TITLE PAGE

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PROJECT TITLE: Occupational Injury Among Personal Assistance Workers

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Table of Contents

Abstract**.** Occupational injury is a prevalent problem in long-term care. However, there is a noticeable lack of research related to workers providing Personal Assistance Services (PAS) – the personal care and housekeeping tasks that enable elderly and other disabled adults to live in community settings. The project is a statewide telephone survey of PAS providers and recipients in California's In Home Supportive Services program (IHSS). The project documents work-related injuries, days of work lost because of these injuries, workers' perceptions about the factors that may have contributed to these injuries, how worker injury may contribute to worker turnover, and health care use (including worker's compensation) associated with these occupational injuries. A companion survey of PAS recipients was conducted. It document recipient injuries (e.g., fractures, sprains), potentially preventable adverse events (e.g., unintended weight loss, bed sores, contractures, and medication mismanagement), and recipients' perception of the consequence arising when PAS providers are unavailable due to work-related injury or illness. The sample was limited to PAS providers who are working with PAS recipients age 18 or older and who have two or more limitations in activities of daily living (i.e., bathing, dressing, transferring in/out of beds or chairs, toileting, and eating).

PAS providers (n=855) reported on a variety of household and personal care tasks, including client lifting and transfers, as well as on barriers to care delivery. A total of 262 providers (31%) reported musculoskeletal symptoms or acute injuries causing at least moderate pain (defined as 'prominent' problems) that had occurred in the prior 12 months; 25% of that group (n=65) reported 12 or more episodes in the previous 12 months of probable work-related musculoskeletal symptoms. Because of these prominent problems, 26 workers missed work, 54 changed their work duties, and 12 had to drop work hours or clients. A second aim of the study was a companion survey of PAS Recipients (n=918). These individual reported on the training background, health status, injuries and other health events associated with their PAS, and information about and satisfaction with their PAS worker. Almost 90% of the respondents had been in the IHSS program for at least one year. Two-thirds of respondents had received some information or training relative to the task assistance they needed. However, for individual tasks (e.g., safe ways to lift and turn, help in feeding, help in bathing, maintaining hygiene and controlling infections) the proportions reduced to about 10%. Almost half of respondents had fallen in the past 12 months, with about 2/3rds of those reporting an injury. Usually this was a bruise or sprain, however 31 recipients reported fractures. Another 64% reported being injured from other causes. Again most of these we cuts, bruises or sprains. Bed sores (7.5%) and contractures (18.7%) were prevalent. Satisfaction with the PAS workers tended to be mixed: 45.6 reported being very satisfied, this contrasted with 1.2% being somewhat or very dissatisfied, leaving the about half reporting somewhat satisfied. Recipients report relatively few injuries among their workers (5.6%). However, consistent with the provider survey, just over half of these 51 episodes resulted in days when the worker either did not come to work or was unable to perform their normal activities. These results suggest some under reporting of injuries by workers to their PAS recipient employers.

