

FINAL REPORT

Occupational health and safety experience of Day Laborers in Seattle, WA

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Executive Summary

Day Labor is a growing part of the informal economy in the US, and in Seattle. While some day laborers look for work in informal pick-up locations, others work through worker centers. Although national studies have been conducted about day laborers, no survey has specifically addressed their experience and needs in relation to occupational health and safety. We surveyed 180 workers, evenly divided between two worker centers, called here Worker Center 1 (WC1) and Worker Center 2 (WC2), and Street hiring locations about occupational health and safety conditions, their job-specific exposure to a variety of hazards, and their workplace injury experience. The results of the study are intended to help identify effective approaches to reducing the hazards experienced by day laborers.

Almost half the reported jobs were in the construction industry, half involved work for homeowners; three quarters of the jobs were at home sites. We found a high prevalence of self-reported exposures to the following hazards:

•	Lifting Heavy Objects	69%
•	Eye hazards	52%
•	Airborne Chemicals/Dusts	40%
•	Noise	38%
•	Other Chemicals	29%
•	Falling Objects	30%
•	Work at Heights	30%
•	Unsanitary Conditions	27%

Among the 180 participants, 45 injuries were reported within the past year. Of those, we classified 34 as recordable according to OSHA definitions. Assuming that day laborers work approximately 1200 hours per year (compared to 2000 hours for full time work), this would produce an injury rate of 31 recordable injuries per 100 full time employees (FTE). If we use assume day laborers work 920 hours per year, as estimated from Worker Center 1 data, the rate would be 41 injuries/100 FTE. These injury rates are several times higher than the national average (4.8 injuries and illnesses per 100 full time employees), or even the rate for the construction industry (6.4 / 100 FTE).

Day laborers commonly reported receiving some training on health and safety, but often described the training as instruction from a supervisor on how to do a job, and not thorough training on safety practices. Forty percent of workers who had been in dangerous situations reported having left a job for fear of being hurt, and substantial fractions had also complained to employers (37%) or asked for protective equipment (74%). Of those that had asked for protective actions, 60% said that their employer had responded positively and 86% had provided safety equipment. Nevertheless, several workers noted that many employers were only interested in production, and used immigrant workers because they would work hard and were unlikely to complain.

After controlling for the type of work done, immigrant workers were 1.5-2 times more likely to report exposure to hazardous conditions, and also had a higher rate of injury.

Workers at WC2 had a lower rate of exposure and injury, which is likely due to generally being hired for less hazardous type of work.

The results of this survey indicate that day laborers are exposed to numerous hazards at work, resulting in high injury and illness rates. Efforts to improve work conditions will only be successful if the discriminatory environment to which some day laborers and immigrant workers are subjected can be overcome. The following interventions should be pursued to provide adequately safe work conditions:

- Day laborers need additional training on recognition of hazardous conditions and actions they can take to reduce the hazards or protect themselves, including methods of safe work, governmental requirements and available resources, and effective use of personal protective equipment.
- Workers also need to understand their rights, and the limitations of their rights, to refuse hazardous work, request assistance from voluntary or governmental organizations, and advocate for better work conditions with employers.
- Employers of day laborers need ready access to information about how to maintain a safe and healthful worksite, and what resources are available to them to improve site safety conditions and safe work procedures. Employers should insure that they are covered by worker's compensation or homeowner's insurance in case of injuries occurring on their worksites.
- Worker centers supporting day laborers need to take an active role in helping
 employers maintain a safe workplace. Active surveillance of work conditions by
 workers, and mechanisms for resisting employers with poor records, need to be
 developed. Cooperation among worker centers to identify unsafe or
 discriminatory employers could help protect day laborers.
- Government agencies with responsibility for regulating and enforcing work conditions should aggressively pursue contractors and businesses that exploit the marginalized status of day laborers and create unsafe workplaces. Agencies must be careful to avoid potential threatening or discriminatory enforcement procedures.
- For smaller and occasional employers of day laborers such as home owners, government agencies and possibly insurance companies should conduct informational campaigns and provide support services to help ensure that working conditions are safe.

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INTRODUCTION

The rapid increase in immigrants in the US labor market over the past ten years has been well documented, and widely discussed. Since 1990 there has been a large increase in the percent of the US population that was foreign born, and also a rapid increase in the percent of the immigrant population that is undocumented (Lollock 2001; Times 2006). A significant and very visible aspect of this change is the increasing use of "day labor" especially in urban and suburban areas in all regions of the country (Valenzuela et al. 2006). Day laborers work on short-term informal agreements with employers in a wide range of work settings, including factories, construction, yard work and landscaping, and maintenance for homeowners. Frequently the work that day laborers do is physically demanding and dangerous. For instance construction (including roofing), moving and landscaping are among the most frequently cited types of work. As a result, occupational injury rates among day laborers are high, though statistics are difficult to obtain. In a national survey of day laborers, one in five said that they had suffered an injury requiring medical attention (Valenzuela et al. 2006). In one study of non-agricultural Latino immigrant workers, which would include day laborers, an injury rate of 12.2/100 FTE workers was calculated (Pransky et al. 2002). Injury fatality rates among Latino construction workers (a fraction of whom are day laborers) are very high (AFL-CIO 2005).

Because the agreement between day laborers and their employers is informal, day laborers have few of the traditional legal rights established for most workers. Basic labor protections, such as being paid the agreed-upon wage for the hours worked, and provision of a safe worksite, are not clearly established and almost impossible to enforce. Day laborers include many immigrants, both documented and not, as well as other marginalized groups including the homeless, mentally ill, and chronic substance abusers. The disenfranchisement of day laborers is greatly exacerbated by their largely immigrant status. While not all day laborers are immigrants, day labor is frequently a natural first step for recent immigrants entering the labor market in the US. Only seven percent of day laborers report being US-born and about 75% of the immigrants are undocumented (Valenzuela et al. 2006). As a result of their limited legal rights, immigration status and generally low socio-economic level, day laborers are generally unable or unwilling to take steps to protect themselves from abuse – either physical, financial, or discriminatory.

In both a large national survey (Valenzuela et al. 2006) and several small qualitative interview projects (Brown et al. 2002; Walter et al. 2002; Buchanan et al. 2006), exposure to hazardous health and safety conditions and the high injury rates has been highlighted as major concerns of many day laborers. However no large survey focused on health and safety concerns has been reported. Furthermore, while day laborers are generally characterized as a uniform group, significant differences in their demographics and the degree to which they are organized into worker centers or other forms of social organization may have a significant role in mediating their occupational safety and health experience (Fine 2006).

This project was developed to provide an in-depth quantitative survey of occupational hazards, safety and health protections and injuries among day laborers, and to help provide some insight into interventions that might be effective in preventing injuries in this growing labor group. In addition, the survey was developed to contrast the experiences of day laborers from three different hiring organizations/locations: Worker Center 1 is a worker center developed to support the local Latino immigrant community with both day labor hiring and social advocacy programs; Worker Center 2 is a longstanding social service agency with a day labor hiring component; and the "Street" is an unorganized hiring location outside a large hardware retailer.

METHODS

Sample Locations

Subjects were recruited from three Seattle area locations: Worker Center 1 (WC1), Worker Center 2 (WC2), and the 'Street'. Street subjects were recruited outside the Home Depot stores on South Lander Street in Seattle and Aurora Village in Shoreline. The two locations were treated as a single hiring location in the analysis. The street sites are essentially unorganized locations with only informal social networks and procedures. Individuals congregate along the side of the street and negotiate individually or in small groups for jobs with potential employers who stop along the street. Each worker negotiates directly with the employer for their pay rate, work conditions and transportation needs. During the course of the interviews, a self-organized group was identified which advertised to potential employers that they were free of alcohol or drug use.

WC1, located in downtown Seattle, was founded in 1999 to provide a work referral service for day laborers, as well as a community organization and advocacy agency. The community that WC1 serves is almost exclusively undocumented workers, most of whom are Mexican, with the rest from a variety of Latin American countries and the United States. WC1 is part of the emerging organizational movement of worker centers(Fine 2006), providing English classes, social gathering and political and legal information to those waiting or not selected for jobs. Each morning laborers register and are selected for available jobs through a series of raffles, which randomly selects individuals for dispatch. The workers at the center have collectively decided on pay rates (currently \$10 per hour) and employers are informed of these rates. All money goes directly to the employee; no fee is paid to the worker center.

Worker Center 2 was founded in 1921 to provide employment options to homeless and other poor men and women in Seattle, in addition to providing meals, hygiene facilities and other services to these groups. WC2 provides on-the-job training of skills necessary for long-term employment. Each morning people arrive at the center and are entered into the dispatch list and matched by computer with potential employers. After being assigned to a job, workers are put back on the bottom of the list so that those who have waited longest are assigned to new jobs first. Only individuals with a valid social security number are allowed to participate, thus limiting WC2 workers to US citizens or documented immigrants. The racial makeup of the laborers is about 1/3 white, 1/3

African American, and 1/3 a combination of Latino, Native American, and Multiracial individuals. WC2 negotiates the wages (usually \$8 to \$10 per hour) for each laborer, with all money going directly to the employee; no fee is paid to WC2.

