# Hispanic/Latino fatal occupational injury rates

The overall fatal occupational injury rate is higher for Hispanic/Latino workers than for all workers; foreign-born Hispanic/Latino workers have higher rates than native-born Hispanic/Latino workers in certain occupations, a statistic that is explainable by differentials in employment between the two groups

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The topic of job safety among Hispanic/Latino workers continues to command the attention of a growing number of people in the occupational safety community. Various events, including the coordination of efforts among various agencies and organizations at the first National Action Summit for Latino Worker Health and Safety, held in April 2010, signal the increasing prominence of this issue.<sup>1</sup>

One statistic frequently noted by professionals in the field is the national fatal injury rate for Hispanic/Latino workers in comparison to that of all workers. Citing BLS data, Dr. John Howard, director of the National Institute for Occupational Safety and Health, spoke at the National Action Summit:

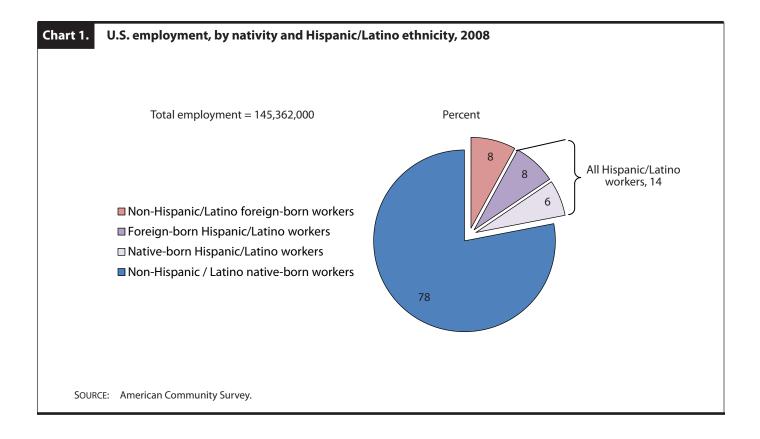
For much of the past two decades... the rate of work-related fatalities for Latinos has exceeded the rate for all U.S. workers, at times dramatically so. During the period 2003–2006, for instance, the fatality rate for Latino workers exceeded the rate for all workers by nearly 35 percent.<sup>2</sup>

This article examines the national Hispanic/Latino fatal injury rate, with a focus on fatal injury rates by major occupation group and nativity. Findings indicate that rates are higher for foreign-born workers, but only in certain occupations. In addition, differentials in employment may explain some of the disparities in fatal injury rates between the two groups discussed. Rates are constructed with the use of data from the Census of Fatal Occupational Injuries (CFOI)<sup>3</sup> and the Current Population Survey (CPS)<sup>4</sup> on workers born inside and outside of the United States by each major occupation. Occupational rates for all workers will be used as a baseline for comparison to provide a context for understanding the rates of fatal injury among subpopulations of Hispanic/Latino workers.

### Foreign- and native-born Hispanics/Latinos

Despite a common ethnicity shared by foreignand native-born Hispanic/Latino workers, it is helpful to view them as two distinct groups in assessing occupational safety. As suggested by the Pew Research Hispanic Center,<sup>5</sup> workers born outside of the United States, particularly those who migrated later in life, share an experience different from that of native-born workers. Chart 1 shows Hispanic/Latino workers by nativity as a proportion of the U.S. workforce.<sup>6</sup>

In 2008, the CPS reported that, of more than 145 million employed civilians in the United States, 14 percent, or roughly 20 million, were of Hispanic/Latino ethnicity. About 11 million,

