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RESEARCH ARTICLE

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Workers' compensation and the working poor

Occupational health experience among low wage workers in federally qualified health centers

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Background: The working poor are at highest risk of work-related injuries and have limited access to occupational health care.
Objectives: To explore community health centers (CHCs) as a venue for accessing at risk workers; and to examine the experience, knowledge, and perceptions of workers' compensation (WC) among the working poor.
Methods: Key informant interviews were conducted among patients in waiting rooms of rural and urban CHCs.
Result: Fifty-one interviews of minority workers across sectors identified 23 prior work-related injuries and mixed experiences with the WC system. Barriers to reporting and ways to overcome these barriers were elucidated.
Conclusions: Patients in CHCs work in jobs that put them at risk for work-related injuries. CHCs are a good site for accessing at-risk workers. Improving occupational healthcare and appropriate billing of WC insurance should be explored, as should best practices for employers to communicate WC laws to low wage workers.

KEYWORDS
community health center, occupational health, workers' compensation, working poor

1 | INTRODUCTION

Low-wage, immigrant, and minority workers and those with unstable, contracted, and cash employment bear an inequitable burden of occupational injuries and fatalities compared to their higher wage, native born, non-minority, and directly hired counterparts.[1–7] Furthermore, there is evidence that this segment of the workforce also has worse health outcomes and receives less compensation after a workplace injury.[8,9]

Some 39 million US workers, close to one in three, had low incomes in 2009–2010 and 2.5–5.7 million workers in 2005 were contingent or alternative employees.[10–12] Today, 10.6 million Americans are counted among the "working poor," including 4.2% of all full-time workers.[13] The working poor are disproportionately very young or old, female, African-American, Hispanic, and foreign born and have fewer years of education than higher income workers; they tend to work in low wage service, manufacturing, warehousing, and agricultural operations.[13] Over 14.1% of total service sector employees and 8.6% of those employed in natural resources, construction, and maintenance had incomes below the federal poverty line. Contracted or "temp" workers earn 8-50% lower wages than directly employed workers in similar jobs.[12] Unstable, contracted employment is expected to grow rapidly in the next decade.[11]

Low wage workers are difficult to access in their workplaces: they often work for small businesses, during night shifts, part time, in multiple jobs, as independent contractors, and as temporary labor.[14] These employees are unlikely to have adequate health and safety

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training.[15] Furthermore, the Occupational Safety and Health Administration (OSHA) and state agencies do not regularly determine these employment conditions during their enforcement activities, leaving some of the most at-risk occupational groups lacking in safety protections enjoyed by most US workers.

The working poor and their families rely on federally and locally funded, Community Health Centers (CHCs) for their health care.[16] CHCs are "non-profit private or public entities that serve designated medically underserved populations/areas or special medically underserved populations comprised of migrant and seasonal farmworkers, the homeless, or residents of public housing."[17] Healthcare in these settings is provided at reduced rates, often on a sliding scale, and subsidized by government and private programs. Across the US, over 93% of patients in CHCs are children and working-age adults.[16] In California and Massachusetts 5-10% of cases in CHCs are work-related illnesses or injuries.[18]

Workers' compensation insurance (WC) provides medical benefits and wage replacement to workers who are injured in the course of employment.[19] Medical benefits include health care, rehabilitation, long-term disability, and job re-training. Legislated on a state-by-state basis, employers are required to purchase WC for most employees (with rare exceptions). CHCs face significant obstacles to the use of WC, leading to inappropriate use of Medicaid, Medicare, or non-reimbursable clinical costs.[18,20]

Under-recognition of occupational illnesses and injuries on the part of health care providers is one of the major factors leading to under-use of WC; lack of reporting on the part of workers also contributes to this problem.[21] Those who are unauthorized to work (ie, undocumented workers) make up a significant proportion of the working poor[13] and are legally ineligible for healthcare coverage through the ACA marketplace,[22] though they are eligible for WC under statute in Illinois and other states.[23] It is estimated that 25-55% of costs for occupational injuries/illnesses are transferred away from WC; for specific conditions or populations, cost shifting to CHCs, federal programs, or the patients, themselves, may rise above 75%.[19,24]

The combination of the growth of the low wage workforce, their high risk of injury, their use of CHCs for clinical services, and the burden of cost-shifting of work related injuries highlight the importance of detecting work-related illnesses and injuries and familiarity with WC on the part of administrators, providers, and patients in CHCs. The goal of this investigation was to examine the experience, knowledge, and perceptions of WC among adults seeking care in CHCs, as well as factors limiting reporting of occupational illnesses and injuries among low wage workers.

