprehensive program to improve health equity should include improving workplace safety and health.

This report and a similar study (*4*) are part of the second CDC Health Disparities and Inequalities Report (CHDIR). The 2011 CHDIR (*5*) was the first CDC report to assess disparities across a wide range of diseases, behavior risk factors, environmental exposures, social determinants, and health-care access. The topic presented in this report is based on criteria that are described in the 2013 CHDIR Introduction (*6*). This report provides information on disparities in work-related death and homicide rates across industry and occupation categories, a topic that was not discussed in the 2011 CHDIR. A separate report providing information on disparities in nonfatal work-related injuries and illnesses also is included in this second CHDIR (*4*). The purposes of this report are to discuss and raise awareness of differences in the characteristics of work-related fatal injuries and to prompt actions to reduce these disparities.

Methods

To characterize work-related death and homicide rates by selected characteristics, CDC used two sources of data. Fatalities were identified by using the Census of Fatal Occupational Injuries (CFOI),* and employment data were derived from the Current Population Survey (CPS) microdata files.

For CFOI, BLS collects data on occupational injury deaths from multiple federal, state, and local sources, including death certificates, police reports, and workers' compensation reports. To be included in CFOI, the decedent must have been employed at the time of the incident, working as a volunteer in the same functions as a paid employee, or present at a site as a job requirement (*7*). Public- and private-sector civilian workers are included. CFOI excludes deaths that occurred during a worker's normal commute to and from work and deaths related to occupational illnesses (e.g., lung disease or cancer). CFOI uses its fatality source documents to extract and code demographic information and place of birth as well as information related to the event or exposure that directly caused the death and the occupation and industrial sector in which the decedent was employed.

Race and ethnicity were combined into four broad groups: non-Hispanic white, non-Hispanic black, American Indian/Alaska Native/Asian/Pacific Islander (AI/AN/A/PI), and Hispanic. Persons of Hispanic ethnicity might be of any race or combination of races. Place of birth was defined as either the United States or its territories (including Puerto Rico, Guam, and the U.S. Virgin Islands) or a foreign country. Persons born in a foreign country include U.S. citizens born abroad (one or both of whose parents were U.S. citizens), naturalized citizens, and noncitizens. Legal immigrants, legal nonimmigrants, and undocumented workers were included in the foreign-born population if their deaths were confirmed as work-related. Information on educational attainment was not available from the CFOI data. Information on geographic region, while available in the data, were not included in the analysis.

To calculate injury-related fatality rates, CDC derived labor force denominator estimates from the CPS microdata files (*8*). CPS is the primary source of U.S. labor force statistics and is based on monthly household surveys conducted by the U.S. Census Bureau. Demographic and employment characteristics in CPS were grouped to match categories in CFOI. CPS uses the Census Bureau definition of "foreign-born," which is slightly different than the definition used by CFOI. Along with including persons who were born in the United States and its territories, CPS, unlike CFOI, also identifies persons born

* Analysis was conducted using restricted CFOI data that the National Institute for Occupational Safety and Health receives through a Memorandum of Understanding. Results might differ from those released by the Bureau of Labor Statistics.

abroad to a U.S. citizen as "native-born." Rates were calculated per 100,000 workers aged ≥15 years.

Poisson regression was used to estimate injury-fatality rates and 95% confidence intervals (CIs) for selected categorical groups (sex, age group, selected events, industry division, and occupation) stratified by demographic variables (race/ethnicity and place of birth). The injury-fatality category rate was considered elevated if it was >1.5 times the U.S. rate (3.7 per 100,000 workers for all fatalities and 0.4 per 100,000 workers for homicides) and also was considered significantly different if it did not contain the U.S. rate (3.7 for all fatalities and 0.4 for homicides). The injury-fatality rate for each category was further stratified by certain demographic variables (race/ethnicity and place of birth). The demographic-specific rate was considered elevated if it also was >1.5 times the corresponding U.S. rate for that particular category (i.e., sex, age group, selected events, industry division, and occupation) and also was considered significantly different if its confidence interval did not contain the overall category rate. No statistical testing was done for this analysis.

