Occupational Safety and Health: The Hispanic Labor Experience

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Honors Thesis
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PASS WITH DISTINCTION

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Précis

This study intends to inform the reader about the factors driving the increasing fatal and non-fatal injury and illness rates for Hispanic workers in the United States. The Hispanic labor force is experiencing disproportionately higher fatal and non-fatal occupational injury and illness rates compared to their non-Hispanic co-workers. This "deadly trend" raises serious concerns for government, employers and employee advocates because there has been a lot of work done to try and decrease occupational injuries and illnesses. This study identifies why Hispanic workers have a higher probability of dying at work than any other ethnic group in the United States.

A quantitative comparison of national and state fatal and non-fatal injury data, population statistics, employment distributions and demographics about the Hispanic population and work force are analyzed to define the Hispanic labor group and the problems it faces. A qualitative review of current occupational research and literature, Hispanic labor group studies and congressional testimonies provide essential information about the factors driving the increasing trend. Excerpts from a personnel journal reflecting my position as a safety and health compliance officer is referenced to include knowledge and experience about Hispanic occupational safety and health issues.

The study shows that immigrants from Latin American countries have supplemented the growth of the Hispanic population and work force in recent years. This has translated into a less-educated, largely Spanish-speaking and low-skilled labor group. On average, Hispanic employees work in some of the most hazardous industries (i.e. construction), and they work in the more hazardous occupations within those industries. Many Hispanic workers are not aware of their worker rights, and they are afraid to report
unsafe working conditions because of possible discriminatory actions. The Occupational Safety and Health Administration (OSHA) identified this alarming trend as a national problem. It has placed the Hispanic occupational fatality concerns at the top of its governing agenda. Outreach to the Hispanic work force has begun by the government and labor advocates, although the tools must be improved to be more effective.

The deadly Hispanic occupational problem has presented itself to me during my work with the Washington Industrial Safety and Health Administration. I have witnessed serious safety and health hazards that Hispanic workers face in various types of industries in Eastern Washington. Interviews of Hispanic workers who have been discriminated against at work tell occupational safety and health stories that mirror those of Hispanics across the nation. Accident and fatality investigations have introduced me to the Hispanic workers behind the fatal and non-fatal injury data that are being seriously injured or die at work. This study solidifies my opinion that the factors contributing to the national increasing fatal and non-fatal injury trend for Hispanics are also present in Washington State.

This research is intended to aid those who develop occupational safety and health training and outreach materials for Hispanic workers, as well as, those who develop legislation to protect Hispanic workers in understanding the factors that are currently affecting the Hispanic labor force. Finally, the factors examined in this study are general characteristics affecting the overall Hispanic labor force; thus, further research and collaboration by government, safety professionals and labor are needed in order to fully comprehend the details behind the deadly “Hispanic Labor Experience.”
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The Hispanic population is currently the fastest growing ethnic group in the United States, and it has created the largest minority in the nation. Hispanics are becoming an increasingly familiar component of the national labor force. The increase, though, has its consequences for the Hispanic labor force. The fatal and non-fatal injury and illness rates have dropped over the last decade for the overall labor force, but have significantly increased over the last few years for the Hispanic labor force (Henshaw, 2002). The Hispanic labor force is experiencing a different trend than the general labor force as it pertains to occupational safety and health in our nation’s workplaces. This raises a question, why is the Hispanic labor force being injured and killed more frequently than any other labor group in the nation?

This study identifies key issues driving the Hispanic fatal and non-fatal injury and illness trends above those of the general labor force. Population demographics, cultural and social issues and employment distributions play key roles in explaining the increasing trend. The increasing fatal and non-fatal injury and illness trend affecting the Hispanic labor force sets the stage for a series of discussions among employers, labor and government agencies. No working individual should have to suffer from an occupational injury or illness, let alone die on the job. A safety and health trainer from New York said it best: “There is nothing honorable in immigrant workers having to sacrifice their lives in record numbers while they contribute to the economic well-being of this great nation.”

In 2050, Hispanics are projected to account for one in four individuals in the United States population; thus, research and analysis on the Hispanic fatality trend must be conducted before the situation becomes worse.

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1Taken from a statement by Omar Henriquez to the Senate Subcommittee on Employment, Safety and Training of the Committee on Health, Education, Labor and Pensions, February 27, 2002.
**Methods**

- A preliminary review of current national and state periodicals and journals provided initial discussion and information on the recent fatal and non-fatal injury rates for Hispanic workers. The information was confirmed, or modified, after quantitatively and qualitatively comparing it to the fatal and non-fatal injury and illness statistics for Hispanics contained within the internet sites managed by the U.S. Census Bureau, the U.S. Bureau of Labor, the National Institute for Occupational Safety and Health, the Occupational Safety and Health Administration and the Washington State Department of Labor & Industries.

- Population statistics, demographics and employment distributions were referenced from government and labor organization reports on Hispanics and government internet sites.

- An occupational safety and health manual published by the federal government was reviewed for safety and health definitions, legislation and hazards associated with various occupations.

- Literary works, occupational journal articles, government and safety professional qualitative Hispanic labor group studies and congressional testimonies provided information on cultural, social, national migration and Hispanic employee experiences factoring into the fatal and non-fatal injury trends.

- A personal journal reflecting my experiences as a Safety and Health Compliance Officer with WISHA was referenced to include knowledge and experience about Hispanic occupational safety and health.
Defining the Hispanic Labor Force

The Demographics of the United States Hispanic Population

Over the past decade the Hispanic population has grown faster than any other ethnic group. Hispanics are now the largest minority in the nation. In 2003, the U.S. Census Bureau estimated that the Hispanic population reached an “all-time high of 38.8 million”, or 13.5 percent of the total population (Bernstein & Bergman, 2003). The U.S. population estimates define people of Spanish/Hispanic/Latino origin as Mexican, Puerto Rican, Cuban, Central and South American, or other Latino2 origin. The population estimates reveal that the Hispanic population is made up of 66.9 percent Mexican, 14.3 percent Central and South American, 8.6 percent Puerto Rican, 3.5 percent Cuban, and 6.5 percent other Hispanic origin (Ramirez & Patricia de la Cruz, 2002).

The rise in immigration over the last few decades from Latin American countries has supplemented the growth of the Hispanic population. “Migration today occurs within the larger economic pattern of globalization, the increased mobility of capital, rising international competition, privatization, deregulation, and the search by business for lower costs and higher profits” (Hart & Weber, 1998). This is evident in the West and South regions of the United States that border Mexico where approximately 79 percent of the total Hispanic population resides (Ramirez & Patricia de la Cruz, 2002). In 2002, the Hispanic population was made up of 40.2 percent foreign born individuals, and 52.1 percent of that foreign born segment had entered the United States between 1990 and 2002 (Ramirez & Patricia de la Cruz, 2002). The increasing wave of immigrants to the United States in recent years is not a new phenomenon for a nation

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2The term “Hispanic” and “Latino” are used interchangeably in this report.
built by immigrants.

Population estimates show that the Hispanic population is not as educated as the non-Hispanic population. Estimates show that only 57.0 percent of the Hispanic population 25-years and older have graduated from high school, compared to 88.7 percent for non-Hispanic Whites. Furthermore, 27.0 percent of the Hispanic population have less than a ninth-grade education (Bernstein & Bergman, 2003). Consequently, the lower education level goes hand-in-hand with lower-skilled jobs, less income and greater poverty for the Hispanic population.

A large proportion of Hispanics claim Spanish as their primary language. The 2000 Census survey estimates that 18,520,000 Spanish-speakers (or approximately half of the Hispanic population) are within the working age population range (18-64 years old) (O’Conner, 2002). The survey estimates further show that roughly 6 million of the 18.5 million Hispanics speak little or no English at all. This may be an understatement considering that recent immigrants who are in the U.S. illegally were not part of the population surveys. For example, 32 percent of all Hispanic construction workers speak only Spanish (The Center to Protect Workers Rights, 2002). From this, one may infer that a large proportion of the Hispanics working in the United States carry Spanish into the work setting. This is key information for those who are developing training materials for a Hispanic workforce in any industry.

**Hispanic Employment Statistics**

The Hispanic labor force represents the new face of the blue collar worker in the United States. There are currently 14.7 million Hispanic employees, or 10.9 percent of all workers engaged in the civilian labor force (Richardson et al, 2003). Hispanic males make up 11.5
percent of male employees, and Hispanic females make up 9.1 percent of female employees in the nations workforce. While Hispanics account for only 11 percent of the labor force, they were found to have created one-half of the increase of supply of new workers in the United States from 2000 to 2002 (Kochhar, 2003). The new supply of workers is highly due to the increase of migration of Hispanic immigrants over the last few years.

The Hispanic labor force is not made up of many native generations. The overall nativity of the Hispanic labor force mirrors that of the overall Hispanic population and the immigration status of the Hispanic workers. The Latino labor force is dominated by first-generation Hispanics, or foreign born workers, who make up 58.4 percent of Hispanic employment as of the fourth quarter in 2000 (Kochhar, 2003). Second-generation Hispanics, or native-born Hispanics with at least one foreign-born parent, accounted for 17.5 percent of the labor force. Third generation Hispanics comprised of 24.1 percent of the labor force. Thus, Hispanic immigrants have taken over at the turn of the century where the Irish, Polish and Italian immigrant workforces of the past left off. It will be shown how the immigration generation of Latino workers factors into the increasing trend of occupational fatal and non-fatal injuries.

The Hispanic labor force is not only largely immigrant, but it is younger than the non-Hispanic labor force. Nearly half (49.5 percent) of the Latino labor force are age 34 and younger. Non-Hispanic White workers were made up of 34.9 percent age 34 and younger (Kochhar, 2003). For example, Hispanic construction workers are on average 5 years younger that their non-Hispanic co-workers (The Center to Protect Workers' Rights, 2002). It is a common theme that younger individuals tend to take more risks in life than older workers. This is largely due to an individuals experiences in the workforce. A 21-year old inexperienced Hispanic worker may be
more willing to climb down into a hazardous 10-foot deep trench to lay pipe, where an older worker may not because of experience or knowledge about cave-in hazards. The Hispanic age factor will present itself again in the occupational fatality summaries from different industries.

The wages that the Hispanic labor force commands are considerably lower than their non-Hispanic counterparts. During 2002, the mean weekly wage for Hispanics was $492.35, for non-Hispanics Whites it was $711.40, and for non-Hispanic Blacks it was $547.24 (Kochhar, 2003). In other words, Hispanics working full-time can expect a paycheck to take home that is less than their non-Hispanic co-workers. These lower wages may add to the pressure of the Hispanic laborer to work longer hours, making overtime hours enticing. One can infer that working extra hours will also make a worker complacent and less inclined to focus on safety in the workplace.

**Major Industries and Occupations Where Hispanics Work**

Hispanics no longer fit solely into the mold of the laboring agricultural worker (Martinez, 2000). The statistics on Hispanics from the Bureau of Labor Statistics show that the Hispanic labor force has extended into other higher paying industries. At the turn of the century, Hispanic men and women could be found working in the agricultural, service, retail trade, construction, and manufacturing industries at higher proportions than their representation in the national population. Besides being over-represented in these major industries, Hispanics have been filling the low-skilled, strenuous and higher risk occupations in those industries.

For decades the Hispanic labor force has been a visible and in the case of Washington State, a predominant, figure in the agricultural industry. By the fourth quarter of 2000, the national agriculture, forestry and fishing industry had the highest proportion of Hispanic male
employees at 25.1 percent compared to their total employment across all industries (Richardson et al, 2003). In 2001, Latino employees made up 69 percent of the total agricultural workers in Washington State (Washington State Employment Security, 2002). Hispanic employees can be found pruning and harvesting various types of fruit trees. They operate and maintain a wide range of machinery from small orchard tractors to large potato diggers. They work with chemicals such as pesticides and herbicides in their daily activities on the farm. Hispanic employees handle livestock such as cattle, hogs, sheep and chickens. The agricultural industry not only includes the actual farm operations, but they may also include packing and processing operations that add value to the various commodities. For example, a farm owner may have fresh onions harvested, bagged and sold under the same agricultural company. In agriculture there is a wide range of low-skilled and strenuous jobs that Hispanic employees may work at. These jobs are fundamental to the agricultural industry, although they turnout to be some of the most hazardous occupations in the nation that drive up the occupational fatal and non-fatal injury rates for the Hispanic labor force.

Manufacturing and service industries have seen a rise in Hispanic employees over that last decade. Hispanics are well represented in durable and nondurable goods, retail trade, wholesale trade, and the general service industries (Richardson et al, 2003). Within the manufacturing and service industries, though, Hispanics are more likely than white workers to be employed in riskier jobs within three detailed occupational groups. First, Hispanics represent 17.4 percent of employees in service occupations. The service jobs include janitors and cleaners, grounds keepers and gardeners and general industrial laborers. Employees in these jobs operate lawn mowers and backhoes, work with hazardous industrial cleaning agents and perform heavy
and repetitive lifting. Second, Hispanic labor represents 13.1 percent in the precision production, craft and repair manufacturing occupations (Richardson et al, 2003). Jobs under this occupational group include auto mechanics, wood working and other construction trades. Hispanic employees in these occupations can be found welding, handling hazardous chemicals, operating power wood saws and working under heavy suspended loads. The third manufacturing occupational group where Hispanics held a disproportional fraction of the workforce was the operators, fabricators and laborers. They represent 16.4 percent of this occupational group (Richardson et al, 2003). Hispanics in this group are employed as machine operators and assemblers, truck drivers and material handlers, processing and manufacturing equipment cleaners, handlers and laborers. So a Hispanic employee in the manufacturing and service industries might work on the slaughter line at a meat packing plant, as an auto mechanic at the local shop, the grounds keeper at the public golf course or as a saw operator in a cabinet shop. Working with power saws, heavy equipment and hazardous chemicals leads one to believe that these jobs are risky. These types of hazardous occupations where Hispanics are concentrated in the manufacturing and service industries play a role in injuring and killing Latino workers.

Construction has been the major industry that has seen the highest increase of Hispanic employment over the last decade, and it has the largest proportion of Hispanic workers except agriculture. In 2000, 14.5 percent of the construction industry was Hispanic compared to 10.9 percent of the overall labor force (Richardson et al, 2003). Hispanic employees are more likely to work in production, rather than as managers. Three production occupations employ approximately half (48 percent) of all Hispanic construction workers (The Center to Protect Workers’ Rights, 2002). Out of 1.4 million construction workers of Hispanic origin, 21 percent
are general laborers. Hispanics in this occupation could be found in the bottom of an excavation laying pipe or carrying around materials on a job site. Carpenters make up 14 percent of the Hispanic construction workers. These employees use power saws, climb high on trusses of residential homes and use power nail guns. Painters account for 13 percent of the Hispanic construction workers. These employees work from ladders and scaffolding to reach areas high above the ground, as well as apply hazardous paints with spray guns. Hispanics represent a higher fraction of employment than their overall (14.5 percent) representation in construction for the following occupations; drywall (33 percent), tile (31 percent), concrete (27 percent) and roofers (23 percent) (The Center to Protect Workers’ Rights, 2002). The data shows that the Hispanic employees are taking over the lower-skilled, higher risk jobs in construction that were once held by Blacks and immigrant groups who helped to build the United States over the previous centuries. Fatal and non-fatal injury data will reflect the hazardous conditions that Latino workers face while employed in these construction occupations.

**Hispanic Fatal and Non-fatal Injury and Illness Data**

**National Data**

Hispanic workers in the United States suffer from a higher occupational fatality rate\(^3\) than their non-Hispanic co-workers. In a five year period, 4,167 Hispanic workers were fatally injured while on the job. Fatal occupational injuries for Hispanics steadily rose over the period from 619 fatal occupational injuries in 1995 to 815 occupational injuries in 2000. These

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\(^3\) Fatality rates are defined by the Bureau of Labor Statistics as the number of workers in a particular group killed per 100,000 total employees.
fatalities translate into fatality rates of 5.4 and 5.6 (per 100,000 workers) respectively. Recent fatality data shows that the rate continued to rise to 6.1 in 2001. These rates are significantly higher than those of non-Hispanic workers whose fatality rates over the same five year period went down from 4.9 to 4.2 (Richardson et al, 2003). These fatality trends correlate with the overall relative risk\(^4\) of fatal occupational injuries. The relative risk of fatal occupational injuries for three major work groups from 1998 through 2000 were; 1.55 for non-Hispanic White workers, 1.68 for non-Hispanic Black workers, and 1.94 for Hispanic workers. Thus, Hispanic workers are not only experiencing an inverted occupational fatality trend compared to the non-Hispanic workers, but they are also more likely to suffer a fatal injury at work. As we will see, this raises some serious concerns for safety and health officials, government agencies and labor advocates.

**Washington State Data**

Hispanic workers in Washington State reflect what has been occurring in the nation as it pertains to an increasing Hispanic occupational fatality rate. In a four year period from 1999 to 2002, a total of 45 Hispanic workers suffered occupational injuries that resulted in fatalities (Washington State Department of Labor & Industries, 1999-2002). These fatalities represent approximately 12 percent of all fatalities in the state, while Hispanics make up 8 percent of the state’s work force. Hispanics went from suffering 4 fatalities in 1999 to 15 fatalities in 2002. In particular, the 2002 fatalities suffered by Hispanic workers accounted for 18 percent of all

\(^4\)The relative risk represents the likelihood that a fatality (or non-fatal injury) will occur for a particular group as compared to their distribution of employment. The higher the relative risk, the more likely the chance the particular group will endure an occupational injury. The standard relative risk for all workers is 1.00.
occupational fatalities in the state. The Hispanic fatality rate in the state is significantly higher than the national average, translating into some serious issues for the State’s Department of Labor & Industries, Washington employers and Hispanic labor advocates.

Non-Fatal Injury Data

The Hispanic labor force is suffering a staggering amount of occupational non-fatal injuries and illnesses. The Bureau of Labor Statistics computed that an annual national average of 182,000 Hispanic men and 66,400 Hispanic women suffer non-fatal occupational injuries with days away from work (Richardson et al, 2003). Hispanic workers have an overall higher relative risk of sustaining a non-fatal injury and illness than non-Hispanic workers. The relative risk of non-fatal occupational injuries and illnesses for non-Hispanic White workers was 1.07, for non-Hispanic Black workers 1.40, and 1.51 for Hispanic workers. Similar to fatalities, Hispanic workers are more likely to sustain a non-fatal occupational injury and illness than non-Hispanic workers. These non-fatal injuries and illnesses lead to days away from work, a lower percentage of wages if any, at times life-long disabling injuries and substantial emotional stress on the injured Hispanic worker.

Industry Specific Hispanic Fatalities

Construction

In order to comprehend why the occupational fatality and non-fatal injury rates are increasing for Hispanics and decreasing for non-Hispanic workers, one must examine the data as it pertains to specific industries. From 1995 through 2000, 1,153 Hispanic workers were killed
while working in the construction industry (Richardson et al., 2003). These fatalities accounted for 28 percent of all Hispanic fatalities, and a fatality rate of 18.3 Hispanics killed per 100,000 workers. Within the construction industry, a large proportion (63 percent) of the fatalities occurred in the special trade contractors occupations. This detailed occupational group includes carpenters, general laborers, roofers, drywall workers and stucco workers to name a few. These occupations are physically demanding and are the most hazardous jobs in construction. With low-skill requirements and above average wages, Latino employees are flocking to these risky occupations.

So what are some of the circumstances of these Hispanic fatalities in construction? The most frequent fatal injury event for the fatalities from 1995 through 2000 were “falls to lower levels” at 37 percent (Richardson et al., 2003). Data from 1998 shows falls from scaffold, falls from roof, falls from roof edge, falls from ladder, falls to lower level and falls through skylights are the top six fall events involved in Hispanic construction fatalities (Hispanic Forum on a Safe and Healthy Environment, 2000). Other significant events include electrocutions, caught in or crushed in collapsing materials and struck by objects. The following are summaries of specific fatalities across the nation involving Hispanic construction workers that relate to the types of events mentioned above:

♦ On January 28, 2003, two Hispanic construction laborers died after a trench collapsed. The laborers were 15 and 16-year old immigrant brothers who had been hired to lay electrical conduit pipe. The employees spoke only Spanish, and had been in the United

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5The summaries are taken from the Center for Disease Control, National Institute for Occupational Safety and Health, Fatality Assessment and Control Evaluation reports.
States for 1-year. The 8-foot deep by 2-foot wide trench was not protected from cave-in hazards.

- On August 29, 2002, a Hispanic roofer died after a 15-foot fall from an elementary school roof under construction. The roofer was a 23-year old immigrant who had been in the United States for 3-years working with the employer. His primary language was Spanish. A fall protection system was not provided.

- On February 24, 2003, a Hispanic painter died after being electrocuted when he contacted an overhead power line with his extendable metal ladder. The painter was 32-years old and had been in the United States for 18 years. He had worked for the painting company for 2 years, and spoke mostly Spanish. The employee was not properly trained in overhead electrical hazards.

- On May 29, 2003, a Hispanic pipe layer (laborer) died after being struck by the bucket teeth of an excavator (or trackhoe). The pipe layer was a 23-year old immigrant who had been in the United States for 3-months. He spoke only Spanish. His job was to work connecting the newly laid pipes in the bottom of the trench. He got in between the bucket and the body of the excavator when he was struck by the teeth of the bucket.

- On June 24, 2002, a Hispanic dump truck driver died when he was caught in between the frame and dump body of an off-road dump truck. The driver was a 21-year old immigrant who had been in the United States for 3-months. He spoke only Spanish. He was lubricating a grease fitting at the time of the accident and had not locked the dump body to prevent it from falling on him.

These are just a few of the numerous construction fatalities that occurred to Latino
workers in 2002 and 2003. Each of the five Hispanic construction workers were immigrant males. They were employed in low-skill, high risk occupations. All of the employees were Mexican nationals whose primary language was Spanish. None of the employees had been employed in construction longer than 3-years, and two employees had only 3-months working in the United States. The oldest employee was 32-years old and the youngest was 15-years old. These fatalities summarize a slice of the data presented earlier on the Hispanic population and labor force, specifically Hispanic construction workers and fatality trends. Similar demographics and circumstances carry over into other industries.

Agriculture

The agriculture industry accounted for 625 fatal injuries suffered by Hispanic workers from 1995 to 2000, accounting for 15 percent of the total fatalities (Bureau of Labor Statistics, 2003). This translated into a fatality rate of 15.3 (per 100,000 workers) for Hispanic workers in agriculture, forestry and fishing. In Washington State, from 1997 through 1999, Hispanic employees accounted for 35 percent of the agricultural fatalities (Washington State Department of Labor & Industries, SHARP Division, 2002). Within the national agriculture industry, 42 percent of the fatalities occurred in the agricultural services, and together with agricultural production-crops they accounted for approximately two-thirds of the Latino fatalities in agriculture. Employees working in these two specific industries are employed as tractor drivers, farm workers, general laborers and truck drivers for example. So, what are the events that cause fatalities in agriculture?

The leading cause of fatalities for the agriculture industry were highway incidents,
accounting for 22 percent of all Hispanic fatalities in agriculture (Richardson et al., 2003). This includes tractor rollovers and vehicle collisions on roadways. Caught in machinery, struck by objects, falls to lower levels and exposure to harmful substances or environments are some examples of events that cause fatalities in agriculture. These are summaries of specific examples of agricultural fatalities involving Hispanic workers that provide some insight to the events listed above:

♦ On October 5, 2002, a female Hispanic farm laborer died after falling from the elevated forks of a forklift. She was 32-years old and had worked on the farm for 9-years. Her primary language was Spanish. At the time of the accident, she was being raised by her husband on the forks of the forklift about 20-feet above the concrete barn floor to label some stacked sweet potato bins.

♦ On July 27, 1998, a Hispanic farm worker was working in an orchard and died from heat stroke.

♦ On October 11, 2000, a Hispanic farm worker was working with a potato harvesting crew. The employee went inside the harvester to disengage potato vines that had jammed up the power take-off shafts. The driver of the tractor pulling the harvester thought the employee had finished clearing up the harvester and he started the harvester up again. The employee was still in the harvester, was caught up in the shafts and was thrown against the inside of the harvester, killing him. The employee’s primary language was Spanish.

6This summary was taken from the Center for Disease Control, National Institute for Occupational Safety and Health, Fatality Assessment and Control Evaluation reports.

7This and the following 3 summaries were taken from the Washington State Department of Labor & Industries, Fatality Assessment and Control Evaluation, SHARP reports.
On August 29, 2000, a Hispanic farm worker was backing up a county road while pulling an apple bin loader. He turned around a corner and lost control of the tractor. The tractor went into a ditch, rolled-over and crushed the operator, killing him. The tractor was equipped with a Rollover Protective Structure, but it was not being used. The tractor driver was in his 20's, an immigrant and his primary language was Spanish.

On September 1, 2001, a Hispanic farm worker was carrying an irrigation pipe when the pipe came into contact with an overhead power line. The electricity killed him. He was a 23-year old immigrant from Mexico. His primary language was Spanish.

These agricultural fatalities occurred from 1998 to 2002, which overlaps the fatality data presented earlier. They represent some common events surrounding Hispanic occupational fatalities in agriculture. Deaths resulting from a fall to a cement floor, heat stroke, being caught on an exposed power take-off shaft during maintenance, being crushed by an orchard tractor after a roll-over and being electrocuted when contacting overhead power lines. All of the summaries involved Latinos who took low-skilled, low paying jobs. The data and summaries prove that the agriculture industry contains some of the deadliest occupations in the United States.

Manufacturing and Services

The manufacturing and service industries provide another large fraction of the overall fatal and non-fatal occupational injuries that Hispanic workers experience. The manufacturing and service industries together accounted for 900 fatalities, or about 22 percent, of all Hispanic
occupational fatalities from 1995 through 2000 (Richardson et al, 2003). This resulted in a fatality rate of 3.1 per 100,000 workers for manufacturing, and a fatality rate of 2.0 per 100,000 workers for the services. These fatality rates are less than the overall Hispanic fatality rate of 5.4 per 100,000 workers. Manufacturing can account 20 percent of its 417 Hispanic occupational fatalities to the event struck by object. This includes being struck by moving machinery, a material being worked on or something falling on the employee. The following are examples of Hispanic worker fatalities in manufacturing and service industries:

♦ On January 20, 2000, a 31-year old Hispanic laborer died when he fell into a heated process tank of nickel acetate. The employee was applying a rinse to parts coming out of the tank. He had worked for 3-months with the company. He did not receive any specific training on how to do the job safely.

♦ On October 21, 2001, a 15-year old Hispanic worker died when he became entangled in a dough mixing machine. The employee had immigrated from Guatemala one month before the incident. He spoke primarily Spanish and had no safety and health training or experience.

The overall fatalities within manufacturing were spread out over various detailed industries such as the food and kindred products, lumber and wood products, stone, clay, glass and concrete products and fabricated metal products. Employees in these industries could work in a food processing plant, in a window production facility or in a brick forming plant. The service industries can account 28 percent of its Hispanic occupational fatalities to homicide events. These

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8 The following summaries were taken from the Center for Disease Control, National Institute for Occupational Safety and Health, Fatality Assessment and Control Evaluation reports.
are acts of workplace violence where an employee’s life is taken. Business services and automotive repair, services and parking combined for 261 (or 54 percent) of all Hispanic service industry fatalities. Hispanic employees in these service industries may work in food preparation jobs, work as janitors and repair employees for office buildings, cleaning grocery stores or as auto mechanics. Although the manufacturing and service industries have low fatality rates, there are still many Hispanic employees working in these general industries that are suffering occupational fatal and non-fatal injuries and illnesses, providing an area of focus for Hispanic safety and health advocates.

Hazards Hispanic Laborers Face and Protective Measures

The demographics of the Hispanic labor force, the types of industries and occupations that they work in and the types of fatal and non-fatal occupational injuries that they suffer from paint a partial picture about the issues driving the occupational fatality rate up for Latinos. This section takes a look at the specific occupational safety and health hazards that Hispanic workers face in different industries. Many of these hazards can be eliminated or diminished to a degree that will prevent injury or illness to workers.

Construction Hazards

Hispanics in construction occupations face some of the most hazardous safety and health conditions of any industry. Construction sites are dynamic work environments. The weather and structures can change quickly that makes planning for safety and health measures even more difficult. The safety and health hazards in construction can also cause more severe injuries
compared to hazards in other industries. The following are examples of occupational safety and health hazards that Hispanic employees face in the construction trades (Friend & Kohn, 2001):

- Fall Hazards—These hazards arise whenever an employee is working above a lower level. Employees who fall to lower levels may experience broken bones, broken back or neck resulting in permanent disability, or death.
  - Roofers perform a majority, if not all of their work on roofs which are above lower ground levels.
  - Employees working on stationary and mobile scaffolding face fall hazards.
  - Open-sided floors, walls openings and floor holes pose another dangerous fall hazard.
  - Ladders and stairways are used to gain access to upper levels for temporary and permanent means.

  Protection from Hazard—Fall hazards can usually be abated by providing some type of fall protection system, or by changing the work procedure. Fall protection systems include fall arrest and restraint systems, and safety monitor systems where the employee is monitored away from the fall hazard. Standard guardrails can be erected around open-sided floors, floor holes and scaffolds.

- Struck By and Caught In-Between Hazards—These are hazards created by moving equipment, materials and falling loads. Injuries can include broken bones, internal damage to the organs and severe lacerations which have the potential for causing death.
  - There is a lot moving equipment and machinery on a construction site that can create these hazards.
Unsecured or improperly secured loads creates another struck by hazard.

Many times employees will be required to work between two structures creating the possibility of being crushed between the objects.

Protection from Hazard–Job modifications and engineering controls are the best ways to eliminate the struck by and caught in-between hazards. Back-up alarms, or moving alarms, should be used on equipment to help warn employees that equipment is moving. Hard hats and steel toe shoes are types of Personal Protective Equipment (PPE) that employees should wear regularly on construction sites.

Electrical Hazards–These are hazards created by unsafe electrical conditions. It only takes 50-150 milliamperes to cause extreme pain, respiratory arrest, burns and severe muscle contractions. Between 1 and 4 amps usually causes death.

Many construction sites are exposed to the elements that can create a wet electrically conductive work area.

Overhead power lines pose a serious electrical threat to employees. Cranes, backhoes and metal ladders are good conductors of electricity from overhead power lines.

Protection from Hazard–The National Electrical Code (NEC) provides guidelines for employers on how to set up all electrical systems, and this Code should be followed to ensure protection of employees. A site inspection of electrical cords, equipment and procedures can help identify frayed, damaged or non-grounded equipment. A lockout/tagout system may be in place to ensure that equipment is
not accidentally started up during maintenance or repair.

- Trenching and Excavation Hazards—These are hazards that occur when the ground is opened up and an employee must work in the bottom of the trench or excavation. If an employee is buried in an excavation or trench they could suffocate or be crushed by the weight of the soil coming in on them. These collapses can result in death.

  - Heavy equipment, traffic, impeding structures on the surface level, a high water table, weather and soil type are some of the factors that contribute to an excavations instability.

✓ Protection from Hazard — To protect employees from cave-in hazards, earth removed from the ground can be placed at a safe distance away from the trench so that it does not create a surcharge on the trench walls. The excavation can be sloped back from its base, so that the soil is sitting at, or is close to its angle of repose. Protective systems such as trench boxes (shields) or shoring can also be used to support trench walls from collapse.

**Agricultural Hazards**

Hispanic employees working in the agricultural industry face some of the same hazards as employees in the construction industry. This is why agriculture consistently ranks as one of the top three industries causing fatal occupational injuries to the Hispanic labor force. The following

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9 An excavation can be any hole below ground level. A trench is longer than it is wide.

10 The angle of repose for soil is the angle the soil will naturally lay at without compression or restrictions. In other words, if you take some sand and start pouring it out onto the top of a surface this is the angle from the foot of the pile to the top of the pile.
are examples of occupational hazards found in the agricultural industry (Shutske, 2001):

- Tractor Hazards—These are hazards associated with tractors and tractor implements, as well as their operations. Theses hazards can cause serious injuries or death by crushing, catching an employee’s clothing or amputating an extremity.
  - Tractor roll-overs account for numerous fatalities each year.
  - Power take-off shafts rotate extremely fast, have catch points and are very powerful.
  
  Protection from Hazard—Tractors that have the potential for rolling over can be equipped with a Roll-Over Protective structure (ROPs). The idea is that the roll over bar keeps the employee from getting crushed by the tractor during the roll over. Guards can be installed over power take-off shafts to protect employees from getting caught by the rotating shaft.

- Material Handling Equipment—This includes equipment such as conveyors and augers.
  - Conveyors consist of a conveying belt, shafts and chain and sprocket drives. The point where the conveyor passes over the shafts creates a nip point hazard. The point where the chains and sprockets meet create a catching hazard.
  - Augers are a type of conveyor that uses a screw type mechanism to move grains, dirt, silage and other loose materials. The auger may also be used to crush materials into smaller pieces, making it a dangerous piece of equipment to take an employee’s arm.

Protection from Hazard—These hazards are usually protected with a physical guard
or by providing a safe distance from the hazard.

- Pesticide Hazards—These are chemical hazards that employees face that can cause serious illness or death if mishandled, or if protective equipment is not in place. The acute effects of pesticides depends on the pesticide being handled. Some pesticides can cause nausea, dizziness, headaches, asphyxiation, burns to the eyes or throat or cancer. Certain pesticides are more dangerous than others. The chronic effects of pesticide exposure have not had much research substantiating the risks or non-risks to employees. It is known that pesticides can enter the human body through inhalation, skin absorption or digestion.

  - Mixing, loading and applying pesticides through ground applications (e.g. tractor and sprayer) provide some serious health risks to Hispanic farm workers.
  - Farm irrigators can also get exposed to pesticides when they have to enter a previously treated area within the Restricted Entry Interval (REI)\textsuperscript{11}, exposing them to recently sprayed pesticides.
  - General farm workers, such as pickers and thinners, may have to enter a crop that has had pesticides applied, exposing them to a health risk (Fred Hutchinson Cancer Research Center, 2004).

✓ Protection from Hazard—The Worker Protection Standard (WPS) developed by the Environmental Protection Agency (EPA) sets safety and health guidelines for employees who have to work with or be around pesticides in agriculture. PPE such as respirators, chemical resistant suits, chemical resistant gloves, chemical goggles

\textsuperscript{11}The REI is a specified amount of time that the Environmental Protection Agency has placed on a particular pesticide before an employee can safely enter a treated area without protective measures in place.
and chemical resistant boots are usually required to protect the employee. Employees need to be trained on the hazards associated with the pesticides, as well as what to do in the case of an emergency.

- Confined Space Hazards—These hazards are created when an employee must enter a space that has minimal entry or exit routes and has the potential to create an environment that can harm or kill the employee. Certain confined spaces can minimize or diminish the amount of oxygen available. Others might contain harmful concentrations of gases such as ammonia, methane, sulfur dioxide or carbon monoxide. Employees who enter these harmful confined space environments may become asphyxiated, lose consciousness or die from the exposure.

  - Silage and manure pits on dairies can create a confined space environment that is deadly for the entering employee.
  - Grain silos can also be considered a confined space.

- Protection from Hazard - Each confined space needs to be evaluated to determine the environmental hazards present and to plan out the safest means of entry. This might mean that ventilation needs to be provided. Others that can’t be controlled with ventilation may require the use of a respirator to enter.

**Manufacturing Hazards**

The manufacturing industry includes many types of work processes. As discussed earlier, Hispanic employees are concentrated in manufacturing occupations that require work with hazardous processes. So what are the hazards that Hispanic employees face in manufacturing?
Besides the hazards described in the construction and agriculture sections, here are examples of hazards that may exist in manufacturing\textsuperscript{12}:

• Hazards Created by Machinery—These hazards are created by moving parts where an employee can get caught by, wrapped up on, snagged or cut. The size, power and speed with which machines operate varies depending on the process. Employees who get caught by these hazards may suffer injuries such as lacerations, amputations, broken bones or injuries that result in death.
  ○ Chains, sprockets, belt drives, pulleys, shafts and gears are examples of parts of power transmission machinery that create a serious hazard to employees.
  ○ Wood cutting equipment like radial arm saws and table saws are examples of equipment that creates a laceration and amputation hazard.
  
  ✔ Protection from Hazard—Most machinery hazards can be corrected by installing some type of protective guard that encloses the moving parts. If a guard can not be affixed, then the work practice can be modified to diminish or eliminate the hazard to employees.

• Hazardous Stored Energy—This hazard is usually created during the maintenance and repair of equipment or machines. Equipment can be powered by numerous energy sources including electricity, air (pneumatic), water, gravity, hydraulic and thermal power. When maintenance is performed on a machine that has one or more power sources, there may be a potential for one or all of the energy sources to be released during maintenance creating an unsafe situation for an employee who may be in a dangerous area of the machine.

\textsuperscript{12}The descriptions of these safety and health hazards are taken from personal experience.
Protection from Hazard—Procedures to safely shut down equipment and machinery can be developed to ensure that all power sources are accounted for before the employee performs maintenance or repair work. These may be called lockout/tagout or energy control procedures. These procedures usually include written programs, employee training, energy control equipment and procedure evaluations.

The hazards presented above represent a small fraction of the occupational safety and health hazards that Hispanic employees face in construction, agriculture, manufacturing and other industries. These hazards can cause severe injury or death to this workforce, making their occupations some of the most dangerous in the United States. Most safety and health hazards can be eliminated or diminished by providing equipment protections, personal protective equipment, employee training and/or engineering controls. These methods to control the hazards, though, will not be effective unless training on safety and health hazards and concepts are communicated effectively to the Hispanic employee.

The Hispanic Employee’s Experience

This section identifies the thoughts, experiences and attitudes of Latino employees regarding occupational safety and health in the United States. From language barriers to discrimination, Latino employees in the United States tend to feel that they are up against a country that has been built by exploiting immigrant and lower working class employees. The factors identified here fuel the increasing occupational fatal and non-fatal injury rates for the Hispanic labor force.
Hispanic employees appear to be more willing to work dangerous occupations and perform more hazardous jobs within those occupations. Latino construction workers in North Carolina believe that “in a dangerous work situation, they have no choice but to perform the task” (North Carolina Occupational Safety and Health Project [NCOSHP], 2000). It has been shown that many Hispanic occupational fatalities occur to immigrant construction workers who are roofers, laborers and carpenters. In their native countries, such as Mexico, wages are lower and work is scarce. This is why they come to the United States, the land of opportunity, where wages are several times higher than those in Mexico. As one immigrant put it:

“Sometimes there’s no other option than to work if the conditions aren’t right, because as a Hispanic, you have to adjust yourself to what they tell you to do at this moment. Easily, a boss can say ‘if you can’t do it, there are other people here waiting to have the opportunity to do it.’ You have to be brave and do the things even if it looks like the safety conditions aren’t good.”

This suggests that Hispanic employees are not only willing to perform hazardous tasks on the job, but that the employer is deliberately assigning these hazardous tasks to them.

Many Hispanic employees believe language and literacy barriers affect their safety and health experiences on the job. Hispanic employees claim that many employers provide safety information in English through safety meetings, training or written materials. Written information may be in the form of Spanish, but it may be too technical for the Latino employee to comprehend. These types of written materials are not effective training tools for a labor force that has a large majority of less educated, highly illiterate and primarily Spanish speaking workers (O’Conner, 2002). Considering that agriculture, construction and manufacturing can be very
dangerous, it makes training on safety and health issues essential for a safe work environment. A Latino employee interviewed by the Minnesota State Department of Labor and Industries reflected on the language issue:

"Being part of these job-club meetings, I happen to know that the biggest issue is the language issue. In most cases, the people do not know their rights because the literature is not available to people. It is not available in Spanish and this makes it impossible for people to know what they are entitled to."

A couple of Latino construction workers from North Carolina had similar comments:

"They give us a "Safety" every week, every Monday. A paper comes around in Spanish and in English. The supervisors read it out loud and give the Spanish one to us to read. And we sign it."

"Many Hispanics are here for two to three years and they don't learn English. This really hurts the people. A lot of people don't even know how to read or write in Spanish."

It appears some employers are going through the motions to provide training to Hispanic employees, even though it may not be effective because of language and literacy problems.

In light of the language and literacy issues, Hispanic employees tend to lack knowledge about work hazards they face, safety and health concepts and their rights as workers. Employee interviews and accident investigations across the nation reveal that many fatal injuries Hispanic employees face are due to a lack of training on workplace safety and health hazards and concepts. For example, the 23-year old immigrant worker who was electrocuted to death when he lifted an irrigation pipe up on end and contacted an overhead power line was not trained (Tri-City Herald, March 14, 2004). The Washington State Department of Labor & Industries investigation into the
accident found that the employee had not been trained on safe work practices and the hazards he faced while working under the overhead power lines. Workers in North Carolina echoed this lack of knowledge about safety hazards and concepts claiming that they received minimal or “no safety information, but (rather), relied instead on learning from co-workers”(NCOSHP, 2000):

“You learn by watching, helping other people. And by your own experience. Safety is up to you yourself. Because some bosses-yes, others-no. There’s all kinds. Some of them—if you tie yourself off—they get mad because it slows you down. Others say, “no, do it carefully, even if you can’t finish the job.” And there’s those who from down below are yelling at you to hurry up. There’s all kinds.”

Hispanic employees also lack knowledge about their rights as a worker. Employees do not comprehend the process of filing a complaint with a government agency. Many employees do not know what OSHA is. An employee in North Carolina expressed his need for information about filing a formal complaint:

“...I wouldn’t hesitate to make a complaint. I’d like to know what you have to do to make one. Because if I did it in front of the boss, he would come down on me and say that I shouldn’t do that, because it’s probably against him” (NCOSHP, 2000).

Some Latino employees in Minnesota felt they were not getting any information about workers’ rights and job safety. Other Latino employees felt that they had to get the information from a co-worker because if they were found reading a “Know Your Rights” poster they might look suspicious. There seems to be a lack of trust for government agencies among many Latino employees:

“Most of these immigrants come from countries where their rights have been denied by
corrupt government. Some of them have bad experiences with reporting misgivings to the government. Some of them do not even know that such rights exist” (State of Minnesota DLI, 2002).

Employees must be informed about their workplace rights to ensure that their employer is providing them with a safe and healthy work environment. In North Carolina, though, employee interviews revealed that many Latino employees do not expect their employer to create a safe work environment, and instead must “watch our for their own safety” (NCOSHP, 2000).

Lacking key knowledge about their workplace rights and an employer’s responsibilities under the law exposes the Latino labor force to workplace discrimination. Discrimination can result from filing a workplace complaint on safety to simply refusing to do an unsafe job. Here is what Hispanic employees from North Carolina had to say (NCOSHP, 2000):

“They treat you like lower class. They take advantage of people who do not speak English.”

“The companies take advantage of the Hispanic workers because they won’t complain and they don’t speak English. They pay attention to the complaints of the White workers more—not so much to the Black workers and even less to the Hispanics.”

Employers may discriminate against an employee by assigning them to do more hazardous work or by firing them. As seen earlier, many Latino employees have to work because jobs are scarce and money is not abundant. Losing one’s job is not an option. For many recent Latino immigrants, continuing to work in hazardous conditions outweighs the risk of dying on the job. Thus, a Hispanic employee who is injured on the job may fear filing a workplace injury claim because of the discrimination factor. This leads to the conclusion that there may also be under-
reporting of the workplace injuries suffered by Latino employees who fear discrimination for exercising their rights.

The Legislation Behind Hispanic Occupational Safety and Health

The OSHA Administration, created by the Act of 1970, has been charged with the responsibility of protecting all working men and women in the United States. This includes the Hispanic employee who may happen to be an illegal immigrant. This section will examine what makes up the OSHA Administration and how it governs workplace safety and health. Then we will view how the Administration is reacting to the increasing trend of the Hispanic labor force's fatal and non-fatal injuries and illnesses.

An OSHA Overview

The Administration was created by the United States Congress to encourage employers and employees to reduce workplace hazards, to provide research on occupational safety and health topics, to establish responsibilities and rights for employers and employees in regards to safety and to develop safety and health standards and ensure their compliance (Friend & Kohn, 2001). OSHA has workplace standards that cover four basic categories: General Industry, Maritime, Construction, and Agriculture. The Act places a set of responsibilities on employer’s such as to evaluate workplace conditions, become knowledgeable about standards that pertain to their industry, minimize or reduce hazards and provide training to employees. Employees are required to follow all applicable workplace safety and health standards. Employees also have the right to ask for safety and health on the job without fear of discrimination. OSHA can choose to take an
employer to court if they choose to discriminate against an employee for complaining about workplace safety.

OSHA allows states to run their own federally approved OSHA plans as in Washington State. The state plan must be as effective as the federal plan, but it can be more stringent on safety and health laws. The Washington Industrial Safety and Health Act (WISHA) is administered by the State Department of Labor & Industries. There is an assistant director who oversees WISHA and its activities.

OSHA enforces its standards through workplace inspections. OSHA may initiate an inspection when an imminent danger situation is identified, a catastrophe or fatality has occurred, an employee has filed a complaint, a programmed high-hazard inspection of a particular industry is identified or a follow-up to a previous inspection to ensure abatement of hazards is warranted (Friend & Kohn, 2001). At times when there are a high number of injuries for a particular industry or business, OSHA will develop a Special Emphasis Program to inspect and identify why injuries are on the rise. OSHA appears to be the Administration that can address the rising Hispanic fatality rates, which raises the question; Has it?

**OSHA Outreach Efforts**

As the statistics on Hispanic occupational fatal injuries reached all-time highs in 2000 and 2001, John L. Henshaw, Assistant Secretary of Labor for Occupational Safety and Health, identified this as a “deadly trend” that the Administration would place at the top of the OSHA agenda (Henshaw[1], 2002). OSHA first began to address this issue by translating publications into Spanish. In more recent years, OSHA has formed a Hispanic Workers Task Force aimed at
assessing the agency’s ongoing Hispanic outreach efforts as well as determining what further activities are needed to improve training, education and information efforts to reach Hispanic workers (Job Safety & Health Quarterly, Spring 2002). Here are some specific examples of how OSHA has responded to the increasing Latino fatality trend:

- Created an 800 phone number accessible to Spanish-speaking individuals.
- Initiated a national clearing house for training programs in Spanish.
- Created a Spanish-language website for employees and employers.
- Compiled a list of fluent Spanish speaking employees in Federal OSHA and the State Plan States.
- Strengthening OSHA offices’ contacts with law enforcement and emergency responders to ensure appropriate referrals are being made about workplace accidents.

OSHA has provided grants to non-profit and professional organizations, colleges, universities and faith-based and community organizations to establish training programs and outreach efforts for Hispanic employees. The Administration is also conducting traditional OSHA training courses in Spanish, like the 10-hour OSHA Construction safety course. These are just some of the efforts OSHA has undertaken to reach the Hispanic labor force, and hopefully stabilize or decrease the Hispanic occupational fatality trend.

**Labor Advocates’ Views on OSHA Outreach**

Hispanic labor advocates do not think the current Administration is doing enough to address the recent Latino occupational safety and health issues. OSHA does not have the
resources available under the Bush Administration to tackle this disturbing trend (Seminario, 2003). OSHA has approximately 1,000 inspectors, and there are roughly 4 million workplaces under Federal OSHA jurisdiction. Lon Ferguson, chairman of the Safety Sciences Department at Indiana University of Pennsylvania, said that: “It’s purely a numbers game. There simply aren’t enough inspectors.” It should also be noted that OSHA does not perform programmed inspections on sites with less than 11 employees (Friend & Kohn, 2001). This may be a hindrance to OSHA’s effectiveness in stabilizing, or minimizing the risk to Hispanic employees who are largely employed with small companies in construction and agriculture. Furthermore, advocates have argued that serious violations issued by OSHA that carry an average penalty of $886 dollars are not substantial enough to deter unsafe employers (The American Federation of Labor and Congress of Industrial Organizations, 2003). If the Administration can not ensure compliance in the work sites where Latino employees are present, how can it significantly affect the increasing fatal and non-fatal injury trends?

The publications, web site and toll-free hotlines that OSHA has presented are under scrutiny by Latino labor advocates and safety and health professionals as being ineffective. Many of the OSHA publications have been literally translated into Spanish. These literal translations are likely to be too technical for the average Hispanic Spanish-speaking worker. Thus, OSHA needs to pay particular attention to developing relatively low-literacy material (O’Conner, 2002). Creating a Spanish language website seems to be a good idea, although roughly 70 percent of the Latino population does not have access to a computer, making internet access impossible. As

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14 A violation is classified as serious if the hazard is likely to cause physical harm or death to the employees.
many Latino workers do not know their rights, let alone have knowledge about OSHA’s existence, it would be difficult for OSHA to claim that a Spanish hot-line is serving a significant proportion of the Hispanic workforce.

Even while scrutinizing many of OSHA’s outreach efforts, Hispanic employee advocates still praise some of the outreach. Most safety and health officials that train Hispanic workers believe that a hands-on-training approach is most effective. As shown earlier, many Hispanic workers learn about safety and health concepts and hazards from co-workers. The training courses that OSHA provides in Spanish can be considered effective tools for training Latino workers. This means that the grants and funding that OSHA provides to various organizations for training is an effective means of addressing the Hispanic safety issues. OSHA’s efforts should not be looked at in vain, but rather, they should be seen as a starting point for further outreach efforts.

Personal Experience With Hispanic Safety and Health

Over the last 3 years as a safety and health compliance officer with WISHA, I have experienced several issues that Hispanic workers face. Through accident investigations and other inspections I have witnessed what is happening to Latino employees in Eastern Washington. This is a summary of a safety inspection that I did where a crew of Guatemalan construction workers were building a residential home:

I found several of the Guatemalan employees working 20-feet above ground level on the roof without any fall protection. There were a couple of them installing siding standing on scaffolding and a ladder made out of scrap 2 by 4's. The employees were trying to balance on an 8-inch wide platform. No one on the ground was wearing a hard hat and the Latino
workers were using nail guns and power saws without any safety glasses. I recall it was extremely hot that day, and there was no drinking water or restroom available. Employee interviews revealed that they did not know that the employer had to provide them with water and a restroom along with safety equipment such as fall protection. The employees had no training on safety and health issues, and most of them had been in the United States for less than 6 months. I remember asking the employer during the course of the inspection why he had the employees working under these hazardous conditions without any safety measures in place, and especially why he had the employees using an unsafe job made scaffold and ladder. He said that it was because of “Guatemalan ingenuity”. He went on to talk about how the employees were great carpenters and acrobats. He added that he had instructed the employees to make the scaffold and ladders out of scrap wood from the house because he did not have time to go and get any safety equipment.

This is one example of the many times that I observed Hispanic employees exposed to life-threatening workplace hazards. A Hispanic crew of industrial cleaners showed me that they faced similar issues while working in the services industry:

The crews job was to clean and sanitize a meat processing plant within an 8-hour night shift. The employees’ jobs included working at heights, crawling and walking on processing equipment and using hazardous cleaning agents. The employees had to be careful they did not get burned by the 140 degree water or chemicals they used. Visibility was minimal because the hot water created a thick atmosphere of steam. The work environment was covered with beef fat, blood and body parts creating a problem for the employees who were pressured to work fast. Many employees experienced slips, trips and
falls causing many to endure painful bruises, strains, sprains and broken bones. The
workers were treated as lower-class citizens by the supervisors, and some were even
threatened with their immigration status if they caused any problems for the company as
the employees did not know their worker rights. This does not sound like the “American
dream” to me.

Finally, an incident that I inspected at an apple orchard heightened my awareness about the
Hispanic labor experience:

My adrenaline was pumping and I knew someone had just died. I was en route to an
orchard where a farm worker had rolled over a tractor. It was his first day on the job and
he had been mowing the orchard for about 4-hours. When I arrived at the farm I
remember the somber look on the foreman’s face. The tractor and mower were at the
bottom of a 30-foot embankment. The foreman told me he had trained the victim in
tractor operations at the start of the day. The foreman went on to inform me that the
victim was his brother. The tractor was not equipped with ROPs, that if used, might have
saved the victims life. It turned out that ROPs were not required on this tractor because of
an exemption under the Washington Administrative Codes for Agriculture\textsuperscript{15}.

Many of the Latino workers I speak to comprehend very little English, or none at all. They do not
understand safety and health concepts. They fear discrimination because they have seen so many
of their co-workers let down by the laws that protect workers’ rights. In the course of my
inspections, I have found that a substantial amount of Latinos do not get sufficient safety and

\textsuperscript{15} This is Chapter 296-307 Safety Standards for the Agriculture Industry in Washington State. The
exemption eliminates the requirement for ROPs on agriculture tractors related to orchard use where the ROPs may
hinder the use of the tractor. The victim died while operating the tractor outside of the orchard rows.
health training, they do not get personal protective equipment and they continue to perform hazardous jobs even when their life is in jeopardy.
Conclusion

There is no question that several issues affect the increasing occupational fatal and non-fatal injury rates for the Hispanic work force. Population demographics showed that the Hispanic labor force is made up of a large fraction of immigrant workers from Latin America. This translates into a less-educated, largely Spanish-speaking and low-skilled Hispanic labor force. Hispanics are disproportionately represented in higher hazard occupations within agriculture, construction, manufacturing and service industries than their non-Hispanic co-workers. Fatal and non-fatal injury data reflect these hazardous employment distributions. Thus, the “Hispanic Labor Experience” is deadly and it is debilitating Hispanics who have come to the United States in search of work and brighter futures.

Government, employers and employee advocates seem to have identified this alarming trend, and the search for solutions are underway. In many of the resources, though, there is a reoccurring opinion among government officials and labor advocates that the data collected by the Bureau of Labor Statistics on fatal and non-fatal injuries is inaccurate. There may be possible under-reporting of Hispanic injuries and illnesses, which could affect the data significantly one way or another. Regardless of the possible inaccuracies, a single fatality among Hispanic workers or any worker, is too much. The nation needs to address the data collection issue so that research focused on the problem can be more effective.

Outreach efforts to reach Hispanic workers such as OSHA’s should be continued and improved. Government and employers need to understand the factors identified in this research in order to effectively plan and implement occupational safety and health outreach and training programs for the Hispanic labor force. This is some advice for those trying interact with Hispanic
workers: Have two-way communication with the workers about safety and health; they may be the most useful source of information on how to protect "them" from occupational injuries and illnesses. Finally, the factors examined in this study are general characteristics affecting the overall Hispanic labor force; thus, further research and collaboration by government, safety professionals and labor are needed in order to better comprehend the details behind the deadly "Hispanic Labor Experience."
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Appendix

The following are excerpts from the personal journal that I have kept over the last 3 years about my work as a Safety and Health Compliance Officer with WIHSA. My job is to ensure employers are complying with the occupational safety and health rules as they pertain to their particular industries in Washington State.

08/20/00
This last week I was involved with my first fatality investigation. Another inspector was the lead, but I was right there the whole time. The accident involved a Hispanic immigrant who was a tractor driver for an orchard. They were harvesting apples. The employee was headed back from lunch break on a gravel country roadway. For some reason, the tractor left the roadway and rolled over into a ditch on the side of the road. The employee was killed by the crushing injuries from the heavy tractor. The owners of the company were upset and emotional over the accident. Not at the employee, but because he had died. They said he was one of their best, and favorite, workers. He was 22-years old, just married, and had a baby. He had always worked as a farm worker at this orchard. The tractor he was driving had ROPS on it, but they were not positioned up to protect him from the roll-over. I thought he should have had the ROPs up, but it turns out the tractor is exempt from having to use ROPs when the operation involves a tractor. I think that if the ROPs had been engaged, and the employee was using the seatbelt, he would have had a good chance of survival. I think the Agriculture standard covering tractors let him down. This exemption needs to be changed, maybe I will be around to help change it.

12/20/00
Yesterday I did an inspection of a construction site where a crew was erecting an aluminum building. The employees were working about 20 feet above the frozen ground. All three of the employees were Hispanic, an only one could speak English. They were not using fall protection equipment. The work looked pretty dangerous because they were walking on the aluminum framing, which had ice and snow on it. I know I would be really scared to be doing that job. The employees looked like they were climbing on a jungle gym 20 feet in the air. I glad I stopped the work and did an inspection before some got hurt.

01/30/01
The last two weeks we (Safety compliance) were doing pruning sweeps in Eastern Washington. We would drive around looking for orchards where workers were pruning. I guess there has been a lot of eye injuries in pruning from the branches hitting employees in the eyes. I sure wouldn’t want to get my eye poked out by a frozen branch. Anyway, as we drove around, especially in the north, they was snow on the ground. It looks scary how they stand on a 3-point ladder in the snow. All of the workers in all of the orchards are Mexican. Sometimes the snow is up to their knees, and then to top things off they are standing on a steep slope. Since the word got out, some employers seem to be providing employees with safety glasses, but some don’t. A good portion of the employees are telling me that they do not want to wear the safety glasses. I am trying to inform them
that it is for their own good, and show them how the safety glasses can protect their eyes. I feel like many of the workers who don’t want to wear the glasses are doing it because it makes them look “dumb”, or there it too much machismo in their attitude. They need to change this before someone gets seriously hurt. Some of the employers don’t even get these guys bathrooms, because of the snow. A lot do not provide drinking water. This has to be really hard work. Cold, strenuous, and dangerous.

02/14/01
About a week ago me and another inspector went to check out a potato processing plant. They make French fries, hash browns, and other potato products. I was amazed how many Hispanic employees worked at the company. Before going into a plant like this, I always thought that American workers held those jobs. The Hispanic employees operated machinery, sorting material, and drove forklift. I remember a lot of employees were not sure if the company had a safety program. They told me that the supervisors talked about safety, but that they did it in English, or if it was in Spanish, they did it too fast to understand. Some employees told me they just had to watch out for themselves and not get into trouble or get hurt. This doesn’t seem right. How can they feel like this with so many safety hazards around? They need to stand up for themselves. Maybe they are scared to lose their jobs?

03/15/01
I need to write this down so I don’t forget. Since I went away to college, it seems that more and more Latino employees are working in construction. Last week there was a crew of stucco employees, all of them spoke Spanish. There was not one employee out of the 10 who could speak English. They had to call the White foreman, who was at another job site. I explained to the foreman why I was there, and he seemed to think everything was o.k. The employees were working on unprotected scaffolding 10 to 15 feet above the ground. I remember as I pulled up to the job site (home), one employee was going to the top tier of the metal tube scaffolding. He didn’t even have a ladder to use. He climbed right up the side of the scaffolding x-braces. It looked really dangerous. All I could think was I hope this guy doesn’t fall while I’m here on the job. None of the employees working on the ground were using hard hats. During interviews, none of the employees had seen a safety program for the company. They talked about some safety meetings, but they were there to get the job done. A few of the employees had only been in the U.S. for about 1 year. They had previously worked in stuccowork in Mexico and they said over there they didn’t even have metal scaffold.

05/12/01
This week I had to inspect an accident at an apple orchard. Two employees were riding on a four wheeler (only one should be riding on it). While one employee drove, the other rode on the rear side fender of the four wheeler. The employees were irrigating the orchard. While they traveled down a county road way to go to an orchard block away from the shop, the four-wheeler lost traction and ran off the road into a block of the orchard. The driver flipped over the handle bars, and the other employee flew about 20 feet through the air up and through an apple tree. I remember noticing he had broken some branches about 8 feet above the ground. He suffered pretty serious injuries, but I
guess he’s going to live. I remember talking to him, he looked so young, he was only 19-years old. He had worked picking fruit and pruning, and this was his first year as full-time at the orchard. The manager had never told the employees not to ride with two people. And if he saw it, he mentioned that he probably didn’t say anything. This had to throw the balance off on the four wheeler, causing the loss of control. The employees also weren’t wearing any helmets, which should be worn while riding a four wheeler, even if you think it is only for a short distance. I see a lot of four wheelers in the orchards, I’m going to start making sure the employees are wearing helmets and that employers are providing them.

6/20/01
A couple of days ago went to visit a cherry packing warehouse. The warehouse is set up differently than the one I used to work at. It seems smaller, but the probably run about the same amount of fruit. The equipment looked liked it was packed into building. They were missing some guards on the equipment. They did not have a safety program. A lot of the ees were Hispanic and only spoke Spanish. It seems like safety is not at the top of the list, but a lot of employees get hurt.

12/08/01
Yesterday me and my supervisor went to inspect a facility that processes onions. I remember that it took me about 10 minutes to get used to the onion smell. Anyway, there were some hazards that I saw today that I hadn’t seen before. There was one employee who had to climb onto the framing of equipment to clean out this conveyor. He had to do it about every 30 minutes because the onions would clog up. He should have been provided with a ladder to get up there. They also had some large industrial fans working in the main processing floor to help ventilate some of the onion smell away from the area, although they didn’t realize the two cords to the fans were damaged. The cords were also running through the water on the processing floor, creating an electrical hazard. Also, some of the employees had to change out the cutting knives of the onion peelers, but they didn’t have any specific procedures on how to do this. This is really unsafe because anyone could walk by the power source and turn the machine on while the mechanic was still in the machine changing the knives. I hope we can do something to make this workplace safer for these workers.

02/26/02
Today I opened an inspection with an employer of an apple orchard. The reason I opened the inspection was because I saw an employee operating an orchard tractor on county highways without any ROPs. It was early this morning and it was still dark. I remember driving right up on the tractor driver and I did not notice him until I almost hit him. The tractor did not have any reflective slow moving sign, or did it have any functioning lights. I followed the driver to the orchard where he was going to fuel up. The interview of the ee revealed that he had worked at the orchard for about 5 years. His brother was the manager. I asked him about the lack of safety precautions on the tractor and he did not understand what I was talking about. He had not been properly trained in safe tractor operations. If he had been hit by traffic while on the road, he could have been killed. Or, without the ROPs installed, he might have been killed if the tractor ran off of the road and
rolled over. I will be issuing some citations for this unsafe work. The employee was Hispanic and spoke only Spanish.

03/15/02
Today was a first for me, I had the chance to inspect a grass seed operation. There was a complaint filed, so I was assigned to do an inspection of the facility. 4 employees, all Mexican immigrant women, alleged they were being sexually harassed by the foreman, they had not been trained in safety, and there were no bathrooms or drinking water. I was not sure how the complaint was going to turn out. When I arrived, the owner seemed very uneasy that I was at the site. He wanted another representative from an employer group before I did the inspection. The Er had the right to turn me away, but I ended up doing the inspection anyway after he spoke with this representative. During the inspection, I found the seed processing operation to be very safe. The equipment was well guarded, catwalks, ladders, and safe stairways had been provided. The company did not have a safety program though. They claimed they did not know that they needed one. When I went to observe the field operation, though, it looked like a totally different company. The foreman ran the grass operations in the field, and the owner new little about what was going on out there. Ee interviews revealed the many of the Hispanic ees did not know about their worker rights. The ees knew that a restroom and drinking water had not been provided, but they appeared to be too afraid to complain. I asked the ees why they had not complained like the other ees and they said they feared they would lose their jobs like the four complainants. I am going back out to the site, but I hope the citations I propose will help to change this workplace.

04/27/02
Last week I met my first Hispanic orchard owner. It was an organic farm. To my disappointment, though, he had not implemented any occupational safety and health measures for the ees. All of the ees were afraid to talk to me except for the foreman. The ees spoke a different dialect of Spanish than I was used to. It turned out a majority of the ees were immigrants from Chiapas, Mexico. The company history showed numerous injuries in the orchards. The ees were injured falling off ladders, they would get eye injuries during pruning, and some even complained about chemical exposure. It turns out, even though the orchard is considered organic, the lime that the owner used to control insects in the orchard were hazardous to employees. The employees were not provided with hand washing facilities out in the orchard. They would thin or pick the fruit, and then eat their lunch. Without realizing it, they were also possibly ingesting the lime coating the apples. I hope none of these ees experience serious illnesses. The tractors they operated were also in poor shape. The power take-off shafts were not guarded, and the brakes did not appear to function properly. The tractor drivers complained about this to me. As for the employer, it looks like he will be dealing with many serious violations. I did not expect these kinds of workplace hazards from another Hispanic. I know he has a lot of money, I just don’t understand why he did not make the workplace safe for his ees.
07/25/02
I am working on a fatality involving a Hispanic employee. The employee had been working for an apple orchard for one day, and actually, 4 hours. He was mowing the orchard rows. After lunch, he was heading back to the orchard and he lost control of the tractor. The tractor went down a steep embankment and he was crushed by the mower implement. It turns out the tractor driver was the older brother of the Hispanic ranch manager. The victim has just moved up from California because his brother told him that he had work at the ranch. The victim had never operated a tractor before. This was his first job doing that, and he had only done it for 4 hours. The tractor is exempt from having to have ROPs installed because it was being used in a manner related to the orchard work. If ROPs were used in the orchard, it would not allow the tractor to pass through. Although, if ROPs were used outside of the orchard where the ee died, they would not have hindered any operation. I just don’t understand why WISHA has an exemption for ROPS where all of the tractor fatalities are occurring. Outside of the orchard where the victim is en route, or leaving from the orchard. I hope my suggestions mean something following this inspection.

07/31/02
Today I ran into a labor contractor in an onion field. I have ran into this guy before. He did not have drinking water or restrooms in the field for the 80 workers sacking onions. All of the workers were Hispanic, and many refused to talk to me. It turns out, this guy is a real bad employer. I found out the owner harasses the ees, making them work long and strenuous hours, and will deduct suspicious amounts of money from their checks. One ee told me that he had run out of gas coming to the field. The labor contractor had a gallon of gas and he gave it to him. When the ee got his next check, it was half the amount he was supposed to get. The owner told him he deducted the gas from his check, and if he didn’t like it, he could leave. Furthermore, ees are claiming that they have to keep sacking onions when the irrigation system is turned on. I know they are sending pesticides through the system, posing a serious threat to the workers on the ground. There is going to be some repeat citations for this er.

08/20/02
I am working on a report involving an onion packing warehouse inspection that I did about a week ago. Looking at the pictures, there are a lot of serious violations. The pictures show numerous instances of unguarded shafts, chain drives, and conveyors. The employees work close to this exposed machinery, and I am surprised they only have a few injuries from ees getting caught by the machinery. I remember a few ees commented why L & I had never been to this onion warehouse before, because the warehouse was very dangerous. There were no safety programs, and the ees had to work around machinery, with forklifts and they did heavy lifting. The Mexican ees speak no English at all. The foreman is the only one who spoke any English and I have determined he does not have any safety and health knowledge.

10/28/02
This last week I inspected a residential construction site where there was a crew of Guatemalan workers. The foreman was White. One of the ees spoke very broken
English, and the foreman spoke no Spanish. The ees were exposed to 20 foot fall hazards, serious scaffold hazards, nail gun hazards, and other types of serious hazards. The ees had never been trained in any safety issues, they even had to use job made ladders. I remember asking the foreman why he had the ees working in these conditions and he told me because of Guatemalan ingenuity. I shocked by his blatant disregard for implementing safety in the workplace. The ees portrayed to me that they did not know about their worker rights, and they needed to work. The added that this was better work than working in the fields picking fruit. They all mentioned money was tight, and they had families back home.

11/25/02
I am getting ready to close an inspection this week that I have some concerns about. A crew of Hispanic workers clean a meat processing plant during a night shift. A complaint triggered the inspection, and there were quite a few items listed in the complaint. The ees were not receiving proper training on safety and health. This is really hard work. The ees are pressured to clean and sanitize the beef processing plant. It is very slippery from the animal fat, blood, and water. The water that they use is very hot, and it could cause burns if they are not careful. I do not envy anyone who has to perform this type of work. The injury logs show a lot of slips, trips, and falls resulting in serious injuries. In some places, the ees have to walk up on top of equipment to scrub down the higher machinery. Since this is a very wet environment, the company has to ensure that all electrical equipment is safe. Further, they must ensure that Lockout/Tagout procedures are being followed properly, if not, someone could get seriously hurt. The supervisor seems to treat the ees as lower class, he appears to look at himself like he is better than them, and he treats the ees like animals. Many ees told me that they are afraid to speak up, and they would never complain because they needed the job. Hopefully we can do something to help minimize the hazards to ees working here.

02/18/03
I have been investigating an accident where a Hispanic male got his arm amputated. He had worked for the meat processing plant for about 10 months operating a machine that cuts the hooves off of the beef passing by. The work is very fast, repetitive, and hard. The worker has only been in the U.S. for a few years, and his previous employment was in seasonal agriculture. As it is turning out, the ee may have been operating a piece of equipment that was modified, or not fitted with the appropriate safety equipment. We’ll see how this one turns out.

03/19/03
Today I inspected an apartment complex where numerous Hispanics worked in construction. In particular, I inspected a framing company. As I drove up to the site, I could see many of the employees working on the roof without any fall protection. They were installing the wood sheathing on the roof trusses. The company was from Texas, and they had not clues about safety on the job site. I don’t think the ees gave me their real names, in fear I would turn them into INS. The owner, who was also Hispanic, had not clues about safety requirements in WA or anywhere for that matter. The ees were exposed to open-sided floor 2 and 3 stories high. There were scrap boards with nails all
over the place, making walking difficult. The ees used nail guns, and they had not been provided with proper safety glasses. I remember even watching one of the ees cut a board across his leg, if he had slipped, he could have put a serious gash into his thigh. Finally, it turned out the ees were being paid in cash, and this has opened up another can of worms I will be referring to the proper people.

04/08/03
Yesterday I went to inspect an accident involving a 19 year old male. He was Hispanic, and spoke no English. He was working around a tractor and sprayer that did not have a guard on the PTO. They were filling smudge pots with diesel to light them in case cold weather came in. The ee tried to turn a valve on the sprayer, and his pant leg got wrapped up on the shaft. The ee ended up only suffering a broken leg, but he could have easily been killed. Luckily the tractor driver was quick enough to shut off the tractor. The ee had not been trained on the hazards associated with an unguarded shaft. Hopefully I can talk to the ee tomorrow and get his side of the story.

08/15/03
A couple of weeks ago I was assigned to investigate a possible pesticide drift exposure at a vineyard. It turns out the drift did occur. The foreman had assigned the tractor driver to spray to close to where the ees were working. A couple of the ees got nausea, and they had to be taken to the medical clinic. The company had not Hazcom, safety programs, or were they keeping any pesticide records. All of the ees working at the vineyard were Hispanics, and I believe a majority are immigrants. The ees who were exposed claimed their eyes and throats were burning when they got exposed. The foreman had taken them to the clinic, then he left and never talked to them again. The ees had no training on pesticide hazards, emergency wash facilities were lacking, and the foreman did not think the pesticides they used were dangerous. The clinic was not even given a label of the pesticide that was being applied at the time. These are all requirements under WPS. It looks like a lot of citations will be issued regarding these issues.