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Occupational health within the bounds of primary care: Factors shaping the health of Latina/o immigrant workers in federally qualified health centers

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Abstract

Background: Many workers seek care for work-related medical conditions in primary care settings. Additionally, occupational medicine training is not consistently addressed in primary care professional training. These patterns raise concerns about the health outcomes of low-wage Latina/o immigrant workers who make use of primary care settings to obtain care for work-related injuries and illnesses. The objective of this qualitative study was to investigate how primary care clinicians assessed and addressed the role of occupational exposures on the health and well-being of Latina/o immigrant workers.

Methods: We conducted semistructured in-depth interviews with 17 primary care clinicians (physicians, resident physicians, and nurse practitioners) employed in an urban federally qualified health center (FQHC) with two sites located in Orange County, CA.

Results: Using a constructivist grounded theory approach, we determined that primary care clinicians had a general understanding that employment influenced the health and well-being of their Latina/o immigrant patients. Clinicians delivered care to Latina/o immigrant workers who feared reporting their injury to their employer and to Latina/o immigrants whose workers' compensation claim was terminated before making a full recovery. Clinicians were responsive to patients' work-related concerns and leveraged the resources available within the FQHC. Although some clinicians offered suggestions to improve occupational health in the FQHC, a few clinicians raised concerns about the feasibility of additional health screenings and clinic-based interventions, and pointed to the importance of interventions outside of the healthcare system.

Conclusion: This study underscores the complexities of addressing occupational health concerns in urban FQHCs.

KEYWORDS

Latina/o immigrants, low-wage workers, occupational medicine, primary care, workers' compensation

1 | INTRODUCTION

Latina/o immigrant workers are among the most vulnerable worker populations in the United States due in part to the exploitation of structural factors linked with some immigrant workers' more vulnerable legal statuses.[1–3] This sector of the workforce experiences disproportionately higher rates of occupational injuries and fatalities,[1] such that Latina/o immigrant workers are more likely to die doing the same job as their non-Latina/o white counterparts.[4] Latina/o immigrant workers are routinely employed in high-risk and low-wage jobs, such as agriculture, hotel housekeeping, janitorial work, and construction.[4–8] They are exposed to occupational hazards including heat, pesticides, formaldehyde, asbestos, cleaning agents, and biohazards, which have been associated with an increased risk of cancer, dementia, asthma, reproductive disorders, and infectious diseases.[9] Latina/o immigrant workers are also exposed to job insecurity, overwork, low wages, and abuse.[10] Working under these conditions is harmful to workers' health and may contribute to acute injuries, mental health problems, cardiovascular disease, and musculoskeletal disorders, among other health conditions.[7–12]

Workers' compensation was established in the early 20th century to cover the healthcare costs of injured and ill workers in the United States.[13] Under the "no-fault" liability system, workers' compensation covers the costs of medical care, temporary disability benefits, permanent partial or total disability, vocational rehabilitation, and survivor benefits for fatal work-related injuries.[13] However, injuries and other health concerns among Latina/o immigrant workers are often un- or under-reported.[14] Additionally, occupational health trends indicate a growing proportion of the cost of care for work-related injuries are paid by workers' private health insurance plans or out of pocket.[15] Approximately 20% of the Latina/o population is still uninsured,[16] with 30% of Latinos being ineligible for coverage due to their legal status,[17] and one out of five low-wage workers identify as Latina/o.[18] Accordingly, many Latina/o immigrant workers receive health care from federally qualified health centers (FQHC).