2 | MATERIALS AND METHODS

This key informant study solicited the participation of adult patients, ages 18-67, sitting in the waiting rooms of two CHCs. One CHC is a rural, federally qualified health center (FQHC) that serves any person employed in farm work and their families, as well as the community at large; patients are mainly Hispanic. The other, located in an urban neighborhood, is designated as a FQHC and serves mainly African-American, and Hispanic populations. Potential key informants were identified by clinic staff and asked if they would be willing to participate in an interview study about occupational health. If they were interested, they were handed a flyer about the study, and then screened by an investigator to determine whether they were currently working or had worked in the prior 2 years. Working adults who spoke either English or Spanish and agreed to participate were consented, according to the IRB approved protocol (UIC #2015-0297). Participants were compensated with a $10 gift card and a fact sheet on WC rights in Spanish or English.

A survey instrument was adapted from a similar investigation conducted in Massachusetts;[25] it was changed to include items of interest, translated to Spanish by the lead author on this publication who is completely bilingual, piloted among many different individuals in a "think aloud" format in both English and Spanish, and finalized for use in this research.[26] "Think-aloud" entails a discussion with pilot testers about each question to clarify meaning and improve reliability. The 41-item survey tool queries demographics, job title, job description, industry of employment, description of industry's activities, employment circumstances, experience with work-related injury, experience and knowledge regarding WC, and perceptions of the facilitators and barriers to reporting work-related injuries. (see Supplement) There is some redundancy of questions and five open ended questions designed to glean more detailed information and to check internal validity. Data were entered into RedCap, a confidential survey tool (https://www.project-redcap.org/), partially during the interview and, when the flow of the responses would be interrupted by typing and pausing, the remainder immediately following each interview. The interviewer also typed notes about each encounter to capture additional information about salient issues expressed in the interviews but not already captured in the survey.

Data were downloaded to a MS Excel spreadsheet. Demographics and employment data were analyzed descriptively and the remainder analyzed to identify codes, themes, interrelationships of constructs, and gaps. Industry and occupation titles given by each respondent were recorded, but then re-coded into the Standard Occupational Classification 2010 titles, based on their descriptions of the activities of their job and the overall activity of their employer. Narrative data for each of four open-ended questions were coded by two investigators individually, who then came together to compare codes and to develop a shared understanding of the meaning and categories of responses. Responses to the final question, "is there anything else you would like to tell me?" were either added and analyzed with the earlier four open-ended responses (if they fit in those categories), or they were reported separately.

3 | RESULTS

3.1 | Demographics and employment and benefits

Fifty-one individuals meeting enrollment criteria were interviewed, 25 at one clinic and 26 at the other. Demographics, language preference,

and employment descriptors are listed in Table 1. The vast majority reported being paid by paycheck or electronic bank transfer.

Four items queried a job title, a job description, an economic sector label, and a description of what the employer does or produces. Economic sectors and job titles of the interviewees are shown in Table 2. In 13 interviewees (25.5%), the job title did not accurately correspond with the description of their work. This mislabeling occurred across six different sectors; and employment by a temporary staffing company was never offered as a sector; rather, the employment sector where the person was currently hosted was named.