Results

During 2005–2009, U.S. workers died from an injury while at work at a rate of 3.7 per 100,000 workers. Hispanics and foreign-born workers had the highest work-related fatal injury rates (4.4 and 4.0 per 100,000 workers, respectively) (Table 1). For all races, ethnicities, and places of birth, males had work-related fatality rates that were 9 to 14 times higher than the rates for females. Fatal injury rates increased with age for all races, ethnicities, and nativities, with non-Hispanic whites, non-Hispanic blacks, and workers born in the United States or its territories having the most dramatic increases. Hispanics of all age groups <65 years had the highest fatality rates, particularly Hispanics aged 15–24 years. Similarly, foreign-born workers of all age groups <65 years had higher fatality rates than workers who were born in the United States or its territories.

The greatest differences in work-related injury fatality rates were across industry sectors, with the rates in agriculture, mining, construction, and transportation/warehousing/utilities being three to almost eight times higher than the overall U.S. rate (Table 1). Although fatality rates by industry sector were similar across most races/ethnicities, non-Hispanic blacks had either the highest or second highest fatality rate for every industry sector, and in agriculture, forestry, and fishing, their rate was just over 1.5 times the U.S. rate for that industry. AI/AN/A/PI and foreign-born workers in the trade sector had rates that were 1.5 to 2.0 times the U.S. rate.

Transportation incidents at work resulted in the highest work-related fatality rates for workers of all races, ethnicities, and nativities (Table 1). Rates for assaults and violent acts, particularly homicides, showed the greatest disparity across race, ethnicity, and place of birth and were highest among non-Hispanic blacks, AI/AN/A/PIs, and foreign-born workers.

During 2005–2009, a total of 2,803 workers were homicide victims (rate: 0.4 per 100,000 workers) (Table 2). Homicide rates for non-Hispanic black and AI/AN/A/PI workers were three times those of non-Hispanic white workers. The homicide rate for foreign-born workers was more than twice that of all other workers. The majority of workplace homicide victims among non-Hispanic blacks were not foreign-born (83%), whereas the majority of such victims among Hispanic workers (61%) and AI/AN/A/PI workers (89%) were foreign-born.

Male workers experienced at least triple the homicide rate that women experienced regardless of race/ethnicity or place of birth (Table 2). Most notably, non-Hispanic black, AI/AN/A/PI, and foreign-born men experienced the highest homicide rates. Hispanic women had the highest rate among women. Overall, workers aged 15–19 years experienced the lowest rates, and workers aged ≥65 years experienced the highest rates. Non-Hispanic black and AI/AN/A/PI workers experienced significantly higher rates for every age group.

Sales and related occupations (e.g., store managers, clerks, and cashiers) and transport and material moving occupations (e.g., taxi drivers and truck drivers) had the highest work-related homicide rates (Table 2). AI/AN/A/PI workers in sales and transportation occupations experienced the highest homicide-related fatality rates. Non-Hispanic blacks consistently had at least double the work-related homicide rates compared with non-Hispanic whites for every industry and occupation group.

To further understand the circumstances of these workplace homicides, CDC explored specific characteristics of the victims (data not presented). Among the 1,483 (55%) homicides for which the type of perpetrator was specified, 1,039 (70%) were committed by suspected robbers, 292 (20%) by a coworker or former coworker, 109 (7%) by a relative of the homicide victim, and 43 (3%) by miscellaneous "others." Men and women were generally victims of different types of workplace violence. Of those homicides that occurred during a suspected robbery or that were perpetrated by a coworker/former coworker, 1,119 (84%) victims were men, whereas of the 109 homicides perpetrated by a relative of the victim, 84 (77%) victims were women.

TABLE 1. Number and rate* of fatal occupational injuries — Census of Fatal Occupational Injuries, United States, 2005–2009

