

Characterizing the Nature of Home Care Work and Occupational Hazards: A Developmental Intervention Study

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Background Home care (HC) aide is the fastest growing occupation, yet job hazards are under-studied. This study documents the context of HC aide work, characterizes occupational safety and health (OSH) hazards, and identifies preventive interventions using qualitative methods.

Methods We conducted 12 focus groups among aides and 26 in-depth interviews comprising 15 HC agency, union, and insurance company representatives as well as 11 HC recipients in Massachusetts. All focus groups and interviews were audio-recorded, transcribed, and coded with NVIVO software.

Results Major OSH concerns were musculoskeletal disorders from client care tasks and verbal abuse. Performing tasks beyond specified job duties may be an OSH risk factor. HC aides' safety and clients' safety are closely linked. Client handling devices, client evaluation, care plan development, and training are key interventions for both aides' and clients' safety.

Conclusions Promoting OSH in HC is essential for maintaining a viable workforce. *Am. J. Ind. Med.* 57:445–457, 2014. © 2013 Wiley Periodicals, Inc.

KEY WORDS: home care; home healthcare; home care aides; occupational safety and health; preventive interventions; worker safety; patient safety

INTRODUCTION

Home care aides form the critical workforce for care of elders and people with disabilities who live at home and need healthcare and/or assistance with activities of daily living (ADLs). The U.S. Bureau of Labor Statistics cites the two fastest growing occupations in the United States are personal

care aides (71% growth rate 2010–2020) and home health aides (69% growth) [Bureau of Labor Statistics, 2012]. Despite high demand, home care aides represent one of the nation's lowest-paid occupational groups, with median annual pay in 2010 of approximately \$20,000 [Bureau of Labor Statistics, 2012]. Aides are predominantly female and increasingly immigrant, minority, and older. Roughly half of the home care and personal assistance workforce are non-white and their average age is mid-40s [Seavey and Marquand, 2011].

Objectives

The objectives of this qualitative study were to (i) characterize the context of home care aides' work and occupational safety and health hazards, (ii) identify beneficial work practice and policy interventions for improving both home care clients' and aides' safety, and (iii) investigate two

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hypotheses based on results of our previous study of home care workers [Markkanen et al., 2007]: (a) home care clients' safety and aides' safety are closely linked, and (b) performing tasks beyond specified job duties can place aides at increased risk of occupational safety and health hazards. The findings informed the development of a subsequent cross-sectional survey questionnaire to quantify risks of occupational hazards and injury outcomes among home care aides. In this article, the broad terms "home care aide" or "aide" refer to a range of occupational titles including: home health aides, personal care homemakers, homemakers, companions, personal care aides, and personal care attendants (PCAs). Aides may be employed via the medical system or the social assistance services system.

Challenges in Evaluating Home Care Work Environments

Safety and health hazards in the home work environment are challenging to evaluate because homes are highly variable and the workforce is geographically dispersed and transient. The home workplace has particular characteristics that contribute to adverse safety and health outcomes: it is a less organized, less controlled, and more unpredictable care environment than a facility setting [Markkanen et al., 2007; Quinn et al., 2009].

Furthermore, a private home is often not recognized as a legitimate workplace—this bias exists across occupations [Markkanen, 2009; Elsbach and Cable, 2012; Bloom et al., 2013]. A recent study of white collar professionals found that employees who work remotely may receive lower performance evaluations, smaller raises, and fewer promotions than their office colleagues even if they work as hard [Elsbach and Cable, 2012]. It is notable that occupational hazards deemed unacceptable in a public setting convert to "something we just need to put up with" for a comparable job in the home-setting [Markkanen et al., 2007]. Occupational Safety and Health Administration (OSHA) rules are limited when applied to home care. For example, the 2001 revised Bloodborne Pathogens Standard applies to the home care agency but does not regulate working conditions in a home. As determined by the 1993 American Dental Association versus Martin court decision, OSHA's Bloodborne Pathogens Standard has a restricted application to home healthcare. If a worker is employed by an agency, the employer is responsible for non-site specific requirements of the Standard (e.g., exposure control plan, provision of personal protective equipment [PPE], engineering controls) but the employer is not responsible for site-specific violations in the home (e.g., housekeeping, maintaining a sanitary worksite, ensuring the use of engineering controls or PPE) [Occupational Safety and Health Administration, 2001; Perry et al., 2001].