Twenty-four (47.1%) respondents reported either having had a work-related injury (n = 20;39.2%) or knowing someone who did (n = 4;7.8%). The injuries were described in terms of body sites of injury (mainly upper extremity; also back, hip, eye); mechanisms of injury (exertion/lifting; slips, trips, falls; caught between or struck by machinery or hand tools and one criminal assault; environmental cause); and nature (burn, sprain/strain, laceration, contusion, fracture, hernia). They received care in outpatient clinics, emergency rooms, and hospitals; four injuries (kicked by a horse, arm laceration, foot laceration with knife, fall on railroad tracks with significant bruising) did not receive medical care. In terms of payment, 13 (65%) said the employer paid for medical care for the injury, only four of them naming "workers' compensation" as the actual source of payment. One case was paid for by the injured worker and one by the worker's general health insurance; the remainder did not know who paid. (Note that some were referring to an injury of a family member, rather than themselves).

The responses to open-ended questions that were coded and summarized follow, here:

Q. Tell me about reporting a work-related injury to your employer or filing a workers' compensation claim

In the majority of cases, injuries were reported to employers or supervisors and the medical care was covered by the company (14/24; 58.3% of those injured). For the remainder, four did not know how reporting was done, four did not report, one used personal health insurance, and one paid out of pocket. Reporting was generally described as easy to do, and the participants generally knew that coverage is required from the company, though a few did not. However, 16/51 (31.4%) were unfamiliar with the term "workers' compensation" as the name for the insurance program providing this coverage. Various reporting scenarios and outcomes were described. In many cases, the worker was discouraged from making a formal report, or the supervisor did not complete the required paper work. In one case, an ambulance was not called for a severe injury; in another there was no triage protocol in place; and another respondent described being held personally responsible for the cost of a hospitalization. Several workers were sent home after a work-related injury and told not to return until they had no pain. Sometimes there was no medical care for the injury, and no lost time payment. One respondent described a physician taking care of the injury and completing appropriate paperwork for the employer. However, several workers felt they were returned to work too early and worked while on pain medication, one describing adverse effects of medications (ie, dizziness) while working. The absence or discouragement of light duty was noted several times, and a couple said the lost time

TABLE 1 Demographics and employment conditions of community health center respondents to a survey on occupational injury and workers' compensation insurance

Gender	
Male	21 (41.2%)
Female	30 (58.8%)
Average age	38.4 ± 11.3
Birthplace[b]	
Mexico	37 (72.5%)
US	12 (23.5%)
France	1 (2.0%)
Missing data	1 (2.0)
Race/Ethnicity[b]	
Latino/Mexican	41 (80.3%)
African-American or Black	9 (17.6%)
Other	1 (2.0%)
Education[b]	
Less than high school	27 (52.9%)
High school	5 (9.8%)
Trade school	2 (3.9%)
Some college	8 (15.7%)
Master degree	1 (2.0%)
Missing	1 (2.0%)
Preferred language for interview	
Spanish	36 (70.6%)
English	15 (29.4%)
Years worked in current job	
<2 years	21 (41.1%)
2–5 years	18 (35.3%)
6–32 years	12 (23.5%)
Full-time work in prior 2 yrs	40 (78.4%)
Health insurance coverage through employer	23 (45.1%)
Currently employed for wages[a]	35 (68.6)
Miscellaneous working conditions	
Employment through temporary staffing	5 (9.8%)
Seasonal work	5 (9.8%)
Employed in >1 part time job concurrently	3 (5.9%)
Day shift	28 (54.9%)
Afternoon shift	4 (7.8%)
Night shift	5 (9.8%)
Rotating shifts	2 (3.9%)

[a]Remainder not working at time of interview.
[b]Percentages add to >100% due to rounding.