Characteristic	Total		Race/Ethnicity								Place of birth†			
			White, non-Hispanic		Black, non-Hispanic		AI/AN/A/PI		Hispanic§		Foreign born		U.S. or U.S. territories	
	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate
Total¶	**26,996**	**3.7**	**18,682**	**3.7**	**2,707**	**3.5**	**982**	**2.6**	**4,367**	**4.4**	**4,665**	**4.0**	**22,331**	**3.6**
Sex														
Male	**24,995**	**6.4****	17,227	6.4	2,485	7.0	893	4.4	4,151	6.9	4,416	6.3	20,579	6.4
Female	**2,001**	**0.6**	1,455	0.6	222	0.5	89	0.5	216	0.5	249	0.5	1,752	0.6
Age group (yrs)														
15–19	**572**	**1.8**	342	1.5	45	1.5	20	2.3	163	3.6††	141	6.1††	431	1.4
20–24	**1,845**	**2.6**	1,049	2.2	183	2.3	69	2.2	524	4.3††	445	4.8††	1,400	2.2
25–34	**4,603**	**2.9**	2,744	2.8	493	2.7	153	1.6	1,162	3.9	1,054	3.4	3,549	2.8
35–44	**5,720**	**3.4**	3,660	3.3	689	3.6	212	2.0	1,089	4.2	1,179	3.5	4,541	3.3
45–54	**6,696**	**3.9**	4,802	3.8	722	4.1	284	3.4	836	4.8	1,034	4.0	5,662	3.9
55–64	**4,603**	**4.6**	3,569	4.5	395	4.7	182	4.0	430	5.7	610	4.8	3,993	4.6
≥65	**2,882**	**10.0****	2,472	10.5	179	8.8	56	5.0	159	8.4	198	5.8	2,684	10.6
Selected events§§														
Contact with object and equipment¶¶	**4,596**	**0.6**	3,210	0.6	375	0.5	108	0.3	881	0.9††	809	0.7	3,787	0.6
Falls	**3,789**	**0.5**	2,561	0.5	219	0.3	107	0.3	877	0.9††	879	0.7	2,910	0.5
Fall to lower level***	**3,279**	**0.5**	2,175	0.4	172	0.2	85	0.2	826	0.8††	817	0.7	2,462	0.4
Exposure to harmful substances/ environs†††	**2,388**	**0.3**	1,593	0.3	220	0.3	56	0.1	495	0.5††	446	0.4	1,942	0.3
Transportation incidents	**11,228**	**1.5**	8,263	1.6	1,134	1.5	309	0.8	1,394	1.4	1,358	1.1	9,870	1.6
Highway incident	**6,407**	**0.9**	4,669	0.9	728	1.0	176	0.5	780	0.8	730	0.6	5,677	0.9
Fires and explosions	**800**	**0.1**	588	0.1	79	0.1	12	<0.1	118	0.1	104	0.1	696	0.1
Assaults and violent acts	**4,097**	**0.6**	2,403	0.5	666	0.9††	390	1.0††	582	0.6	1,052	0.9††	3,045	0.5
Assaults and violent acts by person	**2,803**	**0.4**	1,354	0.3	605	0.8††	334	0.9††	459	0.5	876	0.7††	1,927	0.3
Industry division§§§														
Agriculture/Forestry/Fishing	**3,236**	**29.2****	2,576	31.0	130	46.9††	64	31.4	426	19.7	399	18.7	2,837	31.7
Mining	**810**	**22.6****	612	22.1	38	22.3	16	16.8	140	27.1	57	19.1	753	23.0
Construction	**5,674**	**10.2****	3,661	9.8	390	13.6	117	9.9	1,473	10.9	1,338	10.1	4,336	10.2
Manufacturing	**1,984**	**2.5**	1,373	2.5	214	2.9	65	1.4	327	2.8	321	2.1	1,663	2.6
Trade	**2,725**	**2.6**	1,813	2.4	275	2.8	260	5.0††	346	2.5	644	4.3††	2,081	2.3
Transportation/Warehousing/Utilities	**4,484**	**11.9****	3,125	12.8	679	11.5	151	9.0	469	9.2	663	11.6	3,821	12.0
Services, excluding health care	**7,388**	**2.1**	4,995	2.0	889	2.5	283	1.4	1,141	2.6	1,189	2.2	6,199	2.1
Health care and social services	**664**	**0.7**	509	0.9	90	0.6	23	0.4	39	0.4	49	0.4	615	0.8
Occupation group¶¶¶														
Management, business, and finance	**2,896**	**2.7**	2,614	3.1	84	1.1	81	1.4	106	1.4	192	1.5	2,704	2.9
Professional and related	**1,274**	**0.8**	1,031	0.9	93	0.7	57	0.5	75	0.7	144	0.7	1,130	0.9
Service	**3,456**	**2.8**	2,153	3.0	504	2.8	104	1.6	673	2.8	607	2.3	2,849	3.0
Sales and related	**1,532**	**1.9**	982	1.6	154	2.1	214	5.0	158	1.7	448	4.1††	1,084	1.5
Office and administrative support	**516**	**0.5**	359	0.5	66	0.5	20	0.5	63	0.5	71	0.7	445	0.5
Farming, fishing, and forestry	**1,405**	**27.5****	844	31.0	98	43.6	54	44.0	376	19.3	351	18.6	1,054	32.9
Construction and extraction	**5,445**	**12.3****	3,412	12.4	380	14.2	113	12.7	1,502	11.7	1,338	11.0	4,107	12.8
Installation, maintenance, and repair	**1,896**	**7.2**	1,466	7.6	145	7.2	39	4.1	234	6.4	198	5.5	1,698	7.5
Production	**1,289**	**2.9**	824	3.0	143	2.7	51	2.0	265	2.8	260	2.4	1,029	3.0
Transport and material moving	**7,057**	**16.0****	4,837	18.0	1,020	14.8	238	17.2	889	10.6	1,039	12.6	6,018	16.8