As a step towards establishing the home as a legitimate worksite for healthcare and social assistance workers, studies

have begun to elucidate the nature of the home care work environment. These include studies of human factors in home care for care recipients [National Research Council, 2011], occupational safety and health hazards [National Institute for Occupational Safety and Health, 2010], safety and health manual for home care aides [Labor Occupational Health Program et al., 2011], and community-based participatory research and its role in policy development [Gong et al., 2009]. Recent studies characterized specific home care hazards including strenuous client handling and transfer tasks associated with back and other musculoskeletal injuries [Wipfli et al., 2012; Faucett et al., 2013], violence [McPhaul et al., 2010; Gross et al., 2013], exposures to bloodborne pathogens from sharp medical device injuries [Gershon et al., 2008; Leiss et al., 2009; Lipscomb et al., 2009; Quinn et al., 2009], pandemic influenza [Baron et al., 2009], and a range of psychosocial stressors including low wages and limited employee benefits [Butler et al., 2010; Delp et al., 2010; Bercovitz et al., 2011].

METHODS

This study is part of the Safe Home Care Project at University of Massachusetts Lowell (UML), funded by the National Institute for Occupational Safety and Health (NIOSH). It used qualitative methods of focus groups and in-depth interviews. In occupational safety and health research, qualitative methods provide valuable insights into what-, why-, and/or how-questions regarding the broad context of work, different job hazards, safety and health risk factors, and helpful injury and illness prevention practices. All focus group and interview protocols were approved by the UML Institutional Review Board. Additionally, home care clients' interview protocols were approved by the Elder Rights Review Committee of the Massachusetts Executive Office of Elder Affairs. Each participant provided signed informed consent. The qualitative methods build on methods developed for a previous study of sharps injuries in home healthcare [Markkanen et al., 2007].

The focus group study population consisted of workers employed by private agencies and those hired directly by home care clients (i.e., consumers) or their surrogates. Agency employees included home health aides, personal care homemakers, homemakers, and companions. PCAs were hired and supervised directly by eligible consumers receiving MassHealth (Massachusetts Medicaid administrator) insurance coverage for assistance with ADLs. PCAs are organized by a labor union and the Massachusetts PCA Quality Home Care Workforce Council (state board) acts as the employer of record in collective bargaining negotiations [Commonwealth of Massachusetts, 2008]. In our study, all aide categories assist elderly, people with disabilities, chronically ill, or cognitively impaired with ADLs including bathing, dressing, eating, toileting, exercising, reminding clients to

take medications, assisting with moving around the home, and light housekeeping [Massachusetts Council for Home Care Aide Services, 2008]. During March–July 2011 we conducted 12 focus groups in total with aides from seven agencies and a labor union representing PCAs. Our contact at each agency/union assisted in distributing an informational brochure and a postage-paid response card to aides and PCAs.

Twenty-six in-depth interviews—conducted during April 2011–April 2012—included stakeholders with essential knowledge of aides’ working conditions: (i) industry representatives: home care agency managers, supervisors and leaders (13 interviews from seven home care agencies, an industry trade association, and a labor union); (ii) representatives of a workers’ compensation insurance carrier (2 interviews); and (iii) home care clients (11 interviews). An elder service agency assisted in recruiting client interviewees; the criteria for participation were English-speaking and no diagnosis of dementia (to ensure informed consent). Client interview invitations included a descriptive brochure and reply form that volunteers returned in a postage-paid envelope. Other interview candidates were invited by email and phone to participate.

Focus group and interview participants received a \$40 cash stipend. Industry representatives were interviewed during business hours and therefore a \$40/interview stipend was offered to their organizations. All focus groups and interviews were conducted in English. After obtaining signed consent, audio-recorders were activated. Thematic analysis was used as the analysis method. Typed transcripts were coded in themes with NVIVO Qualitative Research Software (version 9.2) to obtain 3- to 4-level coding of themes. Most first level and a few second level codes were established a priori based on the questions asked in the script. Most second level codes as well as all third and fourth level codes were emergent.

The scripts were developed as a result of our previous study [Markkanen et al., 2007; Quinn et al., 2009] that focused on bloodborne pathogen exposures predominantly among home care nurses. This previous study generated the two earlier mentioned hypotheses that we now investigate for the home care aide population’s exposure to a broad range of occupational hazards.

RESULTS

Tables I–III summarize key study findings. A total of 99 people (93 women, 6 men) participated in the focus groups. Twenty-five percent were Hispanic or Latino and the two largest racial groups were White (67%) and Black (21%).¹

Work experience ranged from a few months to over 35 years. For 15 home care industry and insurance company interviewees, work experience ranged from a few years to over 30 years. Eleven client interviewees had received home care for various time periods ranging from 1.5 years to more than 10 years. Clients’ ages ranged from 61 to 96 years.

Although inter-agency variations exist, most aides performed both client personal care and housekeeping tasks. One agency had “heavy chore worker” for heavy duty tasks such as cleaning refrigerators, ovens, and stoves. Consumer-supervised PCAs did personal care, housekeeping, and anything else required by the consumer. Duties require physical strength, interpersonal skills, and observational aptitudes. Often, a personal automobile is required. Aides also described ensuring client safety, cheering clients up, providing psychological support or social worker-type help to the entire family, and reporting any changes in clients’ condition or living situation to their supervisor.