TABLE 2 Economic sectors and job titles of working poor interviewees in the waiting rooms of community health centers*

Economic Sector	Number
Manufacturing	14 (27.4%)
Agriculture, forestry, fishing, hunting	8 (15.7%)
Arts, entertainment, recreation, and accommodation and food services	5 (9.8%)
Retail	5 (9.8%)
Other services	4 (7.8%)
Construction	3 (5.9%)
Finance and insurance	2 (3.9%)
Real estate and Rental and leasing	2(3.9%)
Educational services and healthcare and social assistance	2 (3.9%)
Transportation and warehousing	2 (3.9%)
Profession, scientific and administration services, and wastewater management	2 (3.9%)
Wholesale trade	1 (2.0%)

Job titles: machine operator; warehouse worker; day care teacher; forklift operator; field crop worker; cashier; tree nursery worker; housekeeping; bagger; cook; receptionist; cashier; project manager; packaging line; checking parts; cleaning horses; security guard; administrator; dishwasher; bus girl; label maker; detailing worker; shipping and receiving in a warehouse; golf course maintenance; event staffing; milking cows (n = 2); security officer; baby sitter; hardwood floor maintenance; banding manufactured parts; driver; product representative; general helper; lunch room server; line runner; insurance underwriter; engineer; manager.

payment was delayed and was lower than expected. Workers frequently required advocacy from an attorney, a co-worker, or a family member. A few noted the complexity of the WC system and that the system is difficult to navigate on their own.

Q. What are the barriers to reporting a workplace injury to your employer? (Restated: if you got injured, what are the reasons you would report or might not report?)

Worry about job loss with attendant loss of income was by far the most frequently described barrier to reporting (n = 24). Other barriers included intimidation and retaliation by the employer (n = 39), leading to workers being treated differently (n = 15), calling unwanted attention to themselves (n = 2), or being blamed for drug use (n = 2) or carelessness in their duties (n = 2); eight said being uninformed was a barrier. Concern about legal status and deportation was frequently noted (n = 7). A lack of trust that workers would have appropriate paperwork completed by supervisors, get appropriate medical care, and have their health problem appropriately addressed vis-à-vis return-to-work came up in several interviews. A few respondents described peer pressure not to report an injury, especially if incentive programs were in place to collectively reward a work crew for having a low number of injuries. Several respondents talked about the importance of doing hard work, even work that causes pain, without complaining; they implied that reporting an injury or hazardous work would demonstrate a weak character.

Q. How could the barriers to claiming workers' compensation—the ones you listed above—be overcome?

Interviewees had many ideas for overcoming the barriers to reporting work-related injuries and accessing (WC) insurance. These included: increasing their own knowledge about workplace health and safety; increasing their knowledge about legal rights related to health and safety, as well as their labor rights; seeking advocacy from co-workers, family members, and attorneys; and addressing health and safety with their supervisors when it is appropriate. They suggested getting better information and training on these issues and pointed out that their employers should be required to provide this. They also described the importance of networking with co-workers and seeking out reliable, external sources of information.

Q. Is there anything else you would like to tell me?

Several individuals had additional comments when they were asked if there was anything else they would like to say; where these comments related to the questions listed above, their answers were incorporated into the analysis of those questions. However, this survey brought up other labor issues for these workers, and are shown in Figure 1.

4 | DISCUSSION

4.1 | Occupational injuries among low wage workers

This sample was drawn from FQHCs that cater to low income patients. The interviewees in this study are employed in a wide array of sectors including, manufacturing, agriculture, retail trades, service, and others. These are common employment sectors of Hispanic, African-American, and other low wage workers in the US[13] and suggest that the sample was generally representative of the low wage workforce. The majority of respondents receive a paycheck or electronic earnings transfer, indicative of "legal" employment; only two reported "cash" as the mode of payment, and several stated that they are currently unable to work—many because of their legal status (lack of work authorization).

The array of injuries among the workers in this study is typical of manual labor jobs and corresponds with the job titles given by the

42 yo African American man employed in food manufacturing through a temporary staffing agency:
"[I] always wonder who is my supervisor or manager. I am just told what to do by other people. There's no one that supervises me or that I report to. I know there is a safety office. But I wouldn't go there to get medical care. I would just go to the [pharmacy]…"

57 yo Latino dishwasher:
"I see a lack of respect at jobs. There is discrimination among Hispanics and Whites. They have no need to humiliate and abuse us."