FQHCs play an important role in the healthcare delivery system, as they provide healthcare safety nets to patients regardless of their ability to pay.[19] They are primary care clinics designed to serve medically underserved populations, including low-income people, migrant workers, and other marginalized groups.[20] FQHCs are required to maintain a governing board whose majority is made up of members that reflect the patient population to remain responsive in culturally meaningful ways to the needs of the surrounding community.[20] These health centers were established to provide comprehensive services including primary care, dental care, behavioral health, and social services to address patients' social determinants of health and health inequities.[21] Moreover, in some communities, FQHCs provide a safe space for undocumented immigrants to seek care and education regarding their rights.[22,23] In California, between 20% and 30% of the state's low-income population obtain their health care from community health centers, including FQHCs.[24] Their mandate to treat everyone and to provide sliding fee scales based on income make FQHCs a viable source of care for undocumented immigrants who are excluded from accessing health insurance through the Affordable Care Act and public health insurance.[25–27]

However, training in occupational medicine in medical schools has been on the decline, such that by 2002 medical students received only an average of 6 h of training in occupational medicine.[28] Additionally, although the American Academy of Family Physicians (AAFP) has developed curriculum guidelines for occupational medicine training in family medicine residency programs,[29] the Accreditation Council for Graduate Medical Education has not specified requirements for occupational medicine in postgraduate training for primary care clinicians.[30] As a result, some primary care clinicians may have insufficient training in occupational medicine. Gaps in occupational medicine training raise concerns as low-wage and immigrant workers obtaining care in FQHCs may not receive optimal care for work-related conditions.[31]

With few exceptions,[32–35] the literature has not fully assessed the role of healthcare institutions in addressing occupational health inequities that disproportionately affect Latina/o immigrant workers.[36] Studies that have examined barriers and facilitators to assessing occupational health concerns in primary care settings have been primarily conducted in rural settings.[32–34] Expanding this study to additional geographic and labor market contexts is necessary to identify nuances in primary care clinicians' perspectives regarding occupational health inequities and points for intervention. Therefore, the objective of this study was to investigate how primary care clinicians assessed and addressed the role of occupational exposures on the health and well-being of Latina/o immigrant workers in an urban setting with a heterogenous labor market. We addressed this study question using a constructivist grounded theory analysis of interviews with clinicians at a university-affiliated FQHC.

2 | MATERIALS AND METHODS

2.1 | Data collection

To conduct this study, we drew on constructivist grounded theory,[37] an inductive analytical approach in which data collection and analysis proceed in an iterative process.

Data for this pilot study were collected through semistructured in-depth interviews ($n = 17$) with physicians ($n = 7$), resident physicians ($n = 6$), and nurse practitioners ($n = 4$) employed at a university-affiliated FQHC with two sites in separate cities. Participants were eligible to participate if they practiced primary care medicine, were employed in an FQHC in Southern California for at least 6 months and their patient population included Latina/o immigrants. FQHCs were chosen as the setting for this study, because their patient population generally includes uninsured or underinsured low-income individuals.[26] The two sites included in this study were chosen, because they were located in cities in which Latinas/os made up between 50% and 77% of the population and immigrants made up between 35% and 45% of the population.[38] In the cities where the

FQHCs were located, between 13% and 17% of residents were uninsured and ~15% of residents lived below the poverty line.[38] Moreover, the FQHCs provided care to Latina/o immigrants employed as waiters, gardeners, and construction workers, among other occupations.

The research team developed an interview guide comprised of open-ended questions to assess primary care clinicians' perceptions of their patients' working conditions, exposures, and the influence of work on the health and well-being of their patients. Interview question topics analyzed in the manuscript included: clinicians' general knowledge about the jobs in which patients are employed, common work-related issues treated, processes for treating patients, and perceptions of the contribution of work to the health and well-being of their patients. Following a constructivist grounded theory approach, we made changes to the interview guide for clarity and to flesh out emerging themes during the data collection phase.[37]

We recruited participants using a purposive sampling strategy that leveraged the professional networks of the coauthors. Recruitment materials were emailed to coauthors' professional networks to inform colleagues of the study. Prospective participants were directed to email the lead author for additional study details and to schedule an interview. The lead author was invited to attend FQHC faculty and resident meetings to announce the study and distribute flyers. Clinicians were encouraged to indicate their interest on a sign-up sheet. The lead author followed up with clinicians who expressed interest in participating to provide additional study details and schedule an interview. Seventeen clinicians completed an interview.