Section 1

Highlights/Significant Findings. . A total of 262 providers (31%) reported acute injuries or musculoskeletal disorders (MSD) symptoms occurring in the last 12 months. These symptoms reached a level of 3 or greater on a 0-10 numerical pain scale. Such symptoms were used to define this as 'prominent' problems. Because of these prominent problems, 26 workers missed work, 54 workers had to change their work duties, and 12 had to drop hours of work or clients. A quarter of these affected individuals (n=65) met our case definition for work-related MSD: a prominent problem that had occurred 12 or more times in the last 12 months, with no other potentially explanatory chronic or acute illnesses or injuries reported. *Functional work environment.* PAS providers assisted recipients with their activities of daily living for a mean of 10.08 tasks per day (sd=2.49). Instrumental activities of daily living (IADL; e.g. cleaning/laundry, shopping, meal preparation) were more common than personal care activities of daily living (ADL; e.g. bathing, dressing, grooming). Thus, nearly all of the providers helped with IADL while roughly 1/2 to 3/4 assisted with one type of ADL or another. Just over half the providers assisted by lifting or transferring the recipient, for example, from bed to chair or chair to commode. Nearly 42% reported between 1-10 lifts/transfers per day, with another 15% reporting up to 20 lifts/transfers per day. Other barriers to providing assistance in the home were not prevalent individually, but cumulatively they affected many workers. Among the barriers were language differences (5%), verbal abuse from the client or family (5%), cigarette smoke (13%), home clutter or unsanitary conditions (12%), client behaviors (e.g., wandering, threatening, yelling; 9%), neighborhood violence/crime (7%), other disease risk exposure (5%), aggressive pets (3%). A companion survey of PAS Recipients (n=918) documented the training, health status, injuries and other health events associated with their PAS, and information about and satisfaction with their PAS worker. Almost 90% of the respondents had been in the IHSS program for at least one year. Two-thirds of respondents had received some information or training relative to the task assistance they needed. However, for individual tasks (e.g., safe ways to lift and turn, help in feeding, help in bathing, maintaining hygiene and controlling infections) the proportions reduced to about 10%. Almost half of respondents had fallen in the past 12 months, with about 2/3rds of those reporting an injury. Usually this was a bruise or sprain, however 31 recipients reported fractures. Another 64% reported being injured from other causes. Again most of these were cuts, bruises or sprains. Bed sores 69 cases (7.5%) and contractures 172 cases (18.7%) were substantially more prevalent than injuries. Satisfaction with the PAS workers tended to be mixed: 45.6 reported being very satisfied, this contrasted with 1.2% being somewhat or very dissatisfied, leaving about half reporting 'somewhat satisfied.' Recipients report relatively few injuries among their workers (5.6%). However, consistent with the provider survey, just over half of these 51 episodes resulted in days when the worker either did not come to work or was unable to perform their normal activities. These results suggest some under reporting of injuries by workers to their PAS recipient employers.

Translation of Findings. Most respondents believed that they had enough access and maneuvering space to manage their work. However, 85% of those who perform lifts or transfers as part of daily care reported that lift equipment was not available in the home. Furthermore—training in the expected tasks is usually provided by the care recipient and

relates most directly to their task assistance needs. Training in how to address or mitigate the various other barriers in the work environment is very infrequent. This is a particular problem for consumer directed personal assistance programs such as the In Home Supportive Services (IHSS) program studied. Within IHSS (as in other consumer directed programs) the vast majority of PAS workers are hired, supervised, and fired by the care recipients. Further, there is usually no agency or organization to provide oversight of the work environment or to aid the worker in resolving problematic situations. The consumer directed approach to PAS is growing across the US. Correspondingly, training programs and requirements for recipients and providers are emerging. These could benefit PAS providers by including content addressing the injury risk and work barrier issues described above. Additionally, case management programs or the other entities responsible for PAS program quality assurance may need to expand their functions to offer resources to PAS providers. These issues are multiplied in situations where the care recipient is purchasing PAS out of pocket rather than through a public program—as care coordination and service oversight is usually not routinely available in these circumstances. The prevalence of bedsores and contractures warrants further attention as it is indicative of insufficient care or equipment that might be used by the recipients in better bed mobility or more frequent transfers. The difference in perspectives about worker injuries or work limitations between recipients and providers may be a consequence of the survey responders. However, it may also reveal an unwillingness of providers to report injuries and work limiting problems to the recipients. This issue warrants further investigation, as it may be a contributing factor in the low recipient satisfaction with their workers, and adverse outcomes.

Outcomes/Relevance/Impact. The project findings have not yet been published, but they are being disseminated through conference presentations (American Public Health Association, Gerontological Society or American, and briefings with IHSS program staff, PAS worker unions, and the programs that offer a gateway into IHSS. Additionally, we have entered into an agreement with Elsevier Publishing to develop an on-line training program for PAS workers and recipients. Among other things, it will incorporate the issues noted above.