46 yo Latina, not currently employed for wages:
"I worked in a factory through a temp agency for five years... Many injustices happened there. OSHA would come and they would fix things for just a while. They would show us videos two or three times in a short time. You would fill out a paper and you would answer questions and you would sign it. They would force you to say yes that you understood the material, that you knew how to use the machines, that you knew the dangers, even if you didn't understand. I injured my back by carrying 45 lbs of candy. They made me wait 4 to 5 hours to take me to their clinic because I was working the night shift. The main office told me that I had to say that I injured myself because I picked up something in the wrong position and I had to say that to the clinic people…"

29 yo Latino man, describing a prior meatpacking job:
"I was let go from my job by the owner without any reason. I dropped a pork cheek and the owner said he didn't want me working there. I left because I didn't want to be humiliated or beg for work."

33 yo Latina who worked in a tree nursery:
"They don't clean the portable toilets. They come to clean them every Thursday and sometimes the company wouldn't come to clean it. It gets dirty fast and we would tell the supervisor and he wouldn't call them. The supervisor wouldn't give us water. He said that it was up to the worker to bring water to the field. There is water available and he would see us get water, so he would stop bringing water and would not let us get water."

61 year old male Latino worker with some college coursework, whose temporary services job entailed banding aluminum furniture and bookcases:
"I believe supervisors should take into account the needs of human beings, especially outside of work. With the family, like if your wife is giving birth or you need to take care of your parents, they are very strict, inhumane. They only care for their own needs and not the worker's needs. They see you like a slave and they take days off. They don't let you take lunch and you have a right to have lunch, to take a break."

27 year old security officer spoke about an injury her boyfriend experienced in his employment through a temporary staffing company:
"He fell from a ladder and got hurt. He told his boss and a coworker and they took him to the hospital. He was called to return to work right away. He still gets medical bills from the medical care he received." (She requested a referral to a legal clinic).

FIGURE 1 Responses to survey question,"Is there anything else you would like to stay?" among working poor interviewees in community health centers

respondents.[27] These included, mainly, injuries of the upper extremity, diagnoses including strains and sprains from heavy repetitive work, as well as contusions and lacerations from handling tools, working with machinery, and experiencing falls.

In Illinois, a First Report of Injury must be filed by the employer when a worker reports an injury requiring more than first aid and lost work time of 3 or more days. [23] (The reporting threshold differs across states, ranging from 3 to 7 days).[20] Additionally, the worker may file a claim to dispute medical care payments and/or wage replacement. Our prior work with data from a large, transnational insurer shows that disputed claims in Illinois are rarely filed for injuries that do not entail lost time (unpublished).

Low-wage workers in this study seem to understand that their employer is responsible to cover health care for work-related injuries. Interestingly, though, many could not identify WC as the administrative system through which occupational injuries are managed. Nor was

there clarity about the range of coverage-wage replacement for time lost from work, rehabilitation of high impairment injuries, or how light duty fits (or does not fit) into the system. Inability to name "workers' compensation" or list the items it covers demonstrates limited "occupational health literacy" among low wage workers and failure of employers to adequately inform them about their rights and protections which are mandated by federal and state law. Their lack of knowledge may interfere with their health outcomes and with their employment rights.

The major and most common barrier to reporting an occupational injury among low wage workers in this and many other studies is fear of job loss and economic ruin.[28–30] This segment of the workforce often works part-time, in multiple and temporary jobs, and lives "from paycheck to paycheck." Any interruption in earnings can have serious negative consequences for them and their families.

There seems to be a poor safety culture in workplaces employing these workers; this is manifested by described intimidation from employers and co-workers. Also, the repeated description of the risk of injury that results from hard and hazardous work being a sign of strength, or simply a part of the job that workers must accept, elucidates serious flaws in the safety culture experienced by these workers. Finally, there is a concern about becoming socially isolated if a worker reports an injury. The lack of individual empowerment, as reflected by accepting the requirement to work with pain, not speaking up about hazardous working conditions, and keeping to oneself, are consequences of these barriers that may play a role in sustaining an injury and having worse outcomes, post-injury.[29,30]

Interviewees had many ideas for overcoming the barriers to reporting work-related injuries and accessing WC insurance. These included: increasing their own knowledge about workplace health and safety; increasing their knowledge about legal rights related to health and safety and employment; seeking advocacy from co-workers, family members, and attorneys; and addressing health and safety with their supervisors when it is appropriate. They suggested getting better information and training on these issues and pointed out that their employers should be required to provide this. They also described networking with co-workers [28]and seeking out reliable, external sources of information.