Interviews were conducted between October 2019 and September 2020. In response to the onset of the coronavirus disease 2019 (COVID-19) pandemic, all research activities were paused for 4 months. Research activities resumed in late July 2020 and all in-person activities were moved online. Between October 2019 and March 2020, interviews ($n = 11$) were conducted in-person at a location convenient to the clinician (e.g., clinic, coffee shop) and participants were compensated with a $5 coffee shop gift card. After July 2020, interviews ($n = 6$) were conducted virtually via Zoom or telephone, depending on the preference of the clinician, and participants were compensated with a $25 visa gift card. The lead author conducted all interviews.

Participants completed a short demographic survey before each interview. In addition to basic demographics, the survey was used to collect data on participants' medical degree, years practicing primary care medicine, and whether they were currently completing their residency training. Interviews were audio recorded and transcribed verbatim. The average length of the interviews was 25 min. The methods for this study were approved by the Institutional Review Board of the University of California, Irvine, in August 2019. COVID-19-related changes to interview methods and compensation were approved in July 2020.

2.2 | Data analysis

Data analysis was guided by a constructivist grounded theory approach[37] to develop themes that were responsive to the research question about how primary care clinicians assessed and addressed the role of occupational exposures on the health and well-being of Latina/o immigrant workers. The first and last author met regularly to debrief about the interviews and discuss the analysis. The first three transcripts were coded line by line and codes were compared across the three interviews to develop an initial codebook. The iterative process of data collection, analysis, and refining the codebook were ongoing. The first and second author independently coded the transcripts. The research team met regularly to compare codes, discuss and reconcile the inconsistencies in coding, update the codebook, and develop themes from the codes. To ensure the reliability of the coding process, an intercoder agreement (ICA) test was completed using the qualitative analysis software Atals.ti version 9.0.7.[39] Atlas.ti uses Krippendorff's α to calculate the reliability coefficient and a Krippendorff's α above 0.80 indicates high reliability. The initial ICA was 0.745. The final ICA was 0.985, indicating a high reliability for the coding process. Example codes included in this analysis are listed in Table 1.

3 | RESULTS

As shown in Table 2, the final sample included 17 participants whose average age was 37.8 years (range = 26–62 years) with an average of 9.0 years of experience practicing in primary care (range = 7 months–25 years). Most of the sample identified as women (70.6%) with a medical degree (MD/DO; 76.5%). Approximately half (52.9%) of the participants identified as Asian/Pacific Islander and almost half (47.1%) identified as Latina/o/x. About 35% of physicians in the study were currently completing their residency training.

The following sections detail four themes identified in the analysis of how clinicians assessed and addressed work's contribution to the health and well-being of their Latina/o immigrant patients and strategies to reduce occupational health inequities including: (1) assessing work-related concerns, (2) clinicians' observations of patients' motivations for seeking care for work-related issues in an FQHC, (3) clinicians' response to patients' work-related issues in an FQHC setting, and (4) strategies to improve occupational health outcomes.

3.1 | Assessing work-related concerns

Clinicians described two broad scenarios during which they assessed the effects of employment on the health and well-being of their patient. The two categories included (i) musculoskeletal issues and respiratory concerns, and (ii) work-related stressors.