Study subjects were recruited for interviews through different procedures at each site. At the street locations, flyers were distributed among those standing in the area and individuals were approached and asked for their interest in participating. Although individuals could approach the interviewers and ask to participate, the staff attempted to recruit a cross section of those available and avoid individuals who had previously participated. At WC2, participants were randomly selected from the bottom of the hiring list – that is, they had recently had a job assignment and were back in the job queue. At WC1, the raffle system was used to randomly select subjects for interview from among those remaining after the job raffle.

Survey Development and Content

The survey was developed in collaboration with staff from WC1 and WC2. A draft survey instrument was developed covering general demographics and health and safety training and experience, job-specific exposures, injury-specific experiences, and approaches to mitigating hazards. In order to obtain a fair and detailed description of work conditions and exposures, subjects were asked to recall and report the most recent three jobs that they had held. For each of those three jobs, specific questions were asked regarding exposures to noise, eye hazards, objects falling from above, liquid chemicals, working at height, airborne dusts or chemicals, repetitive motion of the upper extremities, lifting or carrying heavy objects, and unsanitary conditions. For each of these hazards, additional questions were asked concerning specific personal protective devices that may have been used to address them.

Similarly, rather than asking about all injury experience, subjects were asked to describe up to three injuries that had occurred within the past year. Subjects were asked to report only on injuries "that occurred at work that forced you to stop working and required first aid and/or medical treatment." For each injury, additional questions concerning the nature and circumstances of the injury were asked, as well as when and how the injury was treated and how that treatment was paid for.

Most questions were developed in a simple closed form with multiple choice responses. However, some questions required open-ended responses, and these were recorded in the dataset separately, and coded later. The draft survey was translated into Spanish by a staff member of WC1, and presented to a focus group with WC1 staff and laborers. The focus group was asked to review specific elements of the questionnaire and comment on the intelligibility of the questions and response choices, and the overall content of the survey. Of particular concern was the degree to which the questionnaire could ask for information concerning immigration status. The WC1 focus group provided a strong recommendation that any question concerning legal status would undermine the success of the survey and should be avoided. Immigrant status was thus determined by country of origin, and no information about immigration documentation was obtained. Pilot interviews were conducted in both Spanish and English using the draft questionnaire with

WC1 and WC2 laborers. Results of the focus group and pilot interviews were used to refine the survey instrument. The final questionnaire in English is provided in the Appendix.

Interviews were conducted at all three sites between February and June, 2006. At WC1 and WC2, interviews were conducted in meeting rooms at the day labor hiring sites. At street locations, interviews were conducted while standing on the sidewalk, or in the study van. Interviews took under one hour to complete. There were seven interviewers; three were monolingual English, one monolingual Spanish, and three bi-lingual Spanish/English. The interviewers included a faculty member and staff researcher from the University of Washington, two graduate students, two Americorps volunteers who worked at WC1, and a former day laborer that volunteered at WC1. The questionnaire in both English and Spanish translation was downloaded into handheld computers. Interviewers entered the question responses directly into the device, and the data were uploaded to a central database at the conclusion of each study day. Open-ended questions were recorded separately on paper, and entered into the database at a later time. Each subject was given \$20 at the conclusion of the interview. All procedures and materials were approved by the University of Washington Institutional Review Board.

Analysis

Frequency distributions for the responses were calculated for each question, stratified by worker location (WC1, WC2, Street), and differences between the proportions responding at each center were tested with a chi-square. Analyses were conducted by subject, by job (for questions about each of up to three most recent jobs held), and by injury (for up to three injuries in the past year). Due to the skipping logic built into the questionnaire, some questions were analyzed on subsets of the data. As a result, the denominator changes for each question and is presented for each analysis. Questions answered as "Don't Know" or "Not Applicable" were coded as missing.

In order to consider the effect of immigration status on job-specific exposures, multivariable logistic regression models were developed using job type (construction vs. non-construction) and employer (business, contractor, homeowner, other) as covariates. Logistic models were clustered on subject to account for non-independence between jobs held by each individual. For these models 'immigrant' was considered anyone who reported being born outside the US.

Once all interviews had been completed the qualitative responses in Spanish were translated into English. Responses were then coded by themes, generated by explicit word choice by participants or by combining several similar words or ideas. For example, day laborers that experienced "discrimination" and those that either mentioned or implied being "exploited" were originally separated. Eventually, these themes were combined as the responses represented closely related ideas. Themed responses were grouped together and comparisons were made between sites in the quantity and variety of themes mentioned.

RESULTS

A total of 183 day laborers were recruited and agreed to participate in the survey. Of these, three surveys were excluded from analysis: one was incomplete because the subject left for a job before completing the interview, and two because of communication difficulties with the interviewer, leaving 180 interviews for analysis almost evenly distributed between the three hiring sites.

Day laborers interviewed were almost entirely male and averaged 42 years old, though ages ranged from 18 to 73 (Tables 1 and 2). The demographic characteristics of the cohort differed substantially between the three hiring sites. The Worker Center 2 group was older, had a larger fraction of women, and had a substantially higher proportion of White or Black/African-American workers than either WC1 or the Street sites. WC2 workers also had a high level of education with 83% reporting at least a high school education, compared to 20 or 35% for WC1 or the Street, respectively.

No questions were asked concerning legality or documentation of immigration, so no information is available regarding legal immigrant status, with the exception of WC2 workers who must be citizens or legally documented immigrants to be assigned work. WC2 workers were predominantly US-born, while both WC1 and the Street groups were almost entirely from Latin-America (92 and 82 %, respectively) (Table 1). Between these two groups, WC1 workers were more likely to come from Mexico (72 vs. 60%), and the Street workers were more likely to come from Central America, including Honduras (7 %), Guatemala, (4%), and El Salvador (9%). Ten percent of WC2 participants indicated they were born in other nations, and these included Croatia, Morocco, Kenya and Sudan. Those who reported immigrating had done so relatively recently, with the average year of entry in 1991 for WC1 and WC2, and 1996 for the Street.

The differences between groups are further highlighted by their self-reported English skills. Although 63% of WC2 participants reported speaking English well or very well, only 35 or 32% of WC1 or Street participants, respectively, reported good spoken English. English reading skills were similarly reported to be better among the WC2 group. A significant number of participants from both WC1 and the Street (31 and 24%, respectively) said that they could not read English at all.

A large fraction (41%) of the subjects reported receiving some training on health and safety on the job (Table 3). Of those that reported some training, 57% said it was provided by the employer, followed by 27% receiving training from temporary employment agencies. Overall, 57% of those receiving training said that their supervisor had provided it, and only 25% or 28% had been given audiovisual or written training materials. Training was done in English, Spanish or both languages. Among the 38 individuals for whom complete data were available, three subjects who said they spoke English poorly or not at all, received training in English.

About half the respondents at WC1 and the Street said they brought some PPE to work always or frequently, though the adequacy of protection afforded by this equipment is probably minimal. For instance, 83% of subjects brought gloves, 60% work boots and 46% safety glasses, which although important, may not be well matched to the hazards encountered on a job. A surprising 70% of subjects said they bring a back brace to the job, suggesting the high prevalence of heavy lifting work without effective lifting equipment or practices.

Among the 180 subjects, a total of 529 individual jobs were described (Table 4). Just over half of the jobs were for homeowners, though the percentage varied considerably between sites: two thirds of WC2 jobs vs. only 40% of Street jobs. Conversely, half of Street jobs were for contractors, while only 20% of WC2 jobs were. Businesses hired only 8% of the workers. In a similar way, a large majority (74%) of the work was done at home, with smaller percentages at construction sites, or small or large businesses.

A little less than half of the jobs were in construction, with carpentry, painting and demolition tasks being reported most frequently. Eleven percent of the jobs involved roofing. WC2 jobs more likely involved demolition and hauling materials. More than half of the non-construction jobs involved landscaping tasks, and frequently involved heavy lifting such as moving furniture or equipment.

Job-specific exposures to health and safety hazards are reported by worker center in Tables 5 and 6. Exposure to noise, airborne dusts and chemicals, chemicals and unsanitary conditions were reported on about 35, 40, 30 and 25% of the jobs, respectively. Similarly, eye hazards, falling objects, work at heights and lifting heavy objects were reported on 50, 30, 30 and 70 percent, respectively, and repetitive motion was reported on 90 percent of jobs. Subjects from the WC2 reported a lower frequency of exposure for all health and safety hazards.