Importantly, the barriers and fixes identified by low wage workers in this study not only support findings from other studies that have explored the same issues, but also lend validity to the findings in this investigation. Notably, all of the experiences and comments of interviewees in this investigation have been described elsewhere.[18,25,31–34]

Increasing the knowledge and self-efficacy of low wage workers, as pointed out by the interviewees in this study, would go a long way to improving their health and safety conditions and lowering their risk of workplace injury and illness. The role of "machismo/stoicism" and poor health and safety practices could be addressed through activities to increase knowledge among workers about mechanisms of injury, ways to prevent injuries, and legal occupational safety and health requirements that are the responsibility of employers. Self-efficacy—how to approach supervisors or co-workers when asked to do something unsafe—can also be coached and can lead to more active participation of workers in protecting their own health.[35] As noted above, workplace health and safety is primarily the responsibility of employers, even small businesses, temporary staffing companies, and those that employ workers on a part-time and contractual basis. As an adjunct, integrating training to enhance injury prevention with information on WC and employment rights should reduce workplace injuries, which is in the best interest of these workers, their employers, and the healthcare system. For contractual or "temp" workers who stay with a single employer for an extended period, another approach could entail implementation of health and safety committees with representation from both directly hired workers and "temp" workers.(OSHA 1930.36) However, it is important to note that the employer retains most of the power and discretion in these relationships and worker efforts to improve safety may have limited effectiveness. As long as the employer can demote, punish, or fire employees at their discretion, most employees, particularly those in precarious employment arrangements (eg, temp, part-time, contractual) have little control and few options beyond quitting their jobs. Therefore it is important that a change in culture occur among these employers through education focused on employer responsibilities. An exploration of alternative ways to get information and to provide advocacy to the workers should also be undertaken.

Importantly, it should be noted that there are structural determinants that drive workplace injuries and determine health outcomes among low-wage workers. The interplay of immigration, race, and the manner in which individuals are directed to employment that puts them at risk are beyond the scope of this investigation; there is much policy and public health literature that inform these factors.[36,37]

4.2 | Occupational health in community health centers

The ability to collect this data with relatively few visits by one investigator to two CHCs demonstrates the high proportion of at-risk workers in clinics that serve the working poor. It highlights the importance of occupational health competency among providers in CHCs.

Clinic administrators must have systems and staff in place to obtain reimbursement from WC insurance, rather than absorbing the costs of occupational injuries and illnesses or passing them onto the patients, themselves. Cost-shifting of WC to federal health insurance programs, private health insurance, already challenged CHCs, or the patients, themselves, is unsustainable, if not unethical. Notably, the National Institute for Occupational Safety and Health is piloting a system for computerized coding of Industry and Occupation in the electronic health record.[38] This will assist CHC administrators in incorporating Occupational Health into their armamentarium for appropriate reimbursement.

This study also highlights the need for clinicians to have some degree of competency in occupational health care: clinicians must have the ability to recognize occupational injuries and illnesses, to offer

appropriate treatment, to manage return to work after an injury, and to complete medical records that meet the documentation standards of WC case managers, insurance companies, and state arbitration systems. Also, many of these workers have acute or chronic diseases that need to be managed in consideration of both the home and the work environments. Occupational Medicine literacy and competency is critical for primary care providers to optimize care of patients in CHCs.

A holistic approach to the care of working patients could be incorporated into the "patient centered medical home," which is a health care delivery model that entails a team approach to providing comprehensive medical care to patients with the goal of attaining optimal health outcomes.[39]More broadly it aligns with the Institute of Medicine's view of patient centered care that is "... respectful of, and responsive to, individual patient preferences, needs and values, and ensuring that patient values guide all clinical decisions."[40] Again, systems and competencies among healthcare administrators and providers are critical, since a high proportion of their patients are low-wage, minority, and precariously employed workers. Already mindful of clinic settings serving as venues for enhancing preventive messaging and management of chronic diseases, it is important to incorporate WC and occupational health in these settings.