TABLE 1 Summary of themes, categories, and codes

Theme	Categories	Codes
(1) Assessing work-related concerns	**(i)** Musculoskeletal issues and respiratory concerns **(ii)** Work-related stressors	• "I get a general sense [about the patient's job]" • Chronic conditions • Don't think about [occupational exposures] • Working class jobs • [Clinician] knows Spanish • MSD [musculoskeletal disorder] • Mental health
(2) Clinicians' observations of patients' motivations for seeking care for work-related issues in an FQHC	**(i)** Workers' compensation was not an option **(ii)** Workers' compensation was not enough	• Divided care • Long term [injury] • [Workers' compensation was] not enough • Limited [job] options • Navigating systems • Undocumented
(3) Clinicians' response to patients' work-related issues in an FQHC setting	**(i)** Clinician authority outside of the clinical setting **(ii)** Leveraging resources within the FQHC	• Cost • Financial strain • Uninsured • Provider authority • Formal versus informal jobs • Paperwork • Fear • Undocumented
(4) Strategies to improve occupational health outcomes	**(i)** Clinic-based strategies **(ii)** Limitations of a clinic	• Intervention • Not alone • No occupational health training • Societal change

3.1.1 | Musculoskeletal issues and respiratory concerns

Most clinicians quickly pointed to musculoskeletal issues and respiratory concerns when describing common work-related health concerns among their Latina/o immigrant patients. The response below describes how clinicians assessed the role of work when patients experienced a physical or respiratory health concern:

> "Sometimes, the, the times that I do go into like their work history they're coming in for a specific like musculoskeletal complaint, [...] if they're like, 'you know, my arm really hurts' and, you know, you want to ask, 'What do you do for a living?' and so they're like 'oh I'm a babysitter and I lift babies up' and so that like gives me a clue into making a diagnosis of a certain condition. Or like they cough a lot, you know, if they're coming in with a cough and it's chronic you want to know what they do for a living, umm, 'Do you work in a factory? Do you work somewhere that has exposure to chemicals? Are you wearing protective gears?'"(Interview 4).

As Participant 4 described, most clinicians asked patients about their jobs when they had a musculoskeletal injury or a respiratory health concern to potentially identify the cause. In addition to musculoskeletal injuries, some clinicians also asked about patients' jobs when they had sleep issues. Participant 16 stated, "And for, like, sleep [issues], I remember asking people, like do they [work] night shift."

Regarding chronic disease management, clinicians had different perspectives. Some clinicians perceived chronic diseases as unrelated to occupational exposures. Participant 2 explained:

> "No, it [asking about work] doesn't happen very often because, umm, again because our patients have so many medical problems, umm, health issues that we need to address in 20 min total [...] they you know...I haven't had a chance to ask them. Umm, if they do bring it up of course you know we need to address it but, umm, it's rare because we've got patients with, with diabetes out of control, hypertension out of control, umm, chronic kidney disease, or depression, any mood disorders that we need to, there are many... multiple, multiple problems that we need to address in one visit" (Interview 2).

TABLE 2 Demographic characteristics of interview participants ($N = 17$)

Characteristics	*n*	%
Age in years (Mean/SD)	37.8 (11.3)	
Gender		
Woman	12	70.6
Race/ethnicity[a]		
Latina/o/x	8	47.1
Asian/Pacific Islander	9	52.9
White	2	11.8
Years practiced in primary care (mean/SD)	9.0 (9.6)	
Primary care provider		
Physician	7	41.2
Resident physician	6	35.3
Nurse practitioner	4	23.5
Healthcare degree received		
MD/DO	13	76.5
NP	4	23.5

[a]The totals in the race/ethnicity category are greater than the sample size, and the percentages sum to >100%, to account for participants identifying with more than one racial/ethnic category.

Abbreviations: DO, doctor of osteopathic medicine; MD, doctor of medicine; NP, nurse practitioner.

This participant and other clinicians noted that short appointment times further limited their opportunities to ask about occupational exposures or probe about factors exacerbating patients' chronic conditions. For these clinicians, the urgency of treating patients' multiple health issues in the allotted time took priority over probing about possible underlying causes that might be work-related. However, other clinicians drew connections between work conditions and chronic disease management issues, and responded by asking patients questions about their jobs. Participant 17 explained:

> "Yeah, um, I think the two biggest time[s] [work] comes up is for uncontrolled chronic diseases. Um, when we either have mostly diabetes and hypertension, if they're uncontrolled then we look to see how their home life and how their work life affect their health. Um, so, a lot of patients talk about being at work and can't use the insulin or they work in the restaurants are so busy they don't have time to eat or give themselves [insulin] shots" (Interview 17).