Additional questions pertaining to use of PPE were asked of subjects who reported exposures to selected hazards (Table 7). For instance, if noise exposure was reported, subjects were asked about employer provision of hearing protection devices (HPDs), training on HPD use, and actual use during exposures. Subjects reported employer provision of PPE for a fraction of jobs on which it was needed. For instance HPDs were provided 30% of the time, respirators (or dust masks) were provided 45% of the time, and gloves were provided almost 60% of the time working with chemicals. A slightly lower percent of workers reported using PPE that was provided by the employer, however an additional fraction of workers reported use of their own equipment. For instance, protective eyeglasses were reported to be provided by employers on 43% of jobs with eye hazards present, but used 37%. However, workers wore their own safety glasses on an additional 16% of jobs. Reasons provided for why subjects did not use PPE were primarily that they felt the protection was not needed, or that it had not been provided. In fact, in about 70-80 percent of jobs with exposures, the subjects who did not use any PPE reported that it was because it was not provided. The degree to which the PPE was needed in these cases cannot be directly ascertained.

Table 8 presents data on on-the-job injuries reported by the interviewees. Subjects were instructed to report only injuries "that occurred at work that forced you to stop working and required first aid and/or medical treatment." Thus, minor injuries or chronic injuries or conditions such as hearing loss or musculoskeletal symptoms might have been ignored. Forty-two out of 180 subjects, or 23% indicated ever having such an injury. Twenty-seven subjects reported at least one injury at work in the past year, and eleven of these reported more than one injury. A total of 45 individual injuries were reported, with back, hands, legs and head the most frequently cited body part affected. Sixty two percent of the injuries received some medical or first aid attention, usually either immediately, or the following day. Treatment was received from a wide variety of sources, but largely from an emergency room or public hospital/clinic. Almost half of the treatments received were not paid for, though the employer paid in almost one third of cases. Health insurance and worker's compensation were used in a small percentage of cases.

The nature of the injuries described included overuse (e.g., back, arm/shoulder, leg sprains), cuts, punctures and bruises from equipment such as using a nail gun, moving equipment, or operating machinery, and many falls from ladders, roofs and stairways. Several of the falls were due to failures of the ladder or scaffolding equipment, or placement on slippery surfaces. In addition, several incidents of health effects due to dust or chemical hazards were reported. Several of the injury reports also noted that employers sent them back to work, and that pain had continued for several weeks. Several subjects discussed working for extended periods with pain because of the need for income and providing for their family. For instance, one laborer noted, "We as day laborers would like to not miss work....We come from countries with families to support, to sustain...we have a necessity to work."

Subjects were also asked about reporting injuries or unsafe conditions, and what can be done to help prevent injuries in the future (Table 9). Almost 60% of respondents said they were afraid of being hurt or killed on the job, and 40% said that they had actually left a worksite because of hazardous conditions. A higher percentage of Street subjects reported leaving a job due to danger, as well as fearing being hurt on the job. Thirty-seven percent of subjects said they had reported hazardous conditions to their employer, with 57% of those employers responding positively. An additional 81% of those who had not reported unsafe conditions said they would if needed. However, among those who did not want to report conditions to the employers more than two thirds of them said that it was because they might lose their job. Another 32% said they wouldn't report because the employer was unlikely to do anything to improve the conditions and 36% said it didn't matter for various other reasons. In addition, 73% said they had asked the employer for some sort of safety equipment, and most (84%) of those employers had complied.

Finally, logistic regression models were run to describe the risk of self-reported exposure to each of the identified hazards in relation to type of work (construction vs. non-construction), type of employer (homeowner, business, contractor, or other, which included a temp agency, or other day laborers), and immigrant status (Table 10). Work in

construction was associated with about a two to three-fold risk of exposure to noise, airborne hazards, chemicals, eye hazards, falling objects, work at height, but not with lifting or repetitive motion. Of considerable interest is that after controlling for type of work and who hired the subject, those born outside of the US still had higher odds of being exposed to noise, airborne hazards, eye hazards, falling objects, work at heights and unsanitary conditions. The elevation in risk was modest – about 2-fold.

DISCUSSION

Although workplace safety and health is often cited as a major concern for the growing number of workers doing day labor work through the informal labor market, there are few studies explicitly addressing workplace exposures, work related injuries and approaches to reducing work hazards for this population. The current survey is a first step toward quantifying the extent of the hazards and injury experience, and designing interventions to mitigate these risks. While it is well known that the social context of day laborers is largely responsible for their health and safety experience (Walter et al. 2002), no previous studies have examined different day labor organizations, the populations they serve, and the consequences of these differences for workplace health and safety. Having three different hiring sites within Seattle provided the ability to begin addressing these differences. Although the demographics of the populations at these three centers differed substantially, the common thread is that all workers pursuing day labor jobs are marginalized from mainstream society and are therefore at a disadvantage with respect to exercising their rights to a safe and healthful workplace.

Almost half of the jobs reported were in the construction industry, although three quarters of the work was conducted at a home – suggesting that the construction was frequently on home construction work. Of the non-construction jobs, about half were in landscaping and another quarter involved moving or hauling materials. Given this distribution of work, it is not surprising that exposure to various health and safety hazards was high. The four health hazards addressed were present in 30-40% of the jobs. Workers reported working at heights in 16% of jobs, lifting heavy objects in 70% of jobs, and exposure to upper extremity repetitive motion in 90% of jobs. The question on repetitive motion was "How often did you work involved doing the same movements over and over with your hands or arms?" and may have easily been interpreted to encompass many types of manual labor.

Because these exposures are based on self-reports, they may be subject to some error. In general self-reported exposures have proved to be more valid than other approaches to exposure, explaining an average of about 60% of the variability in measured exposures (Teschke et al. 2002). Self-reported exposures tend to be much more accurate for easily recognized agents such as noise and safety hazards, rather than specific chemicals which the worker may not be able to sense. Although one might suspect that these self-reported exposures reflect some individuals frequently reporting exposure to everything, and others rarely reporting hazards, cross tabulation of the hazards indicated a wide distribution of individuals among the different specific exposures, suggesting that such reporting biases do not dominate the results.

Among the 180 individuals interviewed, almost a quarter reported being hurt at work, and 27 reported being injured once or more within the past year. A total of 45 individual injuries within the past year were described, though this was limited to a maximum of three per subject, so the actual number could have been higher. Injuries reported were restricted to those involving lost time, first aid or medical attention. This definition was provided to insure that minor incidents would be avoided and the results would be more comparable to an "OSHA recordable" injury, and providing a more stable estimate of injury rate. However, we reviewed the narrative description of the injuries and recoded them as uncertain if there was insufficient information to be certain that they would meet the definition of recordable. Eleven injuries were uncertain, reducing the number of injuries meeting the definition of recordable to 34.

Because day laborers work variable numbers of days in a year, it is difficult to accurately report an injury rate for this group, however reasonable bounds may be derived from existing data. In the largest survey to date, day laborers reported earnings of \$10 an hour, and earnings for good and bad employment months ranging from \$500 to \$1400 (Valenzuela et al. 2006). Using these figures most day laborers work between 600 and 1680 hours per year, with a median value of about 1200 hours. Using data collected by WC1, we estimated that the average laborer works about 920 hours per year. This estimate assumes that workers work for an average of 3 days per job dispatched. Using the 34 injuries which met the definition of recordable, these data produce estimated injury rates of 31 (range 22-63) injuries per 100 FTE workers, or 41 injuries per 100 FTE for the WC1 estimate of working days. The 2004 injury rate for construction and warehousing and storage is 6.2 and 9.3 injuries per 100 FTE, respectively (BLS: http://www.bls.gov/iif/oshwc/osh/os/ostb1487.pdf). Thus, even if there is some overreporting of minor injuries in our dataset, the rate among day laborers is several times that of others in comparable high hazard industries.

It may be notable that so many workers reported multiple injuries within the past year. Multiple injuries in one person may be explained by continuing work in hazardous conditions, or specific risk factors such as visual or hearing impairment. It is also possible, that certain individuals were enthusiastic about their reporting, and included injuries that occurred in previous years, or wanted to share their experiences once someone was interested in listening, which could result in an over-reporting of injuries. It would appear just as likely, however, that some individuals were reluctant to share these experiences for fear of financial or legal consequences, and may have underreported their injury experience. Although it is not possible to determine the accuracy of the reports, the specificity with which workers related their varied experience lead us to generally think that the data are reasonably accurate. Despite the positive or negative biases that may be present, the rate of serious on-the-job injuries reported among this group is strikingly high.

A surprisingly high 40% of workers said that they had had safety or health training on the job, however the nature of the training may be very minimal in many circumstances. Fifty-seven percent of those who were trained received it from their supervisors, and

anecdotal reports suggested that this may have been as simple as a quick instruction on how to do the work. About one quarter of those receiving training received either written materials or viewed a video tape – suggesting a more explicit attempt at safety training – although again, the quality and effectiveness of these materials cannot be ascertained. When training is provided, it appears that with some exceptions, it is generally presented in the language that the workers will understand, or with translation.