Finally, low wage workers, many of whom work part time, night shifts, in small businesses, and as temporary employers or contractors, are difficult to reach in their workplaces. These are the workers most at risk for work-related injuries; work related injuries not only impact their immediate health, but also their long-term employability and their economic viability. This investigation suggests that the CHC waiting room could serve as a site for accessing these workers for education about workers compensation, prevention of work-related injuries, and management of chronic diseases in the workplace.

4.3 | Limitations

Though we designed this as a key informant interview study, the small sample size may not be representative of the low wage workforce, overall, or even the immigrant and minority workforce. Sampling from two clinics also may not reflect the knowledge, experience, or perceptions of low wage workers, in general, and two clinics certainly do not represent all CHCs in terms of the number or circumstances of the working poor in our own region, not to mention the US as a whole. However, the respondents work in the array of occupations and working conditions that are commonly low wage jobs with a high risk for occupational injury. Furthermore, the interviewees in this study describe experiences with occupational injury and WC that are expected, based on their employment conditions and the economic sectors where they work. Finally, the information gleaned in this study is in line with the existing literature.

5 | CONCLUSIONS

This study supports previous literature that describes employment arrangements, hazardous sectors, occupational injuries, and the knowledge, experience, and perceptions of low wage workers related to WC insurance. It also points to the potential of CHCs as a place to gather data and educate low-wage workers on occupational safety and health issues, including WC.

Based on the results and insights gained in this investigation, the following activities should be undertaken to move forward to address occupational health challenges among the working poor in CHCs:

A systematic investigation of CHC clinic networks should be undertaken to determine the proportion of occupational injuries that are seen there, the potential for capturing information on the occupations and consequent health risks of adult patients, the experience of providers and administrators (billing) with WC and the possibility of incorporating occupational health into practices of administrators and health care providers. This could take the form of: key informant interviews—specifically, their understanding of these issues, their perceptions of barriers to addressing occupational health and their ideas about ways to overcome these barriers; review of the electronic health record data elements; a determination of how much occupational injury/illness is seen by providers; sampling of actual patient records based on specified criteria; a review of the competencies of providers through examining credentials and interviewing them; and a review of the continuing medical education offerings and administrator development activities.

Second, workers reported their job titles inaccurately 23% of the time, suggesting that wider validity testing for industry and occupation responses is needed. Additionally, the precariousness of employment and job changes across different job sectors requires more frequent ascertainment of industry and occupation than might be obtained only on intake. This has great import for accurate classification of workers for a variety of purposes including a more accurate appraisal of occupational health risks and actions to intervene.

Potential outcomes of further investigation could entail: (1) establishing provider and administrator development activities to improve competency in occupational health; (2) enhancing the existing electronic health record to capture and highlight occupational health issues; and (3) embarking on a needs assessment to determine whether occupational injuries and return to work with chronic health conditions would be best managed in the CHC, through a referral network to occupational health physicians, or in some kind of a partnership; and (4) establishing best practice guidelines for assisting employers to inform workers about WC.

AUTHORS' CONTRIBUTION

LT worked on survey design, contact with research sites, IRB application, interviews, data entry, and writing of the manuscript. LF guided the research, worked on the data analysis and assisted in writing the manuscript. JZ guided the collection and analysis of narrative data and contributed to the manuscript writing. LF guided the study design, data management, and contributed to writing the manuscript.

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ETHICS APPROVAL AND INFORMED CONSENT

University of Illinois at Chicago (UIC) IRB approved protocol #2015-0297. Informed consent was obtained from each participant.

DISCLOSURE (AUTHORS)

There is no COI to disclose on the part of any author.

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SUPPORTING INFORMATION

Additional Supporting Information may be found online in the supporting information tab for this article.

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