As Participant 17 noted, job demands can bar patients from successfully managing their condition in line with their medical treatment plan. For this group of clinicians, observing that their patients are having difficulty managing their chronic conditions will prompt them to ask their patients probing questions about their jobs to identify barriers to chronic disease management.

3.1.2 | Work-related stressors

Most clinicians seemed keenly aware of the health consequences of work-related stress. As Participant 3 described:

> "Yeah, definitely. Umm, and again that kind of thing just comes up. If you're seeing that a patient is having trouble keeping up with their medications or you're just seeing the patient, you know patients reporting sleep issues or, umm, mental health issues, just feeling down, or I'm really worried all the time, and I'm anxious, or then, umm, then you try to dig a little deeper, like what's, you know, what's going on, any major recent stressors, anything going on at home or at work that's bothering you and so, and things come up" (Interview 3).

As Participant 3 explained, some clinicians viewed work-related stress as a source of health problems for patients, including interrupted sleep and mental health issues. For these clinicians, chronic disease management issues and mental health symptoms were key indicators of possible work-related stress which prompted them to ask additional questions about patients' stress at work.

Most clinicians frequently discussed the financial strain under which their Latina/o immigrant patients lived due in part to the types of jobs in which they were employed. In turn, this financial strain was described as having broader implications for the health and well-being of their patients. Participant 12 summarized this pattern as follows:

> "[A] lot of the patients that I, that I see, um, for whatever reason their jobs don't offer them health insurance. So, they're working like a job where they're getting…I guess they're [low] wage workers. Like they're making enough money but they're not getting any benefits at all. Um, and so, obviously when you don't have very much money it's hard for you to have good quality food and like be able to take care of yourself appropriately with like making sure you're seeing doctors frequently, um, or enough, you know to, you know kind of doing all the health maintenance that you would normally do" (Participant 12).

The financial stress associated with earning low wages and the lack of workplace policies to facilitate medical care follow-up potentiated negative health outcomes for patients.

Clinicians that most frequently discussed assessing the role of work in contributing to the health of patients reported being fluent

Spanish speakers and identified as Latina/o/x. One clinician explained:

> "[Latino patients] seem to be very relieved when I, when I just open the door and I start speaking in Spanish. They're like 'Thank God! Finally, we can find, you know, I can talk to someone about all my problems,' and yes, it is, um, very rewarding. It is challenging, too, because they feel so comfortable with me that they start talking about things that are not exactly medically related, uh, which is fine because like you said everything affects something. So, even though, in the beginning it might not seem that it's medically related then I'm like okay, so you have this social situation going on right now, I know why you're not taking your medications or stuff like that. And, and these are things that I feel like they are only able to express with someone that understands not only the language but also culture" (Interview 10).

Some clinicians expressed that they felt Latina/o immigrant patients were more forthcoming about their health problems and the social context of their health when they spoke Spanish and shared a cultural identity. As participant 10 described, the rapport built between clinicians and patients based on a shared culture and language facilitated the ability to tune into the nonbiological factors that may be shaping patients' health.

3.2 | Clinicians' observations of patients' motivations for seeking care for work-related issues in an FQHC

When discussing delivering care for injuries arising directly from work-related accidents that would typically be covered by workers' compensation, clinicians identified two primary motivations that led Latina/o immigrant patients to seek care in an FQHC. The motivations were (i) workers' compensation was not an option and (ii) workers' compensation was not enough.