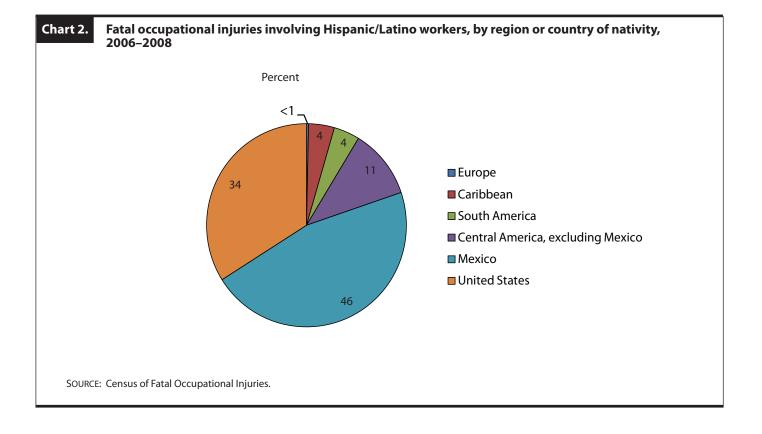


or 54 percent, of Hispanic/Latino workers were born outside of the United States. That year, Hispanic/Latino workers accounted for 49 percent of all foreign-born workers in the nation. Overall, foreign-born Hispanic/Latino workers incurred 66 percent of all fatal injuries to Hispanic/Latino workers, but made up a lesser 54 percent of employment. Native-born Hispanic/Latino workers constituted 6 percent (about 9 million) of all employed persons (see chart 1), and suffered the same percentage of fatal work injuries among all employed persons, from 2006 to 2008. During that same time span, native-born Hispanic/Latino workers incurred 34 percent of fatal work injuries among all Hispanic/Latino workers (see chart 2), slightly more than half the number incurred by foreign-born Hispanic/Latino workers.

Foreign-born Hispanic/Latino workers come from diverse countries in Latin America and Europe. The largest share, according to the American Community Survey, is from Mexico.<sup>7</sup> The greatest portion (46 percent) of fatal work injuries incurred by Hispanic/Latino workers from 2006 to 2008 involved Mexican-born workers, as depicted in chart 2.

Agencies and organizations from diverse backgrounds, such as the Pew Research Hispanic Center, Department of Labor, National Council of La Raza, and American Federation of Labor and Congress of Industrial Organizations (AFL-CIO), frequently assert that foreign-born Hispanic/Latino workers are more likely than other workers born in the United States to encounter barriers to occupational safety, including limited English proficiency and limited or no knowledge of worker safety laws and rights.<sup>8</sup> Among other obstacles that have been cited are the absence of a cultural precedent for safety, as well as the fear of employer retaliation against workers who speak up about safety hazards in the workplace.<sup>9</sup>

Though certainly not a homogenous demographic, native-born Hispanics/Latinos are fairly well aligned culturally with other U.S. citizens, with whom they share similar educational opportunities, a good understanding of U.S. law, and a rich exposure to the English language. For example, a 2008 study by the Pew Research Hispanic Center found that 48.2 percent of all native-born Hispanics/Latinos over the age of 18 in the United States spoke English very well while 13.9 percent spoke English less than very well.<sup>10</sup> In contrast, the same study found that 43 percent of Hispanic/Latino populations of Mexican nativity, 41 percent of Central American nativity, and 21 percent of South American nativity spoke English less than very well. Furthermore, 88 percent of native-born Hispanics/ Latinos had completed high school, compared with 67 percent of foreign-born Hispanics/Latinos.<sup>11</sup> Native-born Hispanic/Latino workers also appear to have better access



to health care, with 80 percent of the group being insured in 2008, in contrast to 50 percent of foreign-born workers who had health insurance that year.<sup>12</sup> For all of these reasons, native-born Hispanic/Latino workers may have a reasonably good understanding of worker safety, enabling them to incur fewer workplace injuries than their foreignborn counterparts.

# Methodology

This article employs the imputation methods used to calculate the official hours-based CFOI rates at the state level. Data were obtained from both the CFOI and the CPS. The CFOI is a federal-state cooperative program that has been implemented in all 50 states and the District of Columbia since 1992. To compile counts that are as complete as possible, the census uses multiple sources to identify, verify, and profile fatal worker injuries. Data compiled by the program are issued annually for the preceding calendar year.

Hours-based fatal injury rates measure occupational risk by standardizing fatal injuries in terms of length of exposure. These rates are generally considered to be more accurate than employment-based rates, which assess the number of fatal injuries per number of employed persons, regardless of the amount of time spent on the job. Hoursbased rates represent the number of fatal occupational injuries per 100,000 full-time equivalent workers (FTEs) in a given worker population<sup>13</sup> and are calculated as

where

- *N* = number of fatal work injuries in a given population,
- EH = total hours worked by all employees in a given population during the calendar year, and

200,000,000 = base for 100,000 FTEs in a population (working 40 hours per week, 50 weeks per year).