Safety and Health Among Home Care Aides

Tables I and II present the aides’ safety and health hazards most frequently cited in the focus groups and interviews.

Musculoskeletal disorders

Musculoskeletal disorders, such as back and shoulder injuries and musculoskeletal strain hazards, were cited most often. Insurance company representatives confirmed that back and shoulder injuries were the most frequently reported and costly incidents in workers’ compensation claims. Key risk factors include manual client handling and transfer tasks; these are even more dangerous when clients are overweight or when no assistive devices are available to mechanize manual moving and lifting.

Psychosocial rewards and challenges

Client or client’s family appreciation was the most often cited positive aspect. The “labor of love” is not a cliché—a deep relationship can develop between aide and client. All focus groups reported this as a major reason to stay in the job. Aides describe a deep sense of satisfaction when their work makes a difference in clients’ lives, such as enabling them to stay at home—often avoiding a long-term care facility altogether. Those with nursing home experience explained that home care allows more valuable one-on-one client care time than nursing facility care. Aides report that their clients may have closer connections with them than with their family members. Aides reported that their daily intimate personal care tasks such as showering, bathing, and toileting contribute

¹ Race and Hispanic/Latino ethnicity not mutually exclusive.

TABLE I. Musculoskeletal Disorders and Psychosocial Hazards as Identified by Home Care Aides in Focus Groups and Home Care Agency and Union Representatives in Interviews

Citation frequency: focus groups (n = 12)	Citation frequency: interviews (n = 13)	Musculoskeletal disorders and psychosocial hazards
***	***	Musculoskeletal disorders and hazards Back pain/injuries Shoulder injuries Client handling/transfer tasks Clients with limited mobility Bed-bound clients with no mobility Overweight clients Work space limitations (small home, clutter) Lack of assistive devices Housekeeping tasks
***	***	Violence and abuse Verbal abuse by client Rude, vulgar, or racist language Dementia clients Aggressive voice, mood swings Biting or scratching, grabbing aide's clothes Physically violent clients Hitting with a cane, slapping in the face Scratching, pulling hair out, shoving, biting Throwing items at aides Sexual harassment of aides by clients Unsafe neighborhoods Second-hand abuse Aides witness abuse in the client's family Aides accused/suspected about a crime
***	**	Clients with difficult personalities Demanding or frustrated clients Client's mental health issues Client refuses the care plan
**	***	Clients' family/living situation Aides in the middle of dysfunctional family dynamics Clients neglected by family members Criminal records of clients/family members Drug/alcohol abuse in client's family Guns in the home Aides asked to help other household members than the client
**	**	Aides' wage and benefits Low salary for all home care workers Healthcare insurance rarely provided for aides
**	**	Aides taken for granted Society's perception of aides as glorified housekeepers/babysitters Some clinicians ignore aides

(Continued)

TABLE I. (Continued.)

Citation frequency: focus groups (n = 12)	Citation frequency: interviews (n = 13)	Musculoskeletal disorders and psychosocial hazards
**	**	Aides become too attached to clients Compassion or guilt blur boundaries Helping clients beyond the job description
**	*	New clients The first home visit is often the hardest for an aide

*Low (in one session only).

**Medium (at least in two sessions, not more than 50% of sessions).

***High (more than 50% of focus group/interview sessions).

to swift bonding with the client. One focus group participant expressed:

And because of what we do, especially the intimate things that we have to do such as bathing, the bond forms so much quicker than it would if we just met the person.

Even more so if you're doing a hospice person. I mean there's almost like an instant connection.

Job flexibility and autonomy were reported as rewarding factors and reasons to choose a home care job. Aides could arrange their work hours to accommodate personal preferences or family responsibilities. Part-time work was an attractive alternative after retirement from another job. However, close bonding with the client and job autonomy draw aides to go beyond specified job duties and may consequently lead to undesired outcomes (see pp. 8–9 of this article).

Home care often begins when a client transitions from being independent to not able to function as independently in his/her own home as before. Change is not easy, especially for elders, and clients often experience home care as invading their privacy and home space. As a result, the very first home care visit is often the hardest for aides. An aide's visiting hours may be perceived as disruptive, clients may resist assistance with personal care or food preparation, or may complain about "not feeling well." Upset clients may snap or yell at aides—some apologize afterwards and some do not, nonetheless, aides must remain professional and not take outbursts personally. Perseverance is required as clients can have inherently difficult personalities or be in dysfunctional living situations. In every focus group, verbal abuse by clients was reported as an almost daily occurrence. Dementia or other mental illness emerged as a factor for verbal abuse, including inappropriate language or voice tone, and was sometimes accompanied by physical abuse such as biting, scratching, or hitting with objects.