Section 2

Scientific Report

Background & Significance. Personal Assistance Services (PAS) (also known as “home care,” or “in-home care”) is a primary mode of long term care, providing support for such activities of daily living as bathing, dressing, and transferring to and from beds or chairs. Such support enables persons with disabilities to live in community settings. Currently more than 5.4 million adults nationally have a limitation in at least one activity of daily living, and about three times this number have limitations in instrumental activities of daily living (e.g., shopping, cooking, housecleaning, and transportation) (National Center for Health Statistics, 1998). The PAS workforce has nearly doubled over the past ten years, going from 500,000 to more than 1.2 million workers nationally (Kaye, Chapman, Newcomer, Harrington, 2005). Factors contributing to the growth of community based personal assistance services include the aging population, the presumed cost-effectiveness of home care relative to care in institutions, the preference of

persons to remain in community settings, and efforts by states to comply with the Supreme Court's 1999 Olmstead decision about providing alternatives to institutional care for long term care recipients.

The expansion of PAS includes an increasing use of "consumer-directed" or "independent provider" models of service delivery. Such PAS workers do not work for agencies. They are hired, supervised, and fired directly by PAS recipients ("consumers"). Independent provider PAS permits consumers to have more control over the services provided, including the option to hire family members as their paid workers. However, the independent provider model has challenges. For PAS workers, consumer direction may result in unintended difficulties regarding occupational safety, such as ambiguities about who is responsible for addressing hazards, *access to* workers' compensation insurance, and assisting injured workers. Also, there may not be systems for backup coverage or sick day benefits. All of this may lead workers to work while injured or delay seeking medical attention. This in turn may increase the risk for more serious health consequences for workers and inadequate assistance for consumers.

Occupational injury among home-based care workers is known to be a prevalent problem (Ono, et al., 1995; Johansson, 1995; Dellve, et al., 2003; Brulin, et al., 2000). However, injury data in the United States (such as that from the Bureau of Labor Statistics [BLS]) generally do not differentiate between community-based and institution-based workers. Moreover, these data come almost exclusively from agencies, ignoring independent providers. The 2003 BLS survey provides illustrative injury rate data (BLS, 2005a). It reported 57,000 occupational injuries severe enough to cause at least one day of missed work among a category of personal assistance workers that includes nurses aides, orderlies, and attendants. The median number of days lost from work was 5, but 17.7% missed one month or more. Most of these injured workers suffered sprains and strains to the trunk (usually the back) related to lifting or moving clients. The injury rate in nursing homes and residential homes was 10.1 per 100 FTEs for all employees compared to the all industry rate of 5.0 per 100 FTEs (BLS, 2005b).

An extrapolation of these injury rates into community settings, after adjusting for comparable levels of need among the PAS recipients, would likely produce an underestimate of injuries. Hospital and nursing home workers are generally thought to have more training, experience, supervision, and access to supplemental assistance as necessary compared to home care providers. Studies of a related occupation–home health care workers–provide support for this assumption about differential risk. For example, Myers and colleagues (1993) found higher injury rates among home health workers than among hospital and nursing home workers. The annual rate of low back injuries among home health workers was 15.4/100 FTE, compared to 5.9/100 FTE for hospital nursing aides. One of the few U.S. studies about working conditions for community-based PAS workers (a survey of 1900 home care workers in Washington state), found that almost 40% of the respondents had experienced a work-related injury or health problem (including muscle strain and emotional stress); 26% reported experiencing discrimination, harassment or abuse (especially verbal) on the job (Hayashi, Gibson, & Weatherley, 1994). Working conditions were poor, with low pay; few benefits; unpaid overtime; unpaid training and travel time; and unstable schedules.

Similar working conditions have been reported from focus groups of agency and independent PAS providers (Artega, et al., 2002; NIOSH, 2004). Housekeeping tasks were said to be as physically demanding as client handling, few workers had adequate tools or equipment for their required tasks, most consumers' homes were not equipped so that services could be provided safely, and most PAS workers lacked training about how to safely conduct PAS work. A Health Hazard Assessment conducted by NIOSH in one California county found a great deal of confusion and ambiguity about how to address occupational injury (NIOSH, 2004).

There are many direct and indirect consequences of occupational injury. The outcomes or consequences studied in this work having greatest applicability to our study are days lost from work, job loss or limitations on the job, and declines in health-related quality of life (e.g., persisting symptoms, psychological and physical impairment) that impact workers both at home and work (Keogh, et al. 2000; Gillen, Jewell, Faucett, Yelin, 2004).

For PAS recipients, an injury to their worker may mean a disruption in the supportive services they rely on every day (e.g., feeding, toileting, getting out of bed). If the injury causes the worker to leave the job, the recipient must find, train, and gain confidence in a new worker. This is stressful and time-consuming. These issues are in addition to anxiety over whether providers will be reliable in showing up for work, and in their willingness and ability to do what is needed (NCHS, 1998). When injured providers continue to work, it is unknown whether the consequences of their injury contribute to sub-optimal care, injury, or unmet need for the PAS recipient. Unmet need has been found to increase the risk for unwanted weight loss, bed sores, contractures, skin problems, falls, and injuries resulting from falls (LaPlante, Kaye, Kang, & Harrington, 2004). Such problems potentially contribute to emergency room visits, emergency medical technician visits, hospitalizations, and nursing home placement.

Specific Aims. Occupational injury is prevalent in long-term care, including in-home services. However, there is a noticeable lack of research and policy attention relative to workers providing Personal Assistance Services (PAS) – the personal care and housekeeping tasks that enable elderly and other disabled adults to live in community settings. The primary aims of this study were (1) increase understanding about work-related injury rates among personal assistance workers (PAS providers) in community settings and (2) document the extent to which such injuries negatively affects the quality of care provided as well as quality of life for the worker. The survey measured work-related injuries over 12-months, days of work lost because of these injuries, workers' perceptions about the factors that may have contributed to these injuries, how worker injury may contribute to worker turnover, and health care use (including worker's compensation) associated with these occupational injuries. A secondary aim was to document consequences arising from any injuries. These include functional losses and health care and worker's compensation use by PAS providers. A third aim considered possible adverse consequences related to the quality of care and health outcomes of PAS recipients. The survey or PAS recipients documented any recipient injuries (e.g., fractures, sprains), potentially preventable adverse events (e.g., unintended weight loss, bed sores, contractures), and recipients' perception of the extent to which these events may be associated with inadequate PAS assistance, or a consequence arising when PAS providers are unavailable due to work-related injury or illness. We investigated differences in two modes of consumer direction:

when the provider is a relative (but not the spouse or parent) of the care recipient, and when the provider is a non-relative.

Procedures/Methodology. The project is a statewide survey of PAS providers and recipients in California's In Home Supportive Services program (IHSS). This program serves more than 320,000 recipients per month and employs more than 280,000 PAS providers. The sample was limited to PAS providers who are working with adult PAS recipients (i.e., age 18 or older) who have limitations in two or more in activities of daily living (i.e., bathing, dressing, transferring in/out of beds or chairs, toileting, and eating). These inclusion criteria were used to limit the study to PAS providers who were working with recipients who may have or are approaching eligibility for nursing home placement. PAS providers and the service recipient samples are separately drawn so that interviews with one were not contingent on having completed an interview with the other. Providers and recipient selection was inclusive of family members (other than the spouse or parent), and non-relatives of the PAS recipient.

There were two components to the data collection activities of the project. The first used the information available from the IHSS Case Management Information and Payrolling System (CMIPS) maintained by the California Department of Social Services. These administrative data provided contact information on both providers and recipients. Additionally, they include recipient assessment data, which was used to stratify the population having 2 or more ADL limitations. CMIPS also includes information on provider relationships, and information on race/ethnicity and primary language. These were used in the data analysis and in assigning bi-lingual interviewers for the interviews.

The survey sample was stratified by age of recipient 18-64, and 65+, and by whether the providers were relatives or nonrelatives. Legally responsible relatives (i.e., spouses and parents) were excluded. Separate samples of providers and recipients were selected for a computer aided telephone survey. Mailings and Interviews were conducted in English or one of the following languages as appropriate: Spanish, Mandarin. Cantonese, and Tagalog. Those whose having another primary language were either interviewed in English or were considered out of scope for the survey.

Survey development was guided by a theoretical framework developed by Faucett (2005). The framework emphasizes the impact of four aspects of the work environment (functional, temporal, physical and interpersonal) as well as work barriers and job strain on worker health and disability outcomes. Our survey of PAS providers included several well-known scales to assess work-related injuries and musculoskeletal disorders (MSDs) and their impact on normal activities, providers' perceptions about factors in the home that may have contributed to these injuries and disorders, and work limitations. Items were drawn from a modified Nordic Musculoskeletal Questionnaire, the Job Content Questionnaire, and the Work Limitations Questionnaire (WLQ-26) to develop the survey (Kuorinka et al., 1987; Karasek et al. 1998; Amick et al. 2004). Additional items were taken from the Medicare Current Beneficiary Survey (CMS, 2002), National Health Interview Survey-Disability Supplement (NCHS, 1998), Effort Reward/Over commitment Scale (Siegrist et al, 2004), BLS Annual Survey of Occupational Injuries and Illnesses **(**BLS, 2003), Nordic Musculoskeletal Questionnaire (Dickinson et al. 1992),

The Short Form-36 (Ware, 1993), Work Limitations Questionnaire (Lerner et al, 2001), and the Survey of Home Care Nurses (Cheung et al, 2006).

The instruments were refined by incorporating both focus group derived items and testing the comprehension of the standardized items when translated. These refinements were further tested and refined with cognitive interviews in all the study language groups prior to the launch of the full survey. The Public Research Institute at San Francisco State University using computer-assisted telephone interviewing equipment and techniques conducted the surveys from April- August 2009. Ethics approval for research involving human subjects was obtained from the University of California, San Francisco; San Francisco State University; and the State of California. We obtained 940 completed provider records and the 942 completed recipient records. After excluding ineligible cases the final sample reduced to 855 provider cases and 918 recipient cases for our analysis. This represents a response rate of just over 50% of those able to be contacted. A comparison of responders with non-responders and those not contacted was possible using provider relationship, race/ethnicity, and the disability levels of the recipients. All these data are available on the administrative files used in selecting the sample. These comparisons found no systematic bias in the responders.

Results & Discussion. Of the 855 PAS providers, 474 were relatives of the IHSS care recipient and 381 were nonrelatives. They were predominately female (n=686, 80%) and non-white (n=619, 72%). Although most responded in English, 31% (n=269) chose to respond to the survey in Spanish, Cantonese or Mandarin. The majority ranged from 31-60 years of age (n=624, 73%), with 12% (n=101) over 60. Most had received 12 years or fewer of education (n=502, 59%). or MSD symptoms occurring in the last 12 months and that reached a level of 3 or greater on a 0-10 numerical pain scale, which we defined as 'prominent' problems. Because of these prominent problems, 26 workers missed work, 54 workers had to change their work duties and 12 had to drop hours of work or clients. A total of 262 providers (31%) reported acute injuries or MSD symptoms occurring in the last 12 months and that reached a level of 3 or greater on a 0-10 numerical pain scale, which we defined as 'prominent' problems. Because of these prominent problems, 26 workers missed work, 54 workers had to change their work duties and 12 had to drop hours of work or clients. A quarter of these affected individuals (n=65) met our case definition for work-related MSD: a prominent problem that had occurred 12 or more times in the last 12 months, with no other potentially explanatory chronic or acute illnesses or injuries reported. *Functional work environment.* PAS providers assisted recipients with their activities of daily living for a mean of 10.08 tasks per day (sd=2.49). Nearly all of the providers helped with instrumental activities of daily living (IADL: e.g., cleaning/laundry, shopping, meal preparation) while roughly 1/2 to 3/4 assisted with one type of activity of daily living (ADL: e.g., bathing, dressing, grooming) or another. Just over half the providers assisted by lifting or transferring the recipient, for example, from bed to chair or chair to commode. Nearly 42% reported between 1-10 lifts/transfers per day, with another 15% reporting up to 20 lifts/transfers per day. *Temporal work environment.* PAS providers gave a mean of 23.52 hours of care per week (sd=12.23 hours) to PAS recipients. They reported that they were able to take coffee and lunch breaks on a typical day (n=629, 74%), but only 64% (n=493) agreed that they had enough time to get the job done. Furthermore, only 59% (n=502) stated that their hours of work were

always predictable. PAS providers also held other jobs: 233 reported providing home care for at least one other person and 197 held non-home care jobs in addition to their PAS work. *Physical environment.* Most respondents believed that they had enough access and maneuvering space to manage their work. However, 85% of those who perform lifts or transfers as part of daily care reported that lift equipment not available in the home. Furthermore, 13% (n=50) of all non-family providers (n=377) reported a lack of supplies or equipment. *Interpersonal environment.* PA providers are hired, directed, and fired by individual PAS care recipients. Difficult interpersonal issues may challenge their ability to work comfortably in the home environment. Ten percent of providers reported that the recipient's family members were demanding, overly helpful, or unhelpful; while 16% reported that the recipient was demanding. Only 2%, however, reported racial or ethnic discrimination related to their work in home care. Note: Because of their potentially sensitive nature, items about the interpersonal environment and barriers to care were asked only of providers who were not related to the IHSS recipient. Family members who are caregivers may also experience interpersonal difficulties while providing care. Only 23% (n=199) had received formal training about how to deliver home care. Most of those who had received training had learned about lifting and transferring clients, as well as bathing, feeding and assisting them with the toilet. Of those who did receive training, 21% received training directly from their IHSS recipient, while other sources included the IHSS public authority, community colleges, and labor unions.

Conclusion**.** IHSS is a public program that provides for paid workers to assist elderly or disabled adults to remain in their homes and in the community. These personal assistance services provide an important alternative for long-term care and, as a consumer based model for long term care, demand is expected to grow as the population ages. Nonetheless, although the research literature in this area is growing, there is little evidence currently to guide policy development related to the protection of workers who provide care in the home, or to assist the recipients of care, who bear the responsibility for the hiring, firing, training and directing of their care providers. We conducted a telephone survey of PAS providers and recipients of home care in California, using multiple languages to reach a diverse sample throughout the state. Many of these low wage workers experience multiple vulnerabilities due to their minority status and gender, their generally low levels of education, and modest ability to speak English or, in a few cases, even the language of the person for whom they provide care. Furthermore, many are family members, who may find it challenging to discuss their work environment and obligations with the relative who hires them to provide care. Approximately 10-16% of the care providers who were not related to the care recipient, for example, noted that either the recipient or the recipient's family members posed a barrier to care because they were demanding or unhelpful, and 5% of these non-relatives reported verbal abuse. Additionally, few providers have received training to prepare them to give personal home care. In addition to the exertion of providing personal care (ADLs), the vast majority engage in physically demanding tasks such as house cleaning. A sizeable minority performs these tasks under time pressure and lacks equipment to lift or maneuver the recipient of care. Little is known, however, about the ergonomics of performing these types of strenuous tasks in the home or their health impacts. We found that approximately 8% of providers met our more conservative case definition for work-related MSDs, and 31% met our definition for prominent problems (either MSD or acute

injury) in the last 12 months. For some workers, these problems caused work time or job loss, and they potentially compromised needed care for the IHSS recipient. In conclusion, PAS work poses considerable risks to an already vulnerable population of low wage workers. The ergonomic risks of providing household care and personal care together are largely under-investigated. We have described numerous challenges in the home work environment. These workers often lack training or equipment related to their work, and they face a diversity of barriers to the completion of their work tasks, including challenging relationships with the recipient of care who has hired them. We have also shown that a sizeable proportion of PAS providers suffered moderate to severely painful injuries or musculoskeletal symptoms over the last 12 months. In future research using ergonomic, organizational and psychosocial work factors drawn from these survey data, we will report on multivariate analyses of PAS providers' health outcomes and work role functioning. We will also link these survey data with data from our survey of PAS recipients that document their adverse health events over the last 12 months. Using the linked data, we will investigate characteristics of providers and the home environment for their associations with adverse health outcomes for recipients.

Publications.

Journal Articles

Faucett J, Kang T, Eversley R, Newcomer R: [under review] The home care work environment for personal assistance workers. *American Journal of Public Health*

Eversley R, Faucett J, Kang T, Newcomer R: [under preparation] Emotional role impairment among California's multi-ethnic personal assistance workers. *Health Services Research*

Newcomer R, Kang T, Faucett J: [under preparation] Personal care service recipient injuries and preventable adverse events, and their relationship with provider training and capabilities. *Medicare & Medicaid Research Review*

Scherzer T, Gillen M, Faucett J, Kang T, Newcomer R: [under preparation]
A profile of California homecare workers: Do relatives and non-relatives differ regarding health issues, working conditions, and work-related injury? *The Gerontologist*

Proceedings

Faucett J, Kang T, Eversley R, Newcomer R: [2010]. The home care work environment for personal assistance workers. Proc of 2010 Human Factors and Ergonomics Society 54th Annual meeting, San Francisco, California, September 27-October 1.

Inclusion of gender and minority study subjects. The IHSS recipient data set included about 58,000 persons age 18-64 and 121,000 persons 65 and over who met the sample inclusion criteria. Only adult recipients age 18 and over were eligible for the survey. The sample of PAS workers is limited to persons providing assistance to adult recipients who meet all the inclusion criteria. Parent and spouse providers were not eligible. There are about 192,000 providers who

met these criteria (some recipients had more than one provider). Most of these were women (76.6%). The sample design proportionately selected sex and race/ethnicity.

Eligible Providers and Recipients were selected using a stratified systematic random sampling process producing an initial sample of 1300 individuals in each of the four recipient age by provider type subgroups. The resulting samples were proportionately weighted by race and gender, and the prevailing distribution of IHSS recipients across counties. Approximately 40% of the sample resided in Los Angeles County. Nine other counties (Alameda, Contra Costa, Fresno, Orange, Riverside, Sacramento, San Bernardino, San Diego, San Francisco). About 20% of the sample represented smaller and predominantly rural counties.

We obtained 940 completed provider records and 942 completed recipient records. However, we dropped ineligible cases, producing a total of 855 provider cases and 918 recipient cases for the analysis. The race/ethnicity status of these 1,773 cases is reported in the following table. Not all cells on the table could be filled in, as there was no race/ethnicity question in the recipient survey. This information instead was obtained from the IHSS administrative records file. To be consistent in reporting for recipients and providers we used the same data source for both samples. The administrative records do not include all the racial categories listed in the PHS 398/2590 Inclusion Enrollment Report Form.

Materials available for other investigators. The survey generally used previously published measures, and IHSS administrative data. The survey instrument is available for other investigators. The survey data set is not currently available for public use release.

Inclusion Enrollment Report

Study Title: Occupational Injury Among Personal Assistance Workers

Total Enrollment: 1773 **Protocol Number:** H945-28284

Grant Number: 5R01OH008759

PART A. TOTAL ENROLLMENT REPORT: Number of Subjects Enrolled to Date (Cumulative) by Ethnicity and Race

Ethnic Category	Females	Males	Sex/Gender Unknown or Not Reported	Total
Hispanic or Latino	444	97		541 **
Not Hispanic or Latino	773	241		1014
Unknown (individuals not reporting ethnicity)	164	54		218
Ethnic Category: Total of All Subjects*	1381	392		1773 *
Racial Categories				
American Indian/Alaska Native	7	1		8
Asian	134	30		164
Native Hawaiian or Other Pacific Islander	27	7		34
Black or African American	255	87		342
White	350	116		466
More Than One Race				
Unknown or Not Reported	444	97		541
Racial Categories: Total of All Subjects*	1381	392		1773 *

PART B. HISPANIC ENROLLMENT REPORT: Number of Hispanics or Latinos Enrolled to Date (Cumulative)

Racial Categories	Females	Males	Sex/Gender Unknown or Not Reported	Total
American Indian or Alaska Native				
Asian				
Native Hawaiian or Other Pacific Islander				
Black or African American				
White				
More Than One Race				
Unknown or Not Reported	444	97		541
Racial Categories: Total of Hispanics or Latinos**	444	97		541 **

* These totals must agree.

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