EH is calculated from two CPS estimates: average hours and time at work. Unfortunately, data on average hours worked by Hispanic/Latino workers are not available at certain levels of detail, such as by state, by nativity, or by occupation. For this reason, the CFOI program developed a method for imputing EH in order to produce fatal injury rates by state. The method uses employment data (E) that are available by state and combines those data with national estimates of average hours (hours worked, or HW) by industry. The CPS also produces employment data (E) on Hispanic/Latino workers by nativity and occupation. Consequently, the method for calculating state rates by industry can be adapted to produce fatal injury rates for Hispanic/Latino workers by occupation. The formula

$$EH_L = E_L \times HW_N$$
,

where

 $E_L$ = Hispanic/Latino employment and HW<sub>N</sub> = average annual number of hours worked by each employee in a given worker

population for the entire United States,

shows how average hours  $(HW_N)$  for the entire United States and "at work" (employment, or  $E_L$ ) information on Hispanic/Latino workers can be used to calculate  $EH_I$ 

(total hours worked by all employees in the Hispanic/Latino population during the calendar year). The imputed value for EH can then be substituted back into the original hours-based fatal injury rate equation (1).

The fatal injury rates obtained exclude members of the resident military, volunteers, and workers under 16 years of age, because these groups are not included in CPS employment estimates. Rates derived from numerators that included three or fewer fatal injuries did not meet CFOI publication criteria and do not appear in this article.

# Hispanic/Latino fatal injury rates

Table 1 presents fatal injury rates from 2006 through 2008 for Hispanic/Latino workers as a population, as well as separate rates for foreign-born and native-born Hispanic/

Occupation		All workers				All Hispanic/Latino workers			
occupation	2006	2007	2008	2006-2008	2006	2007	2008	2006-2008	
Total	4.2	4.0	3.7	4.0	5.3	4.8	4.2	4.8	
Management	3.4	3.2	3.3	3.3	2.1	1.3	1.4	1.6	
Sales and related	2.0	2.1	1.8	2.0	1.9	1.5	1.7	1.7	
Protective service	8.6	10.0	9.1	9.2	7.8	14.0	8.0	9.9	
Food preparation and serving	1.4	1.0	1.1	1.2	1.2	1.3	1.4	1.3	
Building and grounds cleaning and maintenance	6.1	5.4	5.1	5.5	5.9	5.1	5.2	5.4	
Office and administrative support	.5	.8	.5	.6	.7	.9	.5	.7	
Farming, forestry, and fishing	29.9	25.7	28.4	28.0	21.1	17.3	20.0	19.4	
Construction and extraction	13.7	12.6	11.8	12.7	13.3	12.2	10.7	12.0	
Installation, maintenance, and repairs	7.7	7.1	6.7	7.2	8.0	7.4	5.9	7.1	
Production	3.0	2.8	3.0	2.9	3.2	2.9	2.6	2.9	
Transportation and material moving	17.1	17.3	16.1	16.8	12.0	11.6	9.3	10.9	
	Foreig	Foreign-born Hispanic/Latino workers			Native-born Hispanic/Latino workers				
Occupation	2006	2007	2008	2006-2008	2006	2007	2008	2006-2008	
Total	6.4	5.9	4.8	5.7	3.9	3.5	3.4	3.6	
Management	2.7	1.9	1.5	2.0	1.8	.8	1.3	1.3	
Sales and related	2.5	2.5	2.0	2.3	1.5	.8	1.4	1.2	
Protective service	11.6	24.8	9.0	15.1	6.8	11.2	7.7	8.6	
Food preparation and serving	1.1	1.3	1.6	1.3	1.3	1.2	1.1	1.2	
Building and grounds cleaning and maintenance	6.2	4.7	5.0	5.3	4.9	6.8	6.3	6.0	
Office and administrative support	1.0	1.2	1.0	1.1	.5	.7	.3	.5	
Farming, forestry, and fishing	20.7	16.3	17.1	18.0	24.0	24.8	49.1	32.6	
Construction and extraction	12.5	12.2	9.6	11.4	15.8	12.2	14.2	14.0	
Installation, maintenance, and repairs	9.7	7.6	5.7	7.7	6.1	7.2	6.2	6.5	
Production	3.2	2.7	2.4	2.8	3.2	3.4	2.9	3.2	
					1	1	10.7	12.1	

<sup>1</sup> The fatal injury rate is the number of fatalities per 100,000 full-time equivalent employees.

SOURCES: Census of Fatal Occupational Injuries, Current Population Survey.

Latino workers. The table also provides the all-worker fatal injury rate for comparison. For all of the years shown, the overall fatal injury rate for all Hispanic/Latino workers was higher than the rate for all workers.<sup>14</sup> However, the separate rate for native-born Hispanic/Latino workers was lower than that of all workers for all years shown. Foreign-born workers had significantly higher rates in all years than did all workers.