Abbreviation: AI/AN/A/PI = American Indian/Alaska Native/Asian/Pacific Islander.

* Per 100,000 workers aged ≥15 years. Rates were calculated by CDC based on the number of fatalities from restricted data from the Bureau of Labor Statistics (BLS) Census of Fatal Occupational Injuries during 2005–2009 and might differ from estimates published by the BLS; the estimated number of employed workers was obtained from the BLS Current Population Survey, 2005–2009. Per BLS publication requirements, numbers of deaths are reported for workers of all ages whereas rates are for workers aged ≥15 years.

† For CFOI, persons born in a foreign country include U.S. citizens born abroad (one or both of whose parents were U.S. citizens), naturalized citizens, and noncitizens. For CPS, persons born in the U.S. or its territories include U.S. citizens born abroad (one or both of whose parents were U.S. citizens).

§ Persons of Hispanic ethnicity might be of any race or combination of races.

¶ Totals include workers of other/unknown race and ethnicity.

** Indicates that the overall rate for the certain categories (sex, age, selected events, industry division, and occupation group) is >1.5 times the U.S. injury-fatality rate of 3.7 per 100,000 workers. Also indicates that the overall category rate is significantly different from the U.S. rate because the confidence interval for the category rate does not contain 3.7 (the U.S. rate).

†† Indicates that demographic-specific (race/ethnicity and place of birth) rate is considered elevated because it is >1.5 times the corresponding U.S. rate for that particular category (i.e., sex, age group, selected events, industry division and occupation) rate. Also indicates that this demographic-specific rate is considered significantly different because its confidence interval does not contain the corresponding overall category rate.

§§ Event or exposure according to the BLS Occupational Injury and Illness Classification System (available at http://www.bls.gov/iif/oiics_manual_2007.pdf). Totals for major events or exposures include subcategories not shown separately.

¶¶ Examples include being struck by a falling object such as a tree, being crushed during a cave-in while digging ditches, or getting caught in running machinery.

*** Examples include falling from a ladder, roof, or scaffold; falling down stairs or steps; or falling through a floor or roof.

††† Examples include heat stroke or hypothermia, poisoning through inhalation or ingestion of harmful substances, insect stings and animal bites, and non-transportation-related drownings.

§§§ Industry in which the decedent worked was coded according to the 2002 North American Industry Classification System (NAICS) (available at http://www.census.gov/eos/www/naics). The detailed codes from the 20 NAICS sectors were combined into eight industry sectors according to the similarity of their occupational safety and health risks.

¶¶¶ Occupation in which the decedent worked was coded according to the 2000 Standard Occupational Classification Manual (SOC) (available at http://www.bls.gov/soc). The detailed codes from the 22 civilian SOC groups were combined into ten occupation groups according to the similarity of their work and their occupational safety and health risks.

TABLE 2. Number and rate* of homicide deaths — Census of Fatal Occupational Injuries, United States, 2005–2009