All aides, agency supervisors, and labor union representative confirmed that low wages are a problem. Some aides felt that their work is not appreciated, as illustrated by the following quote:

I would have to say for the lack of appreciation and the low pay scale ... it is a labor of love that we do. And I would have to say probably every one of us around this table has saved more than one person's life. That if we weren't in the place that we're in with the people we're in and see what we see, the nurses may never have gotten to them in time to have saved their lives ... and yet we're still looked at as just health aides or glorified babysitters.

Furthermore, cost controls have resulted in shorter home visit times. Aides explained that an hour is allotted for many visits, which was often inadequate especially when caring for hospice patients. Some aides chose to stay and complete work on their own time, unpaid.

Other safety and health hazards

Other incidents that show up frequently in workers' compensation claims are slips, trips, and falls either inside or outside of the home as well as car accidents. A considerable part of the workday may be spent driving to and from clients homes. Although public transportation is sometimes adequate and a few agencies may reimburse taxi fares occasionally, owning a car is typically necessary for home care employment. Mileage is not always compensated. Costs for gas, vehicle maintenance, inspections, and annual insurance can be significant relative to the aide's low hourly wage and lack of benefits.

Home care aides can be exposed to bloodborne pathogens via exposure to blood or by getting stuck by a used sharp medical device, such as lancets or syringes used by diabetics. Aides supervised by nurses are instructed not to assist with medical procedures, but PCAs directly supervised by consumers may be asked to assist in tasks involving

TABLE II. Safety, Biological, Physical, and chemical Hazards in Home Care Described in Aide Focus Groups and Industry Stakeholder Interviews

Citation frequency: focus groups (n = 12)	Citation frequency: interviews (n = 13)	Safety, biological, physical, and chemical home care hazards
***	***	Driving and traveling Winter conditions Distracted driving (cell phone use) Specific accidents (fender-benders, rear-endings, going off the road, parking lot incidents)
**	**	Slip, trip, and fall hazards Slippery weather, ice, snow Scattered rugs, stairs, wires, clutter Trip over a stair chair lift, vacuum, animals
***	***	Bloodborne pathogen exposures Injuries with used needles and other medical sharps Sharps not properly disposed of by client Injuries with used diabetic syringes and lancets Body fluid exposures Fecal matter, clients with colostomy bag Wound care (bed sores) Oozing bleeding rash
***	***	Exposure to infectious diseases MRSA, VRSA, C-Diff, shingles, influenza/avian flu Hepatitis B and C, HIV, tuberculosis, scabies
***	**	Fire hazards Clients who smoke while on home oxygen therapy No smoke detectors/alarms Smoking in bed Dementia client forgetting s/he is cooking Clutter/hording in the home
***	***	In-door air quality issues Hot indoor air Elderly clients often feel cold Clients don't use ACs, fans, or open windows Smoking/chain-smoking clients Smell from cigarette smoke steeps into clothing Unpleasant odors (apart from smoking) Humidity problems Basement flooding gone unnoticed, mold Cleanliness/personal care issues Clients cannot clean the house Clients don't shower or need more personal care
***	***	Chemical-based products Cleaning products used Ammonia, bleach, oven cleaners
**	***	Pests Bed bugs, roaches, fleas
***	***	Pets Dogs (bite, attack, treat visitors as invaders) Cats (scratches)

** Medium (at least in two sessions, not more than 50% of sessions).

*** High (more than 50% of focus group/interview sessions).

TABLE III. Beneficial Safety Practices in Home Care as Expressed in Focus Groups and Interviews

Citation frequency: focus groups (n = 12)	Citation frequency: interviews (n = 13)	Beneficial home care safety practices
***	***	Safe client handling practices Use assistive devices for client handling Assess client handling tasks in initial evaluation Do not allow bathing/showering without safety equipment Teach safe client handling practices in in-service trainings Do not manually lift bed-bound clients Incorporate client handling in building design Two aides perform demanding client handling tasks
***	***	Orientation and in-service trainings In-service trainings useful reminder boosts about do's and don'ts In-home training with the client Intensive safety training at an orientation
**	***	Initial client evaluation Nurse evaluation/intervention before the aide's visit Case manager visits the client Develop a care plan that aide follows
***	**	Report a hazardous situation Document aide's complaint and follow-up Talk to supervisor or case manager Report changes in client's medical condition
**	***	Standard precautions Gloves, masks, shoe covers Vaccines, washing hands
***	**	Information about the client's health Agency shares information with aides about clients' health condition
**	***	Pet safety Screen new clients to alert before the first visit Match up aides with the pet situation Put/lock pets away when aides visit
**	***	Leave a dangerous situation Feeling free to leave an unsafe situation
**	**	Medical sharps device safety Teach clients about sharps safety and safe disposal Look around and scan for sharps Stay away from sharps
**	**	Improving indoor-air Clients avoid smoking/smoke outside when aides visit Open windows
**	**	Family involvement Client's family participates in improving safety
**	**	Refusing unauthorized tasks Reiterate boundaries of authorized job tasks

** Medium (at least in two sessions, not more than 50% of sessions).

*** High (more than 50% of focus group/interview sessions).

sharps, especially when the consumer is a family member. PCAs reported being required to give insulin and vitamin B12 injections. Aides can also sustain a sharps injury from improperly discarded sharps, such as during housekeeping tasks in homes with diabetics.

Most surprisingly, in 6 out of 12 focus groups, aides described clients who continued to smoke while receiving home oxygen therapy. In two cases, clients smoked when the oxygen unit was on. One home health aide stated:

I have a client that is on oxygen and she smokes while she has it on ... she doesn't want to stop, she has had social workers, nurses, everybody you can think of going in there to tell her to stop. I actually see sparks on her nose.

Hazards that may not be visible in workers' compensation records but were cited by aides and their supervisors are bed bugs, infectious diseases, indoor air quality concerns, clutter/hoarding, the use of harsh cleaning chemicals, and clients' pets.

Clients' perceptions of aides' safety

Client interviews revealed that they give little thought to their aide's safety. Two clients mentioned concern about their aides parking on the street. One client reported shoveling the snowy driveway for her husband's aide years back. Two clients described their aides' physical pain: one suffered back pain and the other leg pain. When we asked about their aides' safety and whether their aide had ever been hurt, these two examples illustrate typical responses:

Nope. If she's washed the floors, she'll say to me, don't come out. The floors are wet.

She never complains. Sometimes when she gets here, she's already cleaned a few houses, and I always say, you're tired. No, I like to be busy. She's just a cheerful, nice lady.

Home Care Clients' Safety and Aides' Safety Are Closely Linked

Numerous situations were reported in which the health and safety of the home care client and aide were inextricably linked. Earlier described home hazards and the client's health conditions (e.g., limited mobility, obesity, dementia, diabetes, infectious diseases, smoking habits) become aides' safety and health risks and can lead to musculoskeletal disorders, acute injuries, psychosocial stress, exposure to bloodborne pathogens and other infections, and respiratory problems. Conversely, the clients' safety and health can be compromised

when an aide slips while bathing a client or is unable to mobilize a client because of her own musculoskeletal injury or concern that the client is combative. Preventive interventions, in particular client handling assistive devices, improve both client and worker safety as illustrated by the following aide's quote:

I have a private client I take care of who has ALS, right now he's quadriplegic. When I first started with him, he was able to stand, and I would stand him in the shower, he would insist upon it ... I have to lift him up to standing position. And I kept saying, I need a shower chair. I can't do this. Well, the day came, I almost dropped him three times in that shower. And that's when he said, oh, maybe I need a shower chair. And he got one ... I put him in the shower chair, and give him a shower ... it's much easier.

Performing Tasks Beyond Specified Job Duties Can Increase Home Care Workers' Exposures to Occupational Hazards

Our data also suggest that close client bonds motivate home care workers to exceed their job requirements and this may eventually lead to increased physical injuries and psychosocial strain.

Home care agencies develop a client care plan that indicates aides' job tasks. Reports by home care aides, agency supervisors, and a trade association representative suggest that going above and beyond the job duties is common. As the relationship between client and aide becomes closer, the boundaries of authorized job duties blur. Aides in most of our focus groups explained that clients ask them "definitely," "frequently," or "all the time" to do additional tasks beyond legitimate duties. The more aides do, the more clients expect. Commonly requested additional tasks were doing laundry for someone other than the client, special cleaning, shopping for someone else, fixing gadgets, shopping off-hours, and pet care. One aide shared her experience:

Well, my patient, her daughter went into the hospital and had knee surgery. So the laundry doesn't get done. So I end up doing the laundry. I wash the floors so that her mother or her husband won't slip on the floors. I've done all that. It was not on the care plan. I did it because I wanted to do it for her, so she'll have clean clothes to put on.

Another focus group participant described the power of the client over the care plan:

Legally we ride a very, very fine line because these are, in some situations, legal care plans and we are

not allowed to deviate from these. If a shower is not dictated, we will not get them into a shower, whether the client wants it or not. And this is a tough line for all of us to ride because if you put it on a graph and you made a triangle with the patient and all the people involved in his care, us, doctors, nurses, family, what have you, where does that patient fall on the triangle? ... [The patient] is the captain of the team.

Agency supervisors confirmed that problems can arise when close worker–client bonds form. By involving aides more deeply in their lives, clients may convince aides—either directly or indirectly—to perform activities like dangerous lifting maneuvers, strenuous cleaning, or even visiting the client during off-hours and bringing necessities which aides paid for out-of-pocket. One agency supervisor shared: “... we’ve had aides that patients have got no food and they’ve brought them dinners on their time off. I mean, they’ve gotten them clothes.”

Strenuous client handling and cleaning increase the risk of injuries. The trade association representative summarized the challenge of extending beyond legitimate duties in two quotes as follows:

Yeah, maybe doing things that could hurt them, too, like cleaning windows. You know, going in the closets. Cleaning closets and taking heavy things off the top of shelves in closets ... It’s not a home health task. But windows ... going even outside on a step stool trying to clean the outside of the windows.

... even with back injuries, the worker probably shouldn’t pick [clients] up or whatever, [but] the worker does. [Clients] kind of pull the worker in. I think when a worker first enters a home, they might know these are the rules, I don’t do this, I don’t do that ... but then the client and the worker get emotionally attached, and the client starts to convince the worker to do things they probably shouldn’t do. And that’s when it starts to get downhill. ... I think that’s part of the hardest job for the agencies is to keep managing that worker and the boundaries issues.

We asked home care clients how well aides do their jobs. The majority implied that aides do more than expected. One client responded:

Oh, [Julie²], she does anything ... anything to keep me well ... She went out looking for a bra for me one

day. She said, give me the size. Because they have them, since I was in the rehab, and I can never get them on. So they were just all stretched out. And she said, I’ll get it for you. And she came back with the perfect one.

Consumer-supervised PCAs may never see a care plan or equivalent guidance about expected tasks. The consumer might assign any task she/he deems as ADL assistance. The labor union receives many questions about tasks from their PCA members. A union representative said:

The consumer, and/or the surrogate will define the PCA’s job duties. I mean, what will happen is that the consumer will get from the personal care management agency sort of their care plan, like what their PCA is supposed to be doing. But more often than not the consumer will not share that with the PCA ... there’s definitely nothing compelling the consumer to show that to the PCA ... I don’t think anybody even encourages consumers to show that to PCAs. So the consumer can say, this is what I expect you to do. PCA calls the union, says, my consumer wants me to shovel the drive, my consumer wants me to do some other work around the house. Is that really my job? ... really, probably not the PCA’s job. But again, there’s that power relationship where if the PCA says no, the consumer says bye bye.

Helpful Practices to Prevent Injuries and Illnesses

Table III presents beneficial safety practices in home care suggested by home care aides and industry representatives. In focus groups, aides offered problem-solving advice to each other, readily identifying helpful practices. Aides and supervisors reported that basic client handling devices improve ergonomics and safety for both aides’ work practices and clients’ daily lives. They cited grab bars, shower chairs, and hospital beds most frequently as helpful assistive tools for improving safety.

Low-tech devices were also cited by home care clients when asked what safety means to them and what makes them feel safe and secure. In addition to medical alert systems, fire alarms, and smoke detectors, clients also mentioned grab bars, shower chairs/benches, and anything that prevented them from falling. Two clients shared the following:

It means that I need plenty of grab bars ... I have three of them to get in the shower. And I have them by the toilet.

² Name has been changed.

Well, it means, I have a hard time getting in and out of the bathtub. You can look over there, I've got a handle that I can hold on to.

Clients were also asked what would help them live more independently in their home. They reported that high-tech devices (e.g., mechanicals lifts) would be helpful, but deemed them too expensive. Some clients would like to receive heavy duty cleaning help for washing windows, curtains, and refrigerators and hoped that agencies would not curtail aides' visiting hours.

Agency supervisors explained that before admitting a new client as a case, an initial client evaluation is carried out by a case manager or authorized agency clinician. Medicare certified agencies are required to conduct evaluations according to the Outcome Assessment and Information Set (OASIS) [Centers for Medicare & Medicaid Services, 2013] protocol, whenever care begins or resumes. A baseline evaluation has important implications for both client and worker safety because it provides the basis for developing a care plan. This is the point where assistive devices or changes in the home environment may be specified. An agency supervisor said:

Well I think that by visiting the client before sending any aides there, is really the best thing to do. You learn what the expectations are, what the environment is, we develop a care plan for the client and then the aide follows that plan. So, that's the best way to prevent any injuries. Knowing what your aides are going into.

One supervisor stated that it is vital to teach safety at new employee orientation. This agency's in-depth orientation training had a major role in curtailing sharp injuries. In addition to the orientation, Massachusetts licensed aides must complete 6–12 hr annual in-service training to maintain their licenses. In focus groups, aides reported that in-service trainings organized by their agencies serve as useful opportunities to learn about do's and don'ts, practices to prevent back injuries, personal safety, bloodborne pathogens, and to care for dementia clients. It is also important to target clients/consumers for safety training as the home care trade association representative expressed:

Public awareness ... an education campaign for the consumers like how to get your house ready for home care aides. Like I said moving the stuff you don't need. Or this is what they're going to do, here's what they're not going to do. And I think buy-in from the state to make sure that they will follow that through. I think a lot of times so many people just want to please the clients.

DISCUSSION

Occupational Hazards in the Broader Context of Aides' Work Organization

Our findings show that home care aide jobs have many positive dimensions, and, at the same time the aides are vulnerable to occupational safety and health hazards, for example, musculoskeletal strain, violence, slips, trips, and falls inside or outside the home, and other hazards (Tables I and II). An unexpected hazard also emerged: we were surprised how frequently aides worried about fire safety due to clients on home oxygen therapy who could not quit smoking. Recent newspaper and journal articles indeed confirm that burns and fires related to smoking and home oxygen use are a growing problem and a serious public safety threat [Wendling, 2008; Kayser et al., 2012; Orecchio-Egresitz, 2013].

The aides also reported that their work contribution often goes unrecognized by the greater society. The 2007 National Home Health Aide Survey (NHHAS) showed that while most aides (97%) felt their work was very important, fewer thought that their supervisors (77%), home care agencies (66%), and society (56%) valued their work [Bercovitz et al., 2011]. In addition, the NHHAS concluded that aides are a financially vulnerable workforce [Bercovitz et al., 2011]. The economic vulnerability of home care aides makes them particularly susceptible to occupational safety and health hazards. Many aides do not have health insurance or compensated sick-days or vacation. If an aide becomes injured or ill, there is no safety net, for example, to tide her/him over or to hire backup childcare for her/his family. The companionship clause of the Fair Labor Standards Act exempted many home care aides from minimum wage and overtime protection. In September 2013, the U.S. Department of Labor issued the Federal rule to extend minimum wage and overtime protection to home care aides—the rule will become effective in January 2015 [U.S. Department of Labor, 2013].

Survey data by Butler et al. (2010) showed that younger age and lack of health insurance were significant predictors for leaving a personal support worker job in Maine. Their qualitative data suggested the following reasons for job termination: job not worthwhile, personal reasons (e.g., medical reasons like back injuries), and burnout [Butler et al., 2010]. Our study supports these findings; agency supervisors were concerned about not being able to recruit the younger workforce, as this quote from an agency supervisor illustrates:

I think burnout is a big thing and I don't know quite what to do about that. You know, you have aides that work for a long, long time and sometimes they just get down, and they feel like they're not making any

[difference] ... how do we keep that from happening ... where are these younger people and where's home care going to go if we don't have people to take over ... that's all part of the burnout of, you know, what's going on. It is harder and harder to get employees into doing this.

Delp et al. (2010) presented a conceptual model on social, cultural, economic, and political factors influencing home care work. The rewards and stressors of the care relationship determining the job satisfaction are shaped by long-term care policies, for example, insufficient authorized home visit hours compromising care quality or stress from working unpaid overtime [Delp et al., 2010]. Our study confirmed that aides extend their client visits uncompensated if unable to complete tasks within the authorized time.

In *The Caring Self*, author Stacey (2011) emphasized non-material psychosocial factors that make aides feel their job is “good enough” compared to many other jobs in the service sector. Factors that fostered aides’ recruitment and retention included functional autonomy whereby aides gain dignity and job satisfaction through independent control over their work practices, relational autonomy that allows provision of care in aides’ own terms and developing sustained emotional connections to clients, and fictive kinship ties with clients and their families. She acknowledged a fine line between relational autonomy and exploitation, in particular “surplus care” that can lead to emotional and even financial burden: aides with close client bonds feel obligated to care beyond the job duties and can find themselves being asked to stay longer for a meal, perform more housekeeping, and even lend money or buy food if clients are poor [Stacey, 2011]. Our study found evidence to support the Stacey 2011 findings and also suggests that going above and beyond the job duties can also be a physical injury burden.

Possible Interventions to Help Both Workers and Clients

Qualitative research methods that involve various stakeholders as study participants provide deeper and wider characterization of the work nature, existing occupational hazards, and helpful practices against injuries and illnesses. Such studies are an important step towards developing successful preventive interventions that can benefit all involved stakeholders [Goldenhar et al., 2001].

Only recently has the healthcare industry started paying more attention to the direct link between patient safety and worker safety and acknowledged that one cannot exist without another [The Joint Commission, 2012; Riehle et al., 2013]. Our findings show that client safety and worker safety are inseparable in home care. Home hazards can become aides’ safety risks. The client’s personal health conditions and risk

factors like obesity, dementia, diabetes, smoking habits, and infectious diseases can compromise physical and emotional well-being of the aide. For the care of chronically ill, a variety of technologies may be present in the home like medical sharps, oxygen therapy units, and other. Even if aides do not conduct medical procedures the equipment still is in the home and becomes an inherent part of their work environment.

Initial client evaluation and development of a care plan that includes home care worker safety emerged as one of the most potent opportunities for improved safety. This stage can minimize the phenomenon of “entering the unknown” during the first client visit. The step could be strengthened by incorporating worker safety aspects into the client assessment—a household safety checklist such as that developed by Gershon et al. [2012] could be used. At the national level, the Centers for Medicare and Medicaid Services (CMS) could introduce essential worker safety checkpoints into the OASIS mechanism. Furthermore, the client’s family could receive a safety checklist as a voluntary tool for monitoring critical safety aspects (e.g., safety in bathrooms, toilets, kitchen, staircases, and key ambulatory areas; safe sharps disposal; pet, pest, and clutter management; and other). The care plan that aides receive could also include a safety checklist to encourage aides and clients to communicate critical safety issues in the home. This could also help aides to report living environment changes more systematically to their supervisors.

The most often cited helpful safety practice was the use of low-tech client handling devices in improving both client and worker safety. However, high-tech devices like mechanized lifts hold promise for allowing clients to live more independently. Many challenges of implementing sophisticated equipment in the home (costs, space, and structural considerations) could be overcome at the architectural design stage for new buildings. Home environment design for both client and worker safety is an opportunity to address hazards and eliminate them as early as possible. A promising national initiative for protecting workers is the NIOSH Prevention through Design (PtD) model [National Institute for Occupational Safety and Health, 2012], which focuses on “designing out” hazardous features in a worksite. Home care would benefit greatly from this approach by the systematic design of buildings with integral assistive features and tools that allow the elderly and people with disabilities to live comfortably and be cared for safely in their homes.

Protecting Aides in All Models of Care

Nationwide, Medicaid-funded consumer-directed care programs have been growing steadily as people with disabilities and their families gain more choice over services they wish to receive. Several states developed successful strategies to overcome program barriers—in particular financial ones—and have shared their experience with other

states [Doty et al., 2010]. As these programs expand further, improving safety and health of consumer-directed caregivers must go hand-in-hand. Like agency-employed aides, consumer-directed aides need equivalent resources like a care plan, orientation, annual safety training opportunities, PPE, and knowledge about workers' compensation injury reporting procedures.

There have been encouraging developments in the MassHealth-funded Massachusetts PCA program. The Union and the PCA Quality Home Care Workforce Council (the Council) have established a Labor Management Committee to discuss important topics including safety and health of both PCAs and consumers [Commonwealth of Massachusetts, 2012]. In the current collective bargaining agreement, the union and Council state that the health and safety of both consumers and PCAs is one of their highest priorities and that neither party's health or safety should be threatened. In 2013, funds were allocated to the Union Training Fund for the purpose of PCA training, including safety. In our study interview, a union representative emphasized both training and establishment of a human resource-type unit as ways to improve worker safety:

I think it's about training. If I were talking to MassHealth, I would say, one, you should be figuring out like more training programs, work with the union on creating a real training program for PCAs. PCAs should get an orientation so they know what to do if they're hurt on the job or if anything, you know, and anything else arises. I think there needs to be a human resources department so there's a place for PCAs to call. I think PCAs need to be given the materials that they need to do their job safely, like gloves and anything else that they might need in terms of protecting themselves from infectious diseases.

A policy formulation case study by Gong et al. [2009]—carried out within the California's consumer-directed care program in Alameda County—offers valuable insights. Safety and health barriers that the study identified included unclear guidance for job tasks and job requirements, inadequate training, lack of awareness by consumers, inadequate availability of resources and equipment, and limited advocacy for workers' rights [Gong et al., 2009]. The proposed practice changes called for adding safety and health information into the handbook for consumers and workers as well as establishing an information kiosk and a lending library for free-of-charge and low cost equipment, assistive devices, and other resources for workers. Furthermore, the study proposed providing model contracts that consumers and workers could use when first defining worker job tasks and consumer responsibilities and make these available at the information kiosk. The recommended public policy priorities included a creation of an ombudsperson to assist both

workers and consumers as well as paid training for both workers and consumers [Gong et al., 2009].

CONCLUSIONS

This qualitative study provides a broad picture of home care work organization and detailed examples of occupational safety and health hazards, possible preventive interventions, and rich descriptions of the job content in which hazards and prevention possibilities reside; from the perspectives of aides, supervisors, and clients. Improving occupational safety and health in all models of home care is important for protecting and promoting the viability of the workforce.

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