Given the disparities in fatal injury rates mentioned in the previous paragraph, examining rates for each nativity group by major occupation yields somewhat unexpected results. Four of the six occupation groups of Hispanic/ Latino workers with statistically higher rates than the annual average rate of 4.0 for all workers in 2006-2008 show native-born workers as having a higher rate of fatal injuries than foreign-born workers. The four groups are farming, forestry, and fishing; construction and extraction; transportation and material moving; and building and grounds cleaning and maintenance. Foreign-born workers had higher rates in the other two occupation groups. Although these differences in rates between the two nativity groups may seem counterintuitive, a closer examination of employment within those occupations offers some possible reasons for the disparities.

In farming, forestry, and fishing occupations, the 3-year average fatal injury rate for native-born workers was 32.6 per 100,000 FTEs while the average for foreign-born workers was 18.0 per 100,000 FTEs. Construction and extraction occupations saw a 3-year average fatal injury rate of 14.0 per 100,000 FTEs for native-born workers and 11.4 for foreign-born workers. Fatal injury rates for native-born and foreign-born workers in transportation and material moving occupations were, respectively, 12.1 and 10.2 per 100,000 FTEs, for the 3-year average. Building and grounds cleaning and maintenance occupations also had higher native-born than foreign-born fatal injury rates for 2 out of 3 years.

Protective services showed significantly higher rates for foreign-born Hispanic/Latino workers than for nativeborn Hispanic/Latino workers in 2006 and 2007. Foreignborn Hispanic/Latino workers in this occupation group saw an average fatality rate of 15.1 per 100,000 FTEs for the 3-year period, compared with the native-born average of 8.6. Installation, maintenance, and repair occupations had 3-year average fatal injury rates of 7.7 per 100,000 FTEs for foreign-born Hispanic/Latino workers and 6.5 per 100,000 FTEs for native-born Hispanic/Latino workers, although only one year, 2006, showed a statistically significant difference.

The rest of this article examines the composition of fatal injury rates, as well as occupational safety issues, for Hispanic/Latino workers in light of the numbers of fatal injuries and the proportions of workers employed in various occupations. Fatal injury rate results are analyzed on the basis of the total number of fatal work injuries by major occupation group and detailed occupation. Also as-

Occupation	Count of all Hispanic/ Latino workers		orn Hispanic/ workers	Native-born Hispanic/ Latino workers	
		Count	Percent	Count	Percent
All occupations	2,731	1,804	66	927	34
Management	58	31	53	27	47
Sales and related	88	50	57	38	43
Protective service	95	30	32	65	68
Food preparation and serving	49	34	69	15	31
Building and grounds cleaning and maintenance	249	192	77	57	23
Personal care	19	10	53	9	47
Office and administrative support	44	23	52	21	48
Farming, forestry, and fishing	226	187	83	39	17
Construction and extraction	960	707	74	253	26
Installation, maintenance, and repair	159	92	58	67	42
Production	165	113	68	52	32
Transportation and material moving	541	313	58	228	42

NOTE: Detailed entries do not sum to totals because some occupations are excluded from the table. SOURCE: Census of Fatal Occupational Injuries. sessed is employment by occupation group and nativity.

*Fatal injury counts by occupation group.* Table 2 lists the number of fatal injuries by major occupation. The table also gives the percentage of fatalities, by nativity, in each occupation group. Workers identified as native-born Hispanics/ Latinos account for only a third of the total fatal injuries involving Hispanic/Latino workers. The percentage is lower for native-born Hispanics/Latinos across all occupational categories except protective service occupations, in which native-born workers account for a greater percentage.

Three out of the four previously identified occupation groups in which native-born workers had higher fatal injury rates than foreign-born workers saw approximately one-fourth or less of Hispanic/Latino fatalities involving native-born workers. In other words, although more fatal injuries were incurred per 100,000 native-born Hispanic/ Latino FTEs, the actual number of fatal injuries suffered by this group was still fewer than that of foreign-born Hispanic/Latino workers, because larger numbers of foreign-born workers are employed in these occupations. The three groups were farming, forestry, and fishing; construction and extraction; and building and grounds cleaning and maintenance. Although the differences in percentages of fatal injuries are substantial, it is important to examine the numbers in the context of employment differences between the two groups; a later subsection does just that.

*Fatal work injuries by detailed occupation.* Differences also appear between distributions of fatal injuries among more detailed occupations within the major occupation groups over the 3-year period. The following tabulation shows that nearly 90 percent of fatal injuries to foreignborn Hispanic/Latino workers in farming, forestry, and fishing occupations were incurred by agricultural workers (percentages may sum to more or less than 100 percent because only selected detailed occupations are presented):

Occupation	Hispanic/ Latino	Foreign-born ' Hispanic/ Latino workers	Hispanic/ Latino
Total (number)	226	187	39
Percent:			
All farming, forestry, and fishing occupations Agricultural workers Farmworkers and laborers, crop, nursery, and	100 85	100 89	100 67
greenhouse	55	59	36
Farmworkers, farm and ranch animals Fisher and related fishing		20	26
workers	6	3	21

In 2006–2008, 59 percent of the fatalities suffered by foreign-born Hispanic/Latino workers in the farming, forestry, and fishing sector involved farmworkers and laborers in crop, nursery, and greenhouse occupations. In contrast, 36 percent of native-born Hispanic/Latino fatalities involved farmworkers and laborers, crop, nursery, and greenhouse occupations. Of those workers with fatal injuries in farming, forestry, and fishing occupations, native-born Hispanic/ Latino workers suffered about 21 percent of their fatal injuries in fishing and related occupations, an occupation group that has one of the highest fatal injury rates overall of any occupation among all workers. By contrast, fishing and related occupations accounted for only 3 percent of injuries to foreign-born Hispanic/Latino workers.

As the following tabulation shows, 88 percent of foreign-born Hispanic/Latino workers' fatal injuries suffered in detailed construction occupations occurred in construction trades worker occupations, compared with 77 percent of native-born Hispanic/Latino workers' fatalities (again, percentages may sum to more or less than 100 percent because only selected detailed occupations are presented):

Occupation	Hispanic⁄ Latino	Foreign-born Hispanic/ Latino workers	Hispanic⁄ Latino
Total (number)	. 960	707	253
Percent:			
All construction and			
extraction occupations	. 100	100	100
Supervisors	. 5	4	6
Construction trades			
workers	. 85	88	77
Carpenters	. 9	9	6
Construction laborers	. 42	46	31
Roofers	. 9	10	6
Extraction workers	. 6	4	13

Construction laborers accounted for a considerable part of this difference, incurring 46 percent of the total number of fatal injuries involving foreign-born Hispanic/Latino workers but just 31 percent of those involving native-born Hispanic/Latino workers. The proportion of native-born Hispanic/Latino workers who died while working in extraction occupations (13 percent) was more than 3 times the proportion of foreign-born Hispanic/Latino workers who died while working in those same occupations (4 percent).

Heavy truck or tractor-trailer drivers suffered the most fatal injuries involving Hispanic/Latino workers in any single occupation within transportation and material moving occupations. The following tabulation shows that the proportion of native-born Hispanic/Latino workers who were fatally injured while working as a heavy truck or tractor-trailer driver was about 20 percent greater than the proportion of foreign-born Hispanic/Latino workers (as before, percentages may sum to more or less than 100 percent because only selected detailed occupations are presented):

	Hispanic/	Foreign-born ′Hispanic∕ Latino	Hispanic/
Occupation	workers	workers	workers
Total (number)	541	313	228
Percent:			
All transportation and material moving			
occupations	100	100	100
Truck drivers, heavy and tractor–trailer Truck drivers, light or	45	42	50
delivery	8	7	9
Material moving workers Laborers and material	33	36	28
movers, hand	19	21	16

Foreign-born Hispanic/Latino workers incurred 8 percentage points more of the total injuries in material moving occupations, with hand laborers and material movers accounting for most of the difference.

As the following tabulation shows, foreign-born Hispanic/Latino workers succumbed to more than 3 out of 4 fatal injuries within building and grounds cleaning and maintenance occupations (once more, percentages may sum to more or less than 100 percent because only selected detailed occupations are presented):

	Hispanic Latino	Foreign–born ′Hispanic∕ Latino	Hispanic/ Latino
Occupation	workers	workers	workers
Total (number)	249	192	57
Percent:			
All building and grounds			
cleaning and maintenance			
occupations	100	100	100
Building, cleaning, and			
pest control workers	26	21	42
Janitors and cleaners,			
except maids and			
housekeeping cleaners	22	18	35
Grounds maintenance		10	00
workers	65	71	46
Landscaping and	05	/1	10
groundskeeping			
workers	47	49	39
Tree trimmers and	די	77	57
	18	22	7
pruners	10	44	/

The greatest share of fatalities for these workers (71 percent) involved grounds maintenance workers. Fatal injuries involving native-born Hispanic/Latino workers were more likely to be split between building cleaning and pest control workers and grounds maintenance workers. Hispanic/Latino employment in selected occupations with high fatality rates. For all Hispanic/Latino workers, the greatest number of fatal injuries occurred in occupational categories with traditionally high fatality rates among all workers. However, 63 percent of all fatal injuries involving native-born Hispanic/Latino workers occurred in these occupations with high-fatal injury rates, compared with 77 percent of all fatal injuries involving foreign-born Hispanic/Latino workers. This difference indicates that, although the single-year and 3-year average fatal injury rates for the native-born workers were statistically higher in those occupations in 2008, a greater number of foreignborn Hispanic/Latino workers are employed in occupations with relatively high fatal injury rates.

Table 3 shows the percentages of foreign- and nativeborn Hispanic/Latino workers across occupations. This employment distribution yields important insights into differences in fatal injury rates between the nativity groups. Native-born Hispanic/Latino workers have the greater representation in office and administrative support occupations, sales and related occupations, and management occupations, which together employ 37 percent of that population. As shown in table 1, fatal injury rates of native-born Hispanic/Latino workers were either lower than or on a par with the all-worker rates for management, sales and related, and office and administrative support occupations from 2006 to 2008.

Again from table 3, the occupations with high fatality rates for native-born Hispanic/Latino workers had the four lowest percentages of native-born employment of any of the six previously identified groups and made up only 19 percent of native-born Hispanic/Latino employment. In contrast, those same occupations accounted for 44 percent of foreign-born Hispanic/Latino employment. Chart 3 illustrates this proportional difference. The total size of the foreign-born and native-born shares of the Hispanic/Latino worker population is close to a 1-to-1 ratio: 56 percent and 44 percent, respectively, of all Hispanic/Latino workers. Still, this ratio equates to more than twice as many foreign-born Hispanic/Latino workers as native-born Hispanic/Latino workers employed in these higher risk industries.

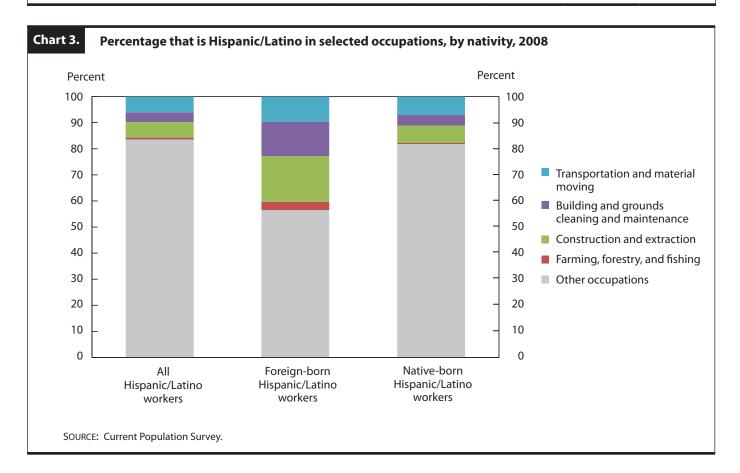
In contrast to the nearly equitable ratio of native- to foreign-born Hispanic/Latino workers, 66 percent of fatal occupational injuries incurred by Hispanic/Latino workers in all occupations from 2006 to 2008 involved foreign-born workers, with native-born workers, of course, accounting for the remaining 34 percent. This is a ratio of nearly 2 to 1 and is an important contributor to differences in fatal injury rates between foreign-born and

Occupation	Count of all Hispanic/		Hispanic/Latino rkers	Native-born Hispanic/Latinc workers		
	Latino workers	Count	Percent	Count	Percent	
ōtal	20,114	11,169	56	8,945	44	
Management	1,128	476	42	653	58	
Business and financial	441	134	30	308	70	
Sales and related	1,877	776	41	1,101	59	
Education	626	181	29	445	71	
Protective service	313	66	21	247	79	
Food preparation and serving	1,629	1,100	68	529	32	
Building and grounds cleaning and maintenance	1,803	1,432	79	371	21	
Personal care	655	321	49	334	51	
Office and administrative support	2,396	803	34	1,593	66	
Farming, forestry, and fishing	386	344	89	42	11	
Construction and extraction	2,735	2,111	77	623	23	
Installation, maintenance, and repair	732	393	54	338	46	
Production	1,916	1,372	72	544	28	
Transportation and material moving	1,683	1.044	62	638	38	

<sup>1</sup> Employment is the average of the 3-year period 2006–2008.

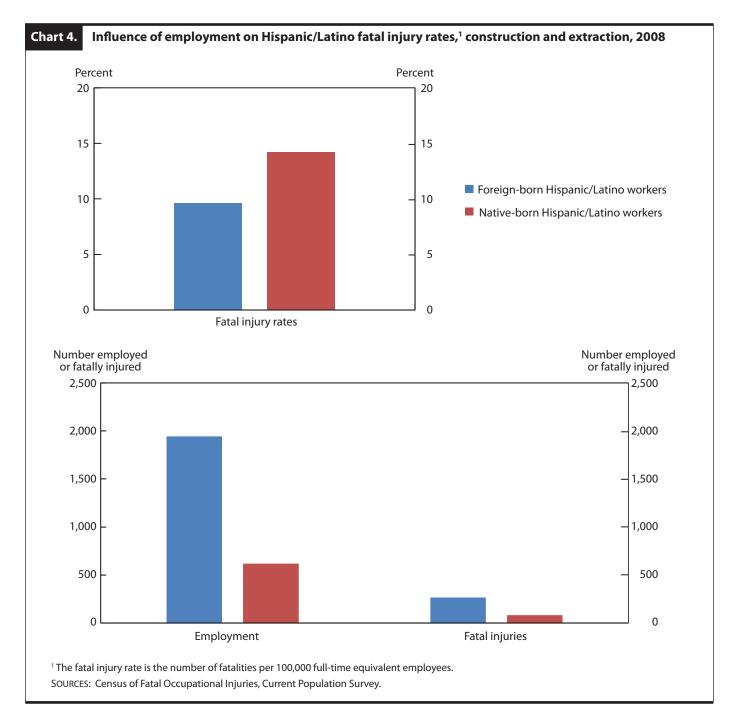
NOTE: Detailed entries do not sum to totals because some occupations are excluded from the table.

SOURCE: Current Population Survey.



native-born Hispanic/Latino workers.

In the calculation of fatal injury rates, high employment in an occupational sector effectively increases the denominator. Despite a large numerator (the number of fatal injuries), a greater denominator serves to push rates down for native-born Hispanic/Latino workers. In other words, the large number of fatal injuries involving foreignborn workers in occupations with higher fatal injury rates is masked by the fact that more foreign-born workers are employed in these occupations relative to native-born workers. Chart 4 illustrates this point. The top panel illustrates the difference between the fatal injury rates of foreign- and native-born Hispanic/Latino workers in construction and extraction occupations, while the bottom panel compares the relative numbers of foreign- and native-born Hispanics/Latinos employed in construction and extraction occupations with the number of fatal injuries incurred by those workers in this same occupation group. Note that,



although the number of fatal injuries is more than 3 times higher for foreign-born than for native-born Hispanic/ Latino workers, the greater relative difference in employment causes the fatal injury rate for native-born workers to be higher. This is despite the fact that considerably more foreign-born Hispanic/Latino workers are exposed to the higher risks of employment in the construction industry and that they suffer a much higher absolute number of fatal injuries than do native-born Hispanic/Latino workers.

HISPANIC/LATINO WORKERS HAVE AN OVERALL higher fatal injury rate than that of all workers. Native-born Hispanics/Latinos tend to succumb to occupational injuries at a higher rate than foreign-born Hispanics/Latinos in occupations that typically have higher all-worker fatal injury rates, but that is because native-born Hispanic/Latino workers'employment in these same occupations is less than half that of foreign-born Hispanic/Latino workers. Therefore, despite some indication that the native-born workers may face greater risks in these sectors, efforts at improving worker safety may prevent more workplace injuries in the foreign-born Hispanic/Latino population because of the larger numbers of such workers who are employed in relatively risky occupations. Certainly, great strides have been taken to combat occupational injuries among Hispanic/Latino workers, but much still can be done to combat the gap between their level of workplace safety and that of other worker populations.