			Race/Ethnicity								Place of birth†			
	Total		White, non-Hispanic		Black, non-Hispanic		AI/AN/A/PI		Hispanic§		Foreign born		U.S. or U.S. territories	
Characteristic	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate
Total¶	**2,803**	**0.4**	**1,354**	**0.3**	**605**	**0.8****	**334**	**0.9****	**459**	**0.5**	**876**	**0.74****	**1,927**	**0.3**
Sex														
Male	2,291	0.6††	1,054	0.4	523	1.5**	299	1.5**	368	0.6	772	1.1**	1,519	0.5
Female	512	0.2	300	0.1	82	0.2	35	0.2	91	0.2**	104	0.2	408	0.1
Age group (yrs)														
15–19	62	0.2	23	0.1	14	0.5**	8	0.9**	17	0.4**	23	1.0**	39	0.1
20–24	207	0.3	81	0.2	51	0.7**	23	0.8**	50	0.4	60	0.6**	147	0.2
25–34	589	0.4	247	0.3	163	0.9**	44	0.5	123	0.4	157	0.5	432	0.4
35–44	714	0.4	324	0.3	155	0.8**	80	0.8**	136	0.5	251	0.8**	463	0.3
45–54	633	0.4	326	0.3	125	0.7**	89	1.1**	82	0.5	209	0.8**	424	0.3
55–64	415	0.4	243	0.3	60	0.7**	72	1.6**	34	0.5	137	1.1**	278	0.3
≥65	178	0.6††	110	0.5	36	1.8**	16	1.4**	16	0.9	38	1.1**	140	0.6
Industry division§§														
Agriculture/Forestry/Fishing	40	0.4	24	0.3	—¶¶	—	—	—	13	0.6**	15	0.7**	25	0.3
Mining	5	0.1	—	—	—	—	—	—	—	—	—	—	—	—
Construction	99	0.2	51	0.1	13	0.5**	—	—	28	0.2	26	0.2	73	0.2
Manufacturing	80	0.1	—	—	—	—	—	—	23	0.2**	24	0.2**	56	0.1
Trade	790	0.8††	342	0.5	141	1.5**	190	3.7**	98	0.7	389	2.6**	401	0.5
Transportation/Warehousing/ Utilities	267	0.7††	99	0.4	96	1.6**	18	1.0	39	0.8	91	1.6**	176	0.6
Services, excluding health care	1,412	0.4	731	0.3	312	0.9**	107	0.6	247	0.6**	314	0.6	1,098	0.4
Health care and social services	109	0.1	58	0.1	32	0.2**	9	0.2	—	—	16	0.1	93	0.1
Occupation group***														
Management, business, and finance	267	0.3	154	0.2	42	0.6**	39	0.7**	31	0.4**	73	0.6**	194	0.2
Professional and related	162	0.1	111	0.1	29	0.2**	11	0.1	8	0.1	29	0.1	133	0.1
Service	841	0.7††	419	0.6	216	1.2**	37	0.6	161	0.7	157	0.6	684	0.7
Sales and related	773	0.9††	344	0.6	129	1.7**	179	4.2**	103	1.1	373	3.4**	400	0.6
Office and administrative support	133	0.1	74	0.1	26	0.2**	—	—	21	0.2	27	0.3**	106	0.1
Farming, fishing, and forestry	26	0.5	10	0.4	—	—	—	—	12	0.6	13	0.7	13	0.4
Construction and extraction	82	0.2	36	0.1	—	—	—	—	31	0.2	23	0.2	59	0.2
Installation, maintenance, and repair	74	0.3	37	0.2	19	0.9**	5	0.5**	13	0.4	19	0.5**	55	0.3
Production	66	0.2	26	0.1	12	0.2**	—	—	23	0.3**	26	0.2**	40	0.1
Transport and material moving	365	0.8††	135	0.5	120	1.7**	40	2.9**	54	0.6	134	1.6**	231	0.7

Abbreviation: AI/AN/A/PI = American Indian/Alaska Native/Asian/Pacific Islander.

* Per 100,000 workers aged ≥15 years. Rates were calculated by CDC based on the number of fatalities from restricted data from the Bureau of Labor Statistics (BLS) Census of Fatal Occupational Injuries during 2005–2009 and might differ from estimates published by the BLS; the number of employed workers from the BLS Current Population Survey, 2005–2009. Per BLS publication requirements, numbers of deaths are reported for workers of all ages whereas rates are for workers aged ≥15 years.

† For CFOI, persons born in a foreign country include U.S. citizens born abroad (one or both of whose parents were U.S. citizens), naturalized citizens, and noncitizens. For CPS, persons born in the U.S. or its territories include U.S. citizens born abroad (one or both of whose parents were U.S. citizens).Persons of Hispanic ethnicity might be of any race or combination of races.

§ Persons of Hispanic ethnicity might be of any race or combination of races.

¶ Totals include workers of other/unknown race and ethnicity.

** Indicates that demographic-specific (race/ethnicity and place of birth) rate is considered elevated because it is >1.5 times the corresponding U.S. rate for that particular category (i.e., sex, age group, industry division and occupation) rate. Also indicates that this demographic-specific rate is considered significantly different because its confidence interval does not contain the corresponding overall category rate.

†† Indicates that the overall rate for the certain categories (sex, age, industry division, and occupation group) is >1.5 times the U.S. injury-fatality homicide rate of 0.4 per 100,000 workers. Also indicates that the overall category rate is significantly different from the U.S. rate because the confidence interval for the category rate does not contain 0.4 (the U.S. rate).

§§ Industry in which the decedent worked was coded according to the 2002 North American Industry Classification System (NAICS) (available at http://www.census.gov/eos/www/naics/). The detailed codes from the 20 NAICS sectors were combined into eight industry sectors according to the similarity of their occupational safety and health risks.

¶¶ Data do not meet confidential BLS publication criteria.

*** Occupation in which the decedent worked was coded according to the 2000 Standard Occupational Classification Manual (SOC) (available at http://www.bls.gov/soc/). The detailed codes from the 22 civilian SOC groups were combined into ten occupation groups according to the similarity of their work and their occupational safety and health risks.

Discussion

On average, each day, 12–13 workers in the United States die from injuries sustained at work. Hispanic and foreign-born workers are at higher risk compared with other workers, primarily because of the type of work that they do. Workers of all races, ethnicities, and places of birth working in construction, agriculture, mining, and transportation face a similar and higher risk for a work-related fatal injury than workers in other industries. Approximately 10% of injury-related fatalities at work are homicides, which occur most frequently during a robbery. Customer service workers who handle money and who often work alone (e.g., cashiers and taxi drivers) are at highest risk. AI/AN/A/PI workers in transportation and sales occupations were at especially high risk. However for every type of occupation, black non-Hispanic workers were twice as likely as white non-Hispanic workers to be a homicide victim. Efforts to prevent robbery-related homicides include establishing workplace policies and procedures that engage management and employees; providing appropriate worksite

analysis and safety and health training; ensuring that minimal cash is kept on hand; and enhancing and securing the physical environment with alarm systems, surveillance cameras, mirrors, and adequate lighting and barriers (*9*).

Women were more likely to be the victim of a homicide perpetrated by a relative. In these instances, the violence not only affects the worker but may also affect co-workers and/or customers who may be present during the incident. Multidisciplinary workplace violence prevention programs that incorporate training and perpetrator-specific prevention strategies should be made available and implemented widely (*10*).

Limitations

The findings in this report are subject to at least four limitations. First, inclusion of cases in CFOI is dependent upon identifying work-relatedness. This determination can be difficult for certain types of incidents for which the work relationship might not be clear. Second, work-related deaths enumerated in CFOI are limited to fatal injuries and do not include work-related deaths attributable to chronic illnesses such as cancer or lung disease. It is estimated that approximately 49,000 deaths each year can be attributed to work-related illnesses (*11*). Third, CFOI includes fatalities to volunteers. However, volunteers are not included in the CPS denominator, potentially resulting in an overestimation of fatality rates presented in this report by CDC. Finally, CFOI and CPS use different approaches to defining place of birth, which might result in an underestimate of injury rates for some categories.

Conclusion

These findings highlight the importance of preventing work-related deaths. All workers, regardless of their race, ethnicity, or immigrant status are afforded equal protection under the Occupational Safety and Health Act. Furthering a culture in which occupational safety and health is recognized and valued as a fundamental component of economic growth and prosperity can play an important role in promoting health equity. The fatality data presented in this report provide important information to focus prevention efforts. These findings highlight priority industries and occupations of workers in the highest risk jobs for all occupational fatalities and for homicides specifically. This information can be used to improve intervention efforts by developing programs that better meet the needs of the increasing diversity of the U.S. workforce. NIOSH's Occupational Health Disparities program has prioritized research projects to improve outreach to eliminate health disparities and NIOSH's National Occupational Research Agenda addresses high priority needs in individual industry sectors through research and partnerships. Prevention recommendations and publications that focus on the most serious concerns for these workers are available in English and Spanish; topics include workplace violence prevention, motor vehicle safety, and machine safety (available at http://www.cdc.gov/NIOSH/injury).

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