3.2.1 | Workers' compensation was not an option

Most clinicians explained that when patients sought care for a work-related injury, they would suggest the patient speak to their employer and report their injury or illness to receive care through the workers' compensation system. However, most clinicians noted that their Latina/o immigrant patients expressed that filing a workers' compensation claim was not an option. Participant 3 summarized this pattern:

> "We see a fair number of patients where [workers' compensation] just doesn't seem like that's an option. Like they're, you know, umm, they're not, umm, again [their job] might be under the table or they're not, umm, being given that option by the employer. The option is you can't work here anymore if you can't do the work that we're asking you to do" (Interview 3).

Clinicians commonly noted that patients did not receive clear guidance from their employer regarding workers' compensation and feared they would lose their job if they were incapable of completing their duties. Clinicians' observations indicated that this group of patients perceived the need to assume responsibility for procuring care to avoid being fired, especially when employed informally. Notably, clinicians clarified that the clinic did not receive reimbursement from the workers' compensation system when they delivered care to patients for work-related injuries and illnesses.

Most clinicians identified patients' unauthorized legal status in the United States as an additional barrier to reporting an injury to their employer and filing a workers' compensation claim. Participant 11 noted:

> "So, it, it...[laughs] it's really tricky because then you have workman's comp, right? Um, I always tell them that if it is work-related, I try to refer them back to their HR department to disclose that information for that specific visit. If it's the first time they tell me this [about their work-related condition] I'll let them know that and then I'll tell them, you know, 'here's some Tylenol [...] to help with the pain,' and have them follow up with the company. If they're telling me, 'well, you know, I'm getting paid under the table' or 'I'm [undocumented]' [...] then we try to treat it here" (Interview 11).

As Participant 11 described, workers' unauthorized legal status further discouraged workers from reporting their injury due in part to the belief that undocumented workers were ineligible for workers' compensation. Consequently, clinicians were caught in the middle as they tried to navigate the challenges of delivering care to undocumented patients with work-related injuries and illnesses.

3.2.2 | Workers' compensation was not enough

The second motivation for which patients sought care for work-related health concerns as described by clinicians was persistent chronic pain. Participant 7 explained:

> "Yeah, other things that I've seen happen as well is, um, patients will already have gone through the workers' comp, but workers' comp will choose to stop treating an injury at some point so they're still having issues following the work injury so then they're coming in seeking care. At this point they don't care

> if they're charged because they're still in pain, they're still having issues and it needs to be treated" (Interview 7).

Clinicians' observations reveal that workers' compensation claims were sometimes closed before the worker fully recovered, leaving these patients to procure their own follow-up care. Further underscoring this pattern is an example provided by Participant 5:

> "I have a patient who came in with, umm, low back pain and, umm, one sided, umm, hip and leg pain [...] At work she was hit, umm, in the back by a pallet and kind of had some, some care through workers' comp and some not. Umm, essentially the case was closed even though she was still experiencing some chronic pain and kind of restricted motion from some of that" (Interview 5).

Similar to the observations of Participant 7, Participant 5 described delivering care to a patient whose workers' compensation claim was closed yet she continued to experience pain and restricted movement. Although the motivations for terminating people's workers' compensation claims were unclear, the act of doing so before the worker has fully recovered might be redirecting the cost of care for work-related injuries away from workers' compensation to workers and FQHCs.

3.3 | Clinicians' response to work-related issues in an FQHC setting

Clinicians that described delivering care to patients with a work-related health concern who had few to no other options demonstrated a resourcefulness. The two mechanisms by which clinicians delivered care included (i) clinician authority outside of the clinical setting and (ii) leveraging resources within the FQHC.

3.3.1 | Clinician authority outside of the clinical setting

Most clinicians leveraged their authority by writing work modification notes and letters to patients' employers recommending to employers that they modify patients' work duties to manage musculoskeletal disorders and chronic conditions. Participant 10 described their experience writing work accommodation notes for patients with diabetes:

> "[For] a lot of [patients] it's just that [they have] a lot of work and a lot of hours and...for example I have patients that have diabetes, right? And I need them to check their sugars at some point. And when they come back and they're like 'oh, no I couldn't check my sugars at work.' And I'm like 'why not?' 'Well because they don't let me go out.' And I'm like 'what do you mean? I can give you a letter saying that you have to have breaks to check your sugars.' And they are hesitant to ask for it. [...] So, there's always that struggle, like they feel like they're going to get fired for every single little thing, but I try to reassure them that this is just their right and, and they should be given [...] accommodations" (Interview 10).