## Notes

<sup>1</sup> Dr. David Michaels, "Modernizing OSHA: Plenary Remarks," paper presented at the American Society of Safety Engineers Professional Development Conference & Expo, Baltimore, Maryland, June 14, 2010, http://osha.gov/pls/oshaweb/owadisp.show\_document?p\_ table=SPEECHES&p\_id=2221.

<sup>2</sup> John Howard, M.D., paper presented at the National Action Summit for Latino Worker Health and Safety, Houston, Texas, Apr. 14, 2010, http:// www.osha.gov/latinosummit/speech\_drhowardcumbre\_04-14-10.html.

<sup>3</sup> See "Injuries, Illnesses, and Fatalities: Census of Fatal Occupational Injuries—Current and Revised Data" (U.S. Bureau of Labor Statistics, Oct. 18, 2012), http://www.bls.gov/iif/oshcfoi1.htm.

<sup>4</sup> See "Labor Force Statistics from the Current Population Survey" (U.S. Bureau of Labor Statistics, Dec. 7, 2012), http://www.bls.gov/cps/home.htm.

<sup>5</sup> "Statistical Profiles of the Hispanic and Foreign-Born Populations in the U.S" (Washington, DC, Pew Research Hispanic Center, Mar. 30, 2010), http://www.pewhispanic.org/2010/03/30/statisticalprofiles-of-the-hispanic-and-foreign-born-populations-in-the-us.

<sup>6</sup> See Table S0201, Selected Population Profile in the United States, 2006–2008, American Community Survey (U.S. Census Bureau, Sept. 30, 2010), "Measuring America—People, Places, and Our Economy," http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS\_08\_3YR\_S0201&prodType=table; and Table C03001, Hispanic or Latino Origin by Specific Origin, 2006–2008, American Community Survey (U.S. Census Bureau, Aug. 4, 2010), "Measuring America—People, Places, and Our Economy," http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS\_08\_3YR\_C03001&prodType=table.

<sup>7</sup> See Table B05006, Place of Birth for the Foreign-Born Population, 2006–2008, American Community Survey (U.S. Census Bureau, Aug. 4, 2010), "Measuring America—People, Places, and Our Economy," http://factfinder2.census.gov/faces/ tableservices/jsf/pages/productview.xhtml?pid=ACS\_08\_3YR\_

#### B05006&prodType=table.

<sup>8</sup> See "20 FAQs about Hispanics" (Washington, DC, National Council of La Raza, 2010), http://www.nclr.org/index.php/about\_us/faqs/ most\_frequently\_asked\_questions\_about\_hispanics\_in\_the\_us; and "Immigrant Workers at Risk: The Urgent Need for Improved Workplace Safety and Health Policies and Programs" (Washington, DC, AFL-CIO, August 2005), http://digitalcommons.ilr.cornell.edu/ laborunions/28.

<sup>9</sup> S. Buchanan, "Day labor and occupational health: time to take a closer look," *New Solutions*, vol. 14, no. 3, 2004, pp. 253–260, http://baywood. metapress.com.ezproxy.welch.jhmi.edu/media/9a0kwvtrrl7317hp9g7t/ contributions/0/f/a/t/0fatlrgyam4dcd2p.pdf.

<sup>10</sup> See Table 20. Language Spoken at Home and English-Speaking Ability, by Age, Race and Ethnicity: 2008 (Washington, DC, Pew Research Hispanic Center), "Statistical Portrait of the Hispanic-Population in the United States, 2008," http://www.pewhispanic. org/2010/01/21/statistical-portrait-of-hispanics-in-the-unitedstates-2008/2008-statistical portrait-23.

<sup>11</sup> See Table 23. Persons, by Educational Attainment and Region of Birth: 2008, "Statistical Portrait of the Foreign-Born Population in the United States, 2008," http://pewhispanic.org/files/factsheets/foreignborn2008/Table%2023.pdf.

<sup>12</sup> See Table 38. Persons Without Health Insurance, by Age, Race and Ethnicity: 2008, "Statistical Portrait of Hispanics in the United States, 2008," http://www.pewhispanic.org/2010/01/21/statistical-portrait-of-hispanics-in-the-united-states-2008/2008-statistical-portrait-45.

<sup>13</sup> For example, all Hispanic/Latino workers, foreign-born Hispanic/Latino workers, and native-born Hispanic/Latino workers.

<sup>14</sup> Note that, although single-year rate comparisons are statistically significant, statistical significances for the 3-year average rate comparisons shown in the table were not established; therefore, caution should be used in discussing the comparisons.