Although about 40% of workers reported that they frequently or always bring PPE to the worksite, this included standard work items such as work boots, gloves and safety glasses. Fewer than one quarter of subjects reported bringing more specialized equipment such as dust masks or hard hats to work. These numbers are perhaps surprisingly high given that day laborers are unlikely to know what equipment needs they might have before coming to the hiring site, and rely largely on public transportation for getting to the hiring location or worksite. Of more importance is the finding that a substantial fraction of jobs in which specific exposures were reported had PPE provided by the employer. For instance, 30% of employers on jobs with noise exposure were reported to provide hearing protectors, and 45% of them provided training on their use. Although a substantial fraction of jobs had PPE provided, many exposed workers did not use protective equipment. Frequently, i.e. 70-80% of the time, workers did not use PPE because it was not provided. The degree to which they would have used it if it had been provided cannot be determined.

Forty percent of workers reported that they had left a job because of the hazards identified. This finding demonstrates a considerable concern among day laborers about their safety, and resolve to address unsafe conditions, even when if could result in loss of income, or other consequences.

Respondents at all sites expressed that working at heights or on the roof was their greatest fear of being injured or killed at work. Both respondents from Worker Center 2 and Home Depot mentioned lack of personal protective equipment for working at heights as one of the main reasons that they feared being injured or killed at work. In addition, almost 40% of workers reported having complained to employers about safety and health concerns, with more than half the employers responding positively to those complaints. This is further evidence of concern among day laborers, and at least a substantial fraction of employers who want to protect their worker's health and safety.

However, considerable challenges exist in assuring workers that they will not be discriminated against for speaking up. Among those that said they would not report concerns to employers, about two thirds of them said it was because they were afraid of losing their job. This fear was represented in numerous comments about employer attitudes toward the safety of their workers. Day laborers at WC2 desired "employers who don't badger" them, while workers at Worker Center 1 and Street locations reported that employers viewed them as inferior and exploited their immigration status. One person noted the lack of choice in work and having to do the work that was given, since he is undocumented. Another respondent explained that contractors hire undocumented day laborers because contractors don't follow state laws. Contractors also hire day

laborers to increase their income, by paying day laborers less for increased production. Day laborers expressed that there was much discrimination against non-English speaking laborers, they were underpaid and shortchanged breaks. Workers reported that some employers want non-English speakers as they are "less likely to complain about conditions" and that lack of documentation allows for increased exploitation by employers: "Its not that people's safety is in question due to their immigration status, it's that their fear of this status keeps them from speaking." The fear is reinforced through being called illegal and other degrading terms in order to maintain the power relationship between employer and employee. "I think that the bosses should have more consideration for the workers. They are concerned about production, not the workers."

Lack of concern for the safety of workers and focus on production was a common theme. Workers noted that employers did not provide the correct equipment or did not inform workers about the PPE that was necessary for the job. Day laborers expressed that employers are merely concerned with profit, with two thirds of these workers most recent work experiences being hired by contractors. Day laborers are intimately tied to, and feel the impacts of the economic pressures that push employers to look for the cheapest route. As one respondent said, "Safety is secondary to employers trying to make money. Productivity is more important than safety. Employers do it out of economic necessity as government pressures them to provide [worker's compensation insurance] and benefits to employees."

About two thirds of the subjects were born outside the US. Although we were unable to inquire about their legal immigration status, we can assume that a large fraction of those at least at Worker Center 1 and Street locations did not have legal status. After controlling for the general type of work done (construction vs. non-construction and who hired them), immigrants reported a higher likelihood of exposure to most of the concerns address. Immigrant workers were between 1.5 and two-fold more likely to be exposed to noise, airborne dusts and chemicals, eye hazards, falling objects, work at heights, repetitive motion and unsanitary conditions. While not inconceivable, there is no apparent reason that immigrants would be more likely to report hazardous exposures than non-immigrants. Furthermore, the injury rate appears to be higher among immigrants than non-immigrants in our analysis: 46 vs. 34 injuries/100 FTE (using the median hours worked for both groups). The rates don't take into account the type of work that immigrants and residents or citizens did. These findings are consistent with other research demonstrating higher injury rates among immigrant workers.

The most important differences between hiring sites was that WC1 and street sites were almost entirely immigrant workers, while the WC2 site was 85% US-born. WC2 had a much higher percent of white and black/African American workers, were older, had a much higher level of educational achievement, and much higher English proficiency. Street and WC1 sites were much more similar to each other – in fact a number of workers interviewed on the Street had had previous jobs through WC1, and vice versa – so there is substantial overlap between these groups.

Workers at WC2 were less likely to be hired in construction, and those that were, were more likely to be hauling materials. Among non-construction jobs, WC2 workers were more likely to do moving or housecleaning work. Partially as a result, WC2 workers reported exposure to all of the specific health and safety hazards at lower rates than the WC1 and Street workers. Only seven of the 45 injuries reported were among WC2 individuals and all of them reported receiving medical or first aid attention for their injury, compared to 50-60% at the other sites.

Although WC1 and Street location workers were similar, demographically, and frequently moved from one site to the other, there were substantial differences between these locations due to their level of organization, and the protection afforded by association with WC1. The type of work, employers and exposure to hazardous conditions were almost exactly the same between these two locations. A larger number of workers on the Street reported injuries in the last year (17 vs. 11), although the number of injuries was similar (20 vs. 18). However, workers on the street were more likely to leave a job because of unsafe conditions. Although workers were similarly likely to report complaining to their employer or ask for safety equipment, a higher percentage of employers responded positively to these requests from WC1 workers. Anecdotally, workers noted that while the WC1 afforded greater protection from abuse and non-payment of wages, some still preferred to work from the Street since they could set their own pay scale and be more assertive in obtaining jobs.

The primary limitation of these survey data is that they are all self reported. We are unable to independently verify either the exposures or injuries reported. However, the variation of reported exposures, and the specificity with which subjects reported injuries provides some assurance of their veracity. Because this is a cross-sectional survey and no information is available on the size of the population represented, we cannot provide estimates of the number of persons exposed or injured in the general population of people seeking day labor in the Seattle area. However, there is no reason to suspect that the sample obtained would not be representative of the populations at the sites. Both WC1 and WC2 assisted with a systematic sampling of workers that would be random with respect to conditions, injuries or demographics, except that workers disabled by injuries or illness would not have been in the sample. At the Street locations, workers more interested in talking about their experiences, and those that had not been successful in finding work on that day would be more likely included in our sample. It is unclear if this could have biased our sample in any particular way.

CONCLUSIONS

We surveyed workers looking for day labor through three different locations, Worker Center 1, Worker Center 2 and Street hiring locations. Several key findings are noted:

 Self reported exposure to health and safety hazards, including noise, dusts and chemicals, work at heights, heavy lifting and repetitive motion was very common among day laborers in Seattle.

- Although some workers had access to protective equipment or provided their own, it was frequently not available and was not used.
- A substantial fraction of workers had some training, but the adequacy of the training is very uncertain.
- Among the 180 participants, 45 injuries were reported within the past year. Of those, we classified 34 as recordable according to OSHA definitions. Assuming that day laborers work approximately 1200 hours per year, this would produce an injury rate of 31 recordable injuries per 100 FTE employees, about 5 times the rate for construction workers. If we use assume day laborers work 920 hours per year, as estimated from Worker Center 1 data assuming 3 days per job dispatched, the rate would be 41 injuries/100 FTE.
- In addition to the hazards and risks faced by all day laborers, immigrant day laborers have about 1.5-2-fold higher reported exposures, even after accounting for the type of work they do. Immigrant workers also had a higher rate of reported injury. These high risks are likely due to discriminatory practices and the marginalized status of day laborers, and further heightened by undocumented immigrant status. Workers at WC2 had a lower rate of exposure and injury, which is likely due to generally being hired for less hazardous type of work.
- Work through a worker center appears to provide some level of security for workers, increasing the responsiveness of employers to requests for protective equipment, etc. Nevertheless, some workers prefer the independence they have working from Street hiring locations, including the willingness to walk away from hazardous conditions.

RECOMMENDATIONS

- Day laborers need additional training on recognition of hazardous conditions and actions they can take to reduce the hazards or protect themselves, including methods of safe work, governmental requirements and available resources, and effective use of personal protective equipment.
- Workers also need to understand their rights, and the limitations of their rights, to refuse hazardous work, request assistance from voluntary or governmental organizations, and advocate for better work conditions with employers.
- Employers of day laborers need ready access to information about how to maintain a safe and healthful worksite, and what resources are available to them to improve site safety conditions and safe work procedures. Employers should insure that they are covered by worker's compensation or homeowner's insurance in case of injuries occurring on their worksites.
- Worker centers supporting day laborers need to take an active role in helping
 employers maintain a safe workplace. Active surveillance of work conditions by
 workers, and mechanisms for resisting employers with poor records, need to be
 developed. Cooperation among worker centers to identify unsafe of
 discriminatory employers could help protect day laborers.
- Government agencies with responsibility for regulating and enforcing work conditions should aggressively pursue contractors and businesses that exploit the marginalized status of day laborers and create unsafe workplaces. Agencies must

- be careful to avoid potential threatening or discriminatory enforcement procedures.
- For smaller and occasional employers of day laborers such as home owners, government agencies and possibly insurance companies should conduct informational campaigns and provide support services to help ensure that working conditions are adequate.

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Table 1. Cohort Characteristics by Worker Center

Tuble It Colloit	Characteristics by Work	WC1	WC2	Street	To	tal
		$\frac{(n=62)}{(n=62)}$	$\frac{\sqrt{n=60}}{(n=60)}$	$\frac{567686}{(n=58)}$	<u>(n=</u>	
		%	%	%	n	<u>%</u>
Gender						_
	Male	97	83	100	(166)	93
Race/Ethnicity						
	White Black/African	2	40	0	(24)	13
	American	0	36	0	(21)	12
	Latino/Hispanic	85	5	79	(102)	57
	Native Amer/Alaskan	5	5	7	(10)	6
	Pacific Islander	2	0	2	(2)	1
	Multiple	5	10	9	(14)	8
Education						
	None	5	0	5	(6)	3
	Elementary	42	0	26	(41)	23
	Middle	32	8	29	(42)	23
	High	18	40	28	(51)	28
	College	2	43	7	(31)	17
	Vocational	2	7	5	(8)	4
Birth Country						
•	US	6	85	16	(64)	36
	Puerto Rico	3	0	0	(2)	1
	Mexico	74	5	60	(84)	47
	Cuba	3	0	2	(3)	2
	Central America	11	0	21	(19)	11
	Other	2	10	2	(7)	4
Native Language	;					
	English	2	87	10	(59)	33
	Spanish	95	7	78	(108)	60
	Other	3	7	12	(13)	7
Speak English						
	Not At All	13	13	10	(14)	12
	Not Very Well	52	25	60	(65)	54
	Well/Very Well	34	63	31	(42)	35
Read English						
	Not At All	31	0	23	(31)	26
	Not Very Well	48	63	56	(63)	52
	Well/Very Well	21	38	21	(27)	22

Table 2. Additional Cohort Characteristics

		<u>WC1</u>	WC2	Street	<u>Total</u>
Age					
	n	62	59	57	179
	mean	41	49	37	42
	Min, Max	18, 60	23, 73	18, 61	18, 73
Year E	ntered US to W	ork*			
	n	57	8	48	112
	Mean	1990	1991	1995	1993
	Min, Max	1968, 2006	1958, 2002	1960 2006	1958, 2006

^{*}Among those born outside the US

Table 3. Health and Safety Training and PPE

Table 5. Health and Safety Training and F	WC1	WC2	Street	Tot	al
	%	%	%	$(n)^{\frac{-2}{n}}$	%
Received H&S Training (n)	(62)	(60)	(58)	(18	20)
Yes	50	43	28	(73)	41
				, ,	
Who Provided Training* (n)	(25)	(26)	(16)	(6)	7)
WC1	40	0	0	(10)	15
WC2	8	23	0	(8)	12
Employer	56	54	63	(38)	57
Temp Agency	1	50	25	(18)	27
Union	4	0	0	(1)	1
Other	4	12	13	(6)	9
Who/What Was Source of Training* (n)	(25)	(26)	(16)	(6)	7)
Coworkers	20	15	25	(13)	19
Other	8	7	25	(8)	12
Supervisor	64	58	44	(38)	57
Video/Slides	28	27	19	(17)	25
Written Mat'ls	20	35	31	(19)	28
Language of Training (n)	(25)	(26)	(16)	(6)	7)
English	28	88	44	(37)	55
Spanish	68	0	38	(23)	34
Both	4	12	19	(7)	10
How often do you bring PPE to a job (n)	(60)	(60)	(57)	(17	77)
Never	27	33	32	(54)	31
Rarely	28	37	18	(49)	27
Frequently	22	17	26	(38)	21
Always	23	13	25	(36)	20
PPE Type*(n)	(46)	(40)	(40)	(12	(6)
Back Brace	67	60	83	(88)	70
Dust Mask	22	10	23	(23)	18
Ear Muffs/Plugs	17	13	10	(17)	14
Gloves	87	85	78	(105)	83
Hard Hat	24	23	25	(30)	24
Other	11	10	3	(10)	8
Respirator	17	13	3	(14)	11
Safety Clothing	11	8	8	(11)	9
Safety Glasses	46	48	45	(58)	46
Safety Goggles	9	5	13	(11)	9
Work Boots	59	58	65	(76)	60

^{*} Multiple answers possible

Table 4. Job-specific Experiences

Table 4. Job-specific Experiences	WC1	WC2	Street	Tota	al
	%	%	%	(n)	<u> </u>
Who hired you? (n)	(181)	(174)	(171)	(52)	6)
Business	11	8	6	(44)	8
Contractor	38	20	50	(188)	36
Homeowner	46	67	40	(269)	51
Temp Agency	1	5	1	(12)	2
Other Day Laborers	2	1	3	(10)	2
Other	2	0	0	(3)	1
Location of Work (n)	(181)	(176)	(172)	(52)	9)
Construction Site	8	5	13	(46)	9
Home	71	75	75	(390)	74
Small Business (≤10 emp)	13	11	6	(53)	10
Large Business (10+ emp)	4	7	3	(25)	5
Other	4	1	3	(15)	3
Type of Work*					
Construction	49	34	51	(235)	44
Construction Job Type* (n)	91	60	90	(24	<i>1)</i>
Painting	27	22	20	(56)	23
Roofing	11	7	14	(27)	11
Electrical	3	7	1	(8)	3
Demolition	21	28	11	(46)	19
Carpentry	24	32	29	(67)	28
Hanging Drywall	8	12	6	(19)	8
Tape and Sand Drywall	4	10	9	(18)	7
Haul Mat'ls	3	30	1	(22)	9
Plumbing	4	12	0	(11)	5
Other	35	50	47	(104)	43
Non-Construction	51	66	49	(294)	56
Non-construction Job Type* (n)	(93)	(116)	(84)	(29.	3)
Moving	0	30	6	(40)	14
Landscaping	59	41	62	(154)	53
House-cleaning	5	14	2	(23)	8
Dishwashing	2	1	0	(3)	1
Haul Mat'ls	24	4	11	(36)	12
Cooking	2	0	0	(2)	1
Other	15	22	20	(56)	19

^{*} Multiple answers possible

Table 5. Job-specific Health Hazards

	•	WC1	WC2	Street	Tota	al_
		%	%	%	n	%
Noise (n)		(177)	(176)	(171)	(52-	4)
	Always	13	10	18	71	14
	More than half day	11	6	12	50	10
	Less than half day	16	10	16	73	14
	Never	59	75	54	330	63
Airborne C	hemicals/Dusts (n)	180	176	170	(52	6)
	Always	14	9	18	(72)	14
	More than half day	14	6	18	(65)	12
	Less than half day	19	10	11	(72)	14
	Never	52	75	54	(317)	60
Chemicals	(n)	180	176	172	(528)	
	Always	13	9	13	(61)	12
	More than half day	8	6	10	(41)	8
	Less than half day	12	8	9	(52)	10
	Never	67	78	67	(374)	71
Unsanitary	Conditions (n)	179	174	172	(52.	5)
•	Always	8	6	12	(46)	9
	More than half day	6	5	11	(38)	7
	Less than half day	16	4	12	(56)	11
	Never	70	86	65	(385)	73

Table 6. Job-specific Safety Hazards

	<u>WC1</u>	WC2	Street	Tot	al
	%	%	%	n	%
Eye Hazards (n)	(178)	(176)	(170)	(52-	4)
Always	22	13	22	(100)	19
More than half day	13	10	19	(74)	14
Less than half day	21	17	19	(99)	19
Never	44	60	40	(251)	48
Falling Objects (n)	181	176	171	(52	8)
Always	13	2	15	(53)	10
More than half day	9	5	12	(46)	9
Less than half day	13	7	13	(58)	11
Never	64	86	60	(371)	70
Work at Heights (n)	173	176	172	(52	1)
Always	9	1	15	(41)	8
More than half day	11	3	10	(43)	8
Less than half day	19	10	12	(70)	13
Never	61	86	63	(367)	70
Repetitive Motion (n)	180	176	172	(52	8)
Always	55	50	67	(302)	57
More than half day	24	22	22	(120)	23
Less than half day	13	15	8	(63)	12
Never	8	14	3	(43)	8
Lift Heavy Objects (n)	181	176	172	52.	9
Always	29	26	35	159	30
More than half day	16	20	18	95	18
Less than half day	23	19	20	109	21
Never	32	35	27	166	31

Table 7. Specific PPE use among those exposed to hazards

Tube W Speeme 112 use uniong	Noise (HPDs)	Airborne Hazards (Respirator)	Chemicals (Gloves)	Eye Hazards (Glasses)	<u>Falling</u> <u>Objects</u> (Hard Hat)	Work at Heights (Harness)	Heavy Lifting (Back Brace)
Number exposed (n)	(195)	(209)	(154)	(273)	(157)	(154)	(249)
% with Employer Provided PPE	30	45	59	43	27	21	10
If PPE provided, % with training	45	38	27	33	n/a	77	12*
% Wearing PPE while exposed							
Yes, employer provided	29	40	51	37	23	18	7
Yes, my own	5	6	21	16	6	3	9
If not, why? (n)	(130)	(108)	(81)	(122)	(109)	(117)	**
Not needed	22	19	17	19	16	32	
Too expensive to buy	5	3	0	2	2	5	
Did not work	0	2	5	1	0	2	
Not provided	78	77	23	73	80	68	
Harder to work	2	1	5	5	9	4	
Makes me self-conscious	2	1	0	0	1	0	
Uncomfortable	4	4	5	7	8	3	
Other	9	7	0	9	3	3	

^{*}Question refers to training on safe lifting, not use of back brace.

** Reasons for not using back brace were not solicited.

Table 8. Injury Experience

Table 8. Injury Experience					
	WC1	WC2	Street	Tota	al
	%	%	%	n	<u>%</u>
Ever injured at work as DL (n)	(62)	(60)	(58)	(180	<u>))</u>
•	18	23	29	42	23
If injured, number in past year (n)	(11)	(14)	(17)	(42))
0	9	57	35	(15)	36
1	55	36	29	(16)	38
2	0	7	18	(4)	10
3	9	0	18	<i>(4)</i>	10
>3	27	0	0	(3)	7
Of the 45 specifically reported injuries:					
Of the 45 specifically reported injuries: Body Part Affected *(n)	(19)	(7)	(20)	(45)	,
	(18) 22	(7) 0	(20) 0	. ,	9
Eyes Head	22	14	20	(4)	20
neaa Back	17	43		(9)	
			50	(16)	36
Arms/Shoulders	22	14	15 25	(8)	18
Hands/Fingers	22	29	25	(11)	24
Legs	33	14	10	(9)	20
Feet	11	0	10	(4)	9
Lungs/breathing	17	0	0	(3)	7
Other	17	14	30	(10)	22
Received first aid or medical					
treatment (n)	(18)	(7)	(19)	(44))
Yes	50	100	60	(28)	62
If first aid, when? (n)	(9)	(7)	(11)	(27))
Immediately	44	57	36	(12)	44
After work	11	0	9	(2)	7
Day after	33	14	18	(6)	22
No first aid	1	29	36	(7)	26
Medical attention, when? (n)	(0)	(7)	(12)	(28))
Immediately	<i>(9)</i> 33	<i>(7)</i> 71	33	(12)	43
After work	11	0	33	. ,	18
Day after	33	29		(5)	29
•		0	25 8	(8)	11
No medical att'n.	22	U	8	(3)	11
How/where was treatment given?* (n)	(12)	(7)	(13)	(32)	
Chiropractic	8	0	8	(2)	6
ER	33	71	38	(14)	44
Employer HCP**	0	0	15	(2)	6
Worksite first aid	25	29	8	(6)	19
Personal HCP**	8	14	0	(2)	6
Physical Therapist	8	14	8	(3)	10
Public Hosp/Clinic	50	57	38	(15)	47
Self/family/friend	8	0	8	(2)	6

How was treatment paid for?* (n)	(8)	(7)	(12)	(27	7)
Did not pay	50	29	58	(13)	48
Employer paid	50	43	25	(10)	31
Health insurance	13	14	0	(2)	7
Self/family	25	14	17	(5)	19
Worker's Comp	13	14	8	(3)	11

- Multiple answers possible** HCP: Health Care Provider

Table 9. Actions to improve safety

Table 7. Actions to improve safety	WC1	WC2	Street	Total
	<u>% % </u>	<u>%</u>	<u>%</u>	<u>n %</u>
Ever afraid you would be hurt or killed (n)	(60)	(59)	(58)	(177)
Yes	53	56	69	(105) 59
Ever left a job as because of danger (n)	(31)	(37)	(40)	(108)
Yes	29	35	53	(43) 40
Ever Reported concerns to employer? (n)	(61)	(60)	(58)	(179)
Yes	33	45	33	(66) 37
If yes, did the employer do something? (n)	(20)	(27)	(16)	(63)
Yes	60	67	50	(38) 60
If no, would they? (n)	(41)	(34)	(37)	(112)
Yes	85	88	73	(92) 82
If not, why not?* (n)	(6)	(4)	(12)	(22)
Afraid of losing job	67	0	92	(15) 68
Employer would not act	50	50	17	(7) 32
Language barrier	0	0	17	(2) 9
Other (temp, don't care, etc)	0	50	33	(8) 36
Ever asked employer for safety				
equipment? (n)	(62)	(60)	(57)	(179)
Yes	73	70	79	(132) 74
If yes, did employer provide? (n)	(43)	(42)	(45)	(130)
Yes	93	98	69	(112) 86
If no, would you ask employer for safety				
equipment? (n)	(17)	(19)	(11)	(47)
Yes	82	84	45	(35) 74

^{*} Multiple answers possible

Table 10. Odds Ratios (SE) for exposures in association with construction work, immigrant status and hiring agent (from logistic regression models).

	<u>Noise</u>	<u>Airborne</u> <u>Hazards</u>	Chemicals	<u>Eye</u> <u>Hazards</u>	Falling Objects	Work at Heights	<u>Heavy</u> Lifting	Repetitive Movement	<u>Unsanitary</u> <u>Conditions</u>
Construction Work	2.08# (0.43)	2.78# (0.53)	2.35# (0.51)	3.19# (0.65)	1.89# (0.40)	2.51# (0.54)	1.19 (0.25)	1.46 (0.51)	1.57 [^] (0.33)
Immigrant	1.71 [^] (0.38)	1.94# (0.47)	1.25 (0.29)	1.55* (0.35)	1.68 [^] (0.42)	1.98 [^] (0.54)	0.80 (0.19)	1.66 (0.66)	1.99 [^] (0.57)
Hired By (BL=Homeowner)									
Business	2.28^	1.09	1.31	1.18	1.95*	1.29	0.98	0.70	0.68
	(0.81)	(0.43)	(0.50)	(0.41)	(0.71)	(0.47)	(0.33)	(0.33)	(0.31)
Contractor	1.44	1.43*	1.07	1.23	2.17#	1.77^	1.05	0.98	1.24
	(0.32)	(0.31)	(0.24)	(0.29)	(0.52)	(0.39)	(0.25)	(0.37)	(0.29)
Other	3.11#	1.63	1.53	2.38*	2.17	1.38	0.59	-	1.57
	(1.21)	(0.73)	(0.68)	(1.13)	(1.13)	(0.68)	(0.25)		(0.69)

^{*}p<0.1

[^]p<0.05

[#]p<0.01



WORK HISTORY

First, I am going to ask about your experiences as a day laborer and the job hazards you have faced. For this survey, we define a "day laborer" as someone who works for multiple employers on a temporary basis.

, , ,	ow many months do yo months	ou look for work	each year as a day laborer?
2) Do you curren _Yes ₁	atly have another job, o	ther than as a da No_2	ny laborer? Refused3
3) As a day labor you do not get huYes ₁	rt or killed?		raining on how to do your work safely soI don't know ₃
Employ Million A unior	the trainings (check alver who hired you for wair Club ₃ n ₄ emember ₆	vork ₁ C T	Casa Latina ₂ Cemporary agency (like Labor Ready) ₃ Other ₅
(CHECK ALL TI supervi		c w	o do work? o-workers ₂ vritten materials ₄ Oon't remember ₆
Using s To use Respon other4	training topic (check a afety equipment (like 1 equipment safely (like ding to injuries ₃)	espirators, glove	
7) What language English Spanish			with interpreter ₂
•	(like safety glasses, ha	•	expected or asked to provide your own or a dust mask) at any of your jobs?Always4Don't know5
Never Freque	[skip to question 10]		ght your own safety equipment to a job? Rarely ₂ Always ₄



	o you usually bring with you to a job?
(Show PPE sheet and check all	
hard hat ₁	gloves ₂
safety glasses ₃	safety goggles ₄
work boots ₅	safety clothing ₆
ear muffs or plugs ₇	back brace ₈
dust mask ₉	respirator ₁₀
other ₁₁	don't know ₁₂
10) As a day laborer in Seattle, have you ever or killed?	er worked at a job where you feared you might be hurt
No ₁ [skip to question 12]	Yes_2
Don't remember ₃ [skip to question	[12] Refused ₄ [skip to question 12]
10a) If yes, please describe	
11 As a day laborer in Seattle, have you ever dangerous?	r left a job or not done a job because it was too
No ₁ [skip to question 12]	Yes_2
Nor [skip to question 12]Don't remember ₃ [skip to question	
11a) If yes, please describe	
12 14 DECENT IODS	
12, 13, 14 RECENT JOBS	ioness on the three most recent day labor ichs that
- · · · · · · · · · · · · · · · · · · ·	iences on the three most recent day labor jobs that
you had in Seattle. These last three jobs w (3X)	yould be ones you likely had this week or last week
For the 1 st most recent job you had:	
A) How did you get the job?	
Casa Latina ₁	Millionair Club ₂
On street ₃	Temp Agency (like Labor Ready) ₄
Through a friend ₅	Other ₆
B) Who hired you?	
homeowner ₁	contractor ₂
other day laborers ₃	Temp Agency (like Labor Ready) ₄
business ₅	other ₆
C) How many continuous days did you work	k for them? days
c, 110 w many commuous days and you work	tioi dieni:duys
D) On average, how many hours did you wo	ork in a day at this job? hours



E) What type of job was this recent job? Construction work	_Non-Construction work [Skip to Question E2] ₂
	work did you do [Skip to Question F]?
(Check all that apply)	work did you do [Skip to Question 1]:
painting ₁	$roofing_2$
electrical work ₃	demolition work ₄
carpentry ₅	hanging drywall ₆
taping and sanding drywall ₇	hauling materials ₈
plumbing ₉	$\underline{\underline{}}$ other construction work ₁₀
12-E2) What type of non-construc	etion work did you do?
(Check all that apply)	
$_$ moving ₁	landscaping or digging ₂
house-cleaning ₃	dishwashing (in restaurants) ₄
hauling materials ₅	$_$ cooking $_6$
other ₇	Don't remember/don't know ₈
F) Where was this recent job?	
construction site ₁	individual's home ₂
_small business (1-10 employees)	
other ₅	Don't remember/don't know ₆
G) Describe the tasks that you did during	this recent job:
	ment did you use the most in this recent job?
1)	
2)	
3) 4)	
4)	
	oises during your work at this recent job? Noises are loudyou have to shout to talk to somebody standing an arm's
Never or rarely ₁ [skip to question	on J For less than half the day ₂
For more than half the day ₃	Always ₄
Don't remember/don't know ₅	/ 11way 54
Yes ₁ No ₂ [ski	rplugs or earmuffs to block out the noise in this recent job? p to question I3] know ₅ [skip to question I3]



I2) Did you receive training on how to use recent job?	these earplugs or earmuffs correctly in this
Yes_1 No_2	
Don't remember/don't know ₃	
Don't remember/don't know 3	
I3) Did you wear earplugs or earmuffs to b Yes, I wore my own ₁ [skip to qu	y
Yes, I wore the employer's ₂ [ski	
No ₃	p to question of
Don't remember/don't know ₄ [sl	kip to question J]
I3a) If not, why?	
Uncomfortable ₁	
Makes it harder to work ₂	
Did not work correctly ₃	
Did not need it ₄	
Did not want to buy it my	self.
Too much money to buy ₆	5011
Self-conscious wearing it	
It was not provided ₈	
Other ₉	
J) How often did you work around materials or act	ivities that could have hurt your eyes in this
recent job? Your eyes can be hurt by getting dust of	
other objects.	For loss than half the day
Never or rarely ₁ [skip to question K]	
For more than half the day ₃	Always ₄
Don't remember/don't know ₅	
J1) Did your employer give you safety glass job?	ses or goggles to protect your eyes in this recent
Yes_1	No ₂ [skip to question J3]
Don't remember/don't know ₃ [sh	
J2) Did you receive training on how to use recent job?	these safety glasses or goggles correctly in this
Yes_1	No_2
Don't remember/don't know ₃	
J3) Did you wear safety glasses or gogglesYes, I wore my own ₁ [skip to qu	
Yes, I wore the employer's ₂ [ski	
No ₃	,
Don't remember/don't know ₄ [s]	kip to question K]
	1 1
12-) 16 1 0	
J3a) If not, why?	



Uncomfortable/Hurts to wear it ₁ Makes it harder to work ₂ Did not work correctly ₃ Did not need it ₄ Did not want to buy it myself ₅ Too much money to buy ₆ Self-conscious wearing it ₇ It was not provided ₈ Other ₉
K) How often did you work in areas where heavy tools, materials, or other objects could have fallen on your head in this recent job? Never or rarely_1 [skip to question L]For less than half the day_2Always_4Don't remember/don't know_5
K1) Did your employer give you a hard hat to protect your head in this recent job? Yes_1No_2Don't remember/don't know ₃
K2) Did you wear a hard hat to protect your head in this recent job? Yes, I wore my own ₁ [skip to question L] Yes, I wore the employer's ₂ [skip to question L] No ₃ Don't remember/don't know ₄ [skip to question L]
K2a) If not, why? Uncomfortable/Hurts to wear it ₁ Makes it harder to work ₂ Did not work correctly ₃ Did not need it ₄ Did not want to buy it myself ₅ Too much money to buy ₆ Self-conscious wearing it ₇ It was not provided ₈ Other ₉
L) How often did you work around chemicals, paint, solvents, or other liquids in this recent jobNever or rarely ₁ [skip to question M]For less than half the day ₂ Always ₄ Don't remember/don't know ₅
L1) Did your employer give you gloves to protect your hands in this recent job? Yes_1No_2 [skip to question L3] Don't remember/don't know_s[skip to question L3]



L2) Did you receive training on when it is necessary to wear gloves in this recent job? Yes ₁ No ₂
Tosi Don't remember/don't know ₃
L3) Did you wear gloves to protect your hands in this recent job? Yes, I wore my own ₁ [skip to question L4] Yes, I wore the employer's ₂ [skip to question L4] No ₃ Don't remember/don't know ₄ [skip to question L4]
L3a) If not, why? Uncomfortable/Hurts to wear it ₁ Makes it harder to work ₂ Did not work correctly ₃ Did not need it ₄ Did not want to buy it myself ₅ Too much money to buy ₆ Self-conscious wearing it ₇ It was not provided ₈ Other ₉
L4) Did your employer give you safety clothing to protect your body in this recent job? Yes_1No_2 [skip to question L6] Don't remember/don't know_3 [skip to question L6]
L5) Did you receive training on when or how to use this safety clothing correctly in this recent job?
Yes ₁ No ₂ Don't remember/don't know ₃
L6) Did you wear safety clothing to protect your body in this recent job? Yes, I wore my own ₁ [skip to question M] Yes, I wore the employer's ₂ [skip to question M] No ₃ Don't remember/don't know ₄ [skip to question M]
L6a) If not, why? Uncomfortable/Hurts to wear it ₁ Makes it harder to work ₂ Did not work correctly ₃ Did not need it ₄ Did not want to buy it myself ₅ Too much money to buy ₆ Self-conscious wearing it ₇ It was not provided ₈ Other ₉



/	often did you work more than six feet off the ground where you could have fallen-off and t in this recent job?
gotten nur —	_Never or rarely ₁ [skip to question N] For less than half the day ₂ Always ₄ Always ₄
	1) Were there guard-rails or bars where you were working that would keep you from ling in this recent job? Yes_1No_2Don't remember/don't know ₃
M2 job	2) Did your employer give you a harness to wear to keep you from falling in this recent o? Yes_1No_2 [skip to question M4] Don't remember/don't know ₃ [skip to question M4]
M	B) Did you receive training on how to use the harness correctly in this recent job? Yes_1No_2Don't remember/don't know ₃
M	4) Did you wear a harness to keep from falling in this recent job? Yes, I wore my own ₁ [skip to question N] Yes, I wore the employer's ₂ [skip to question N] No ₃ Don't remember/don't know ₄ [skip to question N]
	M4a) If not, why? Uncomfortable/Hurts to wear it ₁ Makes it harder to work ₂ Did not work correctly ₃ Did not need it ₄ Did not want to buy it myself ₅ Too much money to buy ₆ Self-conscious wearing it ₇ It was not provided ₈ Other ₉
that gave of	often did you work in this recent job around materials such as chemicals, paint, & solvents off a lot of fumes or gases, or dusty materials such as sawdust and sandthat could have f you breathed them? Never or rarely ₁ [skip to question O] For less than half the day ₂ Always ₄ Don't remember/don't know ₅



N1) Were there any fans or vacuums used to blow or suck these substances or agents away from where you were working in this recent job? Yes_1No_2
Don't remember/don't know ₃
N2) Did your employer give you a paper mask/respirator to keep you from breathing these substances or agents in this recent job?
Yes ₁ No ₂ [skip to question N4]Don't remember/don't know ₃ [skip to question N4]
N3) Did you receive training on how to use the paper mask/respirator correctly in this recent job?
Yes_1 No_2
Don't remember/don't know ₃
N4) Did you wear a paper mask/respirator to keep from breathing these substances or agents in this recent job?
Yes, I wore my own ₁ [skip to question O]
Yes, I wore the employer's ₂ [skip to question O] No ₃
No3 Don't remember/don't know4 [skip to question O]
N4a) If not, why? Uncomfortable/Hurts to wear it1 Makes it harder to work2 Did not work correctly3 Did not need it4 Did not want to buy it myself5 Too much money to buy6 Self-conscious wearing it7 It was not provided8 Other9
O) How often did your work involve doing the same movements over and over with your hands o arms in this recent job? Never or resolve folion to guestion Plan. For less than helf the day.
Never or rarely ₁ [skip to question P]For less than half the day ₂ Always ₄
Por more than har the days
O1) Did you receive training on how to not get hurt by doing these activities over and over in this recent job? Yes ₁ No ₂ Don't remember/don't know ₃
P) How often did you have to manually lift or carry heavy objects in this recent job? Never or rarely ₁ [skip to question Q] For less than half the day ₂
For more than half the day ₃ — Always ₄



Don't remember/don't	t Know ₅	
P1) Did you receive train objects in this recent job?	ing on how to not	t get hurt by lifting or carrying these heavy
$\underline{\hspace{1cm}}$ Yes ₁	$\underline{\hspace{1cm}}$ No ₂	Don't remember/don't know ₃
P2) Did your employer greent job? Yes_1Don't remembe	·	ace to help you with these heavy objects in thisNo ₂
Yes, I wore my Yes, I wore the	y own ₁	g these heavy objects in this recent job?
	athing in the air o	conditions where you felt you could become sick r by touching objects in the area in this recent job'For less than half the day2Always4
		periences with job injuries. We only want to hear a to stop working and required first aid and/or
15) As a day laborer in Seattle, h and get first aid or medical treatm No ₁ [skip to question 2Don't remember/don't	nent? 22] Ye:	an injury at work that forced you to stop working $$s_2$$ fused4
16) Have you ever been unable to working and get first aid or media No ₁ [skip to questionDon't remember/don't	cal treatment?	ou had an injury at work that forced you to stop es_2 $fused_4$
17) In the past year, how many d	lays were you una	able to work as a result of injuries on the job?
18) Within the past year, how ma0 [skip to question 22]2 ₃ more than 3 ₅	$ \begin{array}{c} $	· · · · · · · · · · · · · · · · · · ·



19, 20, 21 For the next set of questions, I will be asking you to describe the injuries you had in this year. For each injury, I'll be asking you a series of questions. If you have had more than three injuries, please talk about the three most serious injuries, and about the most recent injuries first.

For injury #1/2/3:	
R1) How did the injury occur?	
back ₃ a hands/fingers ₅ l legs ₇ t other ₉	ck all that apply)? head ₂ arms/shoulders ₄ lungs/breathing ₆ feet ₈
S) Describe what your symptoms were.	
T) Was there safety equipment available to prev No_1Yes_2Don't remember/don't know_3 T1) What safety equipment were you us U) Did you get first aid or medical treatment foNo_1 [skip to question V]	sing?
Other ₅ U1a) When did you get medical treatme Immediately ₁	After I got off work ₂ Did not receive first aid ₄ Don't remember/don't know ₆
U2) How did you treat your injury (chec First aid at worksite ₁ Public hospital or clinic ₂ Personal doctor/nurse ₃ Employer doctor/nurse ₄ Physical therapist ₅ Emergency room ₆ Chiropractor's office ₇	ck all that applies)?



Alternative providers (sobadores/masseuses, curanderos/shaman) 8Self/family/friend treated9 [skip to question V]Co-worker treated10 [skip to question V]Don't remember/don't know11
U3) How did you pay the medical provider to treat your injury? (check all that applies)
I/Family/Friends privately paid ₁ Employer/Company paid ₂ Worker's Compensation (Insurance) ₄ Other ₆ Other ₆
V) Did you report your injury to anyone of the following (check all that applies)? Your employer/company ₁ Casa Latina ₂ Millionair Club ₃ Other ₄
W) Do you think your injury could have been prevented? No ₁ [skip to Question 22]Yes ₂ Don't know ₃
W1) If so, how?
REDUCING WORKPLACE HAZARDS The next questions will be about your experience trying to reduce the amount of workplace hazards.
22) Do you know of people or places that you can report your concerns of work hazards? No ₁ [skip to question 23]Yes ₂
22A) Who would you contact?
Have you ever reported your concerns about hazardous work conditions to an on-site employerNo ₁ [skip to question 24]Yes ₂ Don't remember/don't know ₃
23a) Did your employer do something to reduce the hazardous work conditions on-site? No ₁ [skip to question 25]Yes ₂
23b) If yes, what did your employer do? Removed/Reduced the hazard1 [skip to question 25] Ignored my concern2 [skip to question 25] Other3 [skip to question 25]
24) If faced with a work place hazard, would you report your concerns of hazardous work conditions to the on-site employer?
No ₁ Yes ₂ [skip to question 25] Don't know/Not sure ₃



afrai langu	hy not? (CHECK ALL 'd of losing job ₁ uage barrier ₃ are enough ₅	_employer would note temporary job4	ot do anything ₂
25) Have you ever asl etc.?	ked an employer for rela	evant safety equipme	ent/tools (safety glasses, hard hat,
No ₁ [skip to	question 26]	$\underline{\hspace{1cm}}$ Yes $_2$	Don't remember/don't know ₃
,	employer provide you [skip to question 27]	•	quipment/tools? S2 [skip to question 27]
26) If faced with a wo equipment/tools?	ork place hazard, would	you ask the employe	er for relevant safety
_No ₁	_Yes ₂ [skip to	question 27]	Don't know/Not sure ₃
afrai langi	ny not? (CHECK ALL d of losing job ₁ uage barrier ₃ are enough ₅	employer would not _temporary job ₅	ot do anything ₂
,	s, so that they could con	me out and investiga	WISHA) to file a complaint about te the on-site employer?Don't remember/don't know ₃
	nplaint about unsafe wo	-	e safety and health agency t they could come out and
_No ₁		question 29]	Don't know/Not sure ₃
afrai agen fear (langu temp not c	ny not? (CHECK ALL d of losing job ₁ cy would not do anythin of getting deported ₄ uage barrier ₅ porary job ₆ care enough ₇	,	
Have you ever reporte	orked at Casa Latina of ed your concerns of an nair Club? (Check all the	employer's unsafe	conditions when dispatched from ion $30]_2$



29a) Who was the person at Casa Latina or Millionair Club that you talked to about your unsafe working conditions concerns?

30) Do injuries	-	would be useful	I for you to atte	nd safety trainings on how to reduce on-the job
mjurica		\Yes_2	Not sure ₃	
to safet	ty at work as a			ttend trainings on your legal rights with regard
32) Wł	hat would you	do to reduce or	prevent injurie	es at work?
	re there any ot know about?	her workplace	hazards and inj	ary concerns that we did not ask about, that we
	R BACKGRO am going to a		formation abou	t yourself.
34) W	•	tive language? kip to Question	1 37)Spa	nish ₂ Other ₃
		ou speak Englis Not very w		ll ₃ Very well ₄
36) Ho		ou read English Not very w		ll ₃ Very well ₄
37) W	Latino or F White ₃	Hispanic ₁ frican America		u identify yourself as (check all that apply)? Native American/Alaska Native ₂ Asian ₄ Pacific Islander/Hawaiian ₆ Refused ₈
38) Ho	ow old are you	1?	years old	
39) W	None ₁ Middle Scl	nool (grades 7-8 A, BA, BS)5	acation you hav	e completed?Elementary School (grades 1-6) ₂ High School (grades 9-12) ₄ Vocational School ₆ Other ₈
40) In	•		? UESTION 45]	Mexico ₂ Puerto Rico ₄



Cuba 5 Columbia7 Panama9 Chile11 Other13	El Salvador ₆ Peru ₈ Honduras ₁₀ Argentina ₁₂ Refused ₁₄	
41) In what year did you first come to the	ne US to work?	-
42) Have you done any other work in th for multiple employers on a temporary b Yes ₁	pasis?	g a day laborer and working efused ₃
43) In what year did you first work as a	day laborer in the United States	?
44) Once again, if you do not feel comfo Do you feel your immigration status affo _Yes ₁ No ₂ l	ects how safe your job is as a day	1 1
45) Is there anything else you would lik	te to share from your experience	as a day laborer?
ie) is there any thing else you would in	J 1	•
This is the end of the questionnaire. T We will provide you with the results o Millionair Club.	Thank you for sharing your ex	-
This is the end of the questionnaire. T We will provide you with the results o	Thank you for sharing your ex	-
This is the end of the questionnaire. T We will provide you with the results o Millionair Club.	Thank you for sharing your ex	-
This is the end of the questionnaire. To We will provide you with the results of Millionair Club. Interviewer Observations 46) Gender of day laborer: Female_1Male_2 47) Questionnaire orally conducted in:	Thank you for sharing your ex	-
This is the end of the questionnaire. To We will provide you with the results of Millionair Club. Interviewer Observations 46) Gender of day laborer: Female_1Male_2 47) Questionnaire orally conducted in:English_1Spanish_2 48) Questionnaire conducted at:	Thank you for sharing your ex	at Casa Latina and