As Participant 10 pointed out, some clinicians observed that some patients expressed feeling afraid of being fired for presenting their employer with a work accommodation note. However, some clinicians leveraged these conversations to educate their patients on their rights.

Some clinicians described referring patients to the human resources department of the company for which the patient worked as a first course of action. However, as was noted in the second theme, patients employed in informal jobs typically reported being ineligible to file a workers' compensation claim. Under these circumstances, clinicians wrote work modification notes to mitigate work-based exposures that may exacerbate patients' health issues. Participant 3 summarized this process:

> "Umm, but patients usually need to figure out first like what they're eligible for, umm, by either talking to their HR. If they tell me that's not an option, 'I don't have an HR that I can talk to' or that, you know, 'my employer isn't giving me any direction on that' then I try to just start with writing a letter to the employer and then go from there [...] I'll write a letter [...] and I just, you know, again, without always knowing the details of what that patients is eligible for, what the terms of their employment are, I try to just follow [the patient's] lead and do whatever I can to allow them to get the rest period that they need or, you know, whatever is indicated" (Interview 3).

This clinician's experiences further underscore the challenges of navigating workers' compensation and delivering care to patients with informal work arrangements. Under these uncertain conditions, work modification notes are leveraged by clinicians to mitigate work-related exposures.

Clinicians had mixed experiences regarding the efficacy of work modification notes. Some clinicians perceived the work modification notes to be an effective tool:

> "I have to say that I haven't had any issues with any [work notes] so far. Um, sometimes they'll call and they want clarification because, you know, I forgot the end date or, um, they want to specify a little bit more on the restriction. Like, you know, you can't lift 10 pounds, 'well can they lift, you know, five pounds?'

So, it's just little things here and there. But really, I haven't had any issues" (Interview 11).

As Participant 11 indicated, clinicians followed up with employers when details of the work modification notes needed clarification.

However, some clinicians indicated that the efficacy of the work modification notes depended on patients' work arrangements:

> "It only really works for my patients who work at, at grocery stores or a place where it's established, like, it's established with the government or in the American system. I've noticed it works better because I think one of my patients worked at like a [Pharmacy] or something like that, and I said, 'please allow patient to work earlier hours. Stop scheduling them for the night shift,' [...] And that one was, I think, the only work letter I wrote that actually worked. They actually switched his hours and honored it" (Interview 13).

In Participant 13's experience, patients with formal work arrangements were better positioned to benefit from work modification notes, because their employers typically complied with the request for modified work. One can glean from this participant's response that patients with informal work arrangements encountered greater difficulties negotiating work modification requests.

Although work modification notes were a common tool leveraged by clinicians, it is important to note that clinicians only wrote the letters and communicated with employers once they received permission from the patient. Most clinicians seemed aware of potential repercussions their patients could face—being fired or other retaliatory actions—in response to work modification notes. These clinicians did their best to navigate the complexities of the situation.

3.3.2 | Leveraging resources within the FQHC

Most clinicians described FQHCs as the only option available to some of their Latina/o immigrant patients seeking care for a work-related health concern and perceived the FQHC as responsive to the needs of patients. Participant 16 explained:

> "Yeah. So, like, if someone comes in with, um, like, you know, knee pain and it's arthritis, like, we'll try to medicate it, um, send her off to physical therapy, joint injections, um, and just kind of reassure them like, 'hey, like this is, we think it's because you're literally working on your hands and knees all the time'" (Interview 16).

As described above, clinicians leveraged the resources available within the FQHC to provide appropriate care to patients who reported repetitive use injuries. In addition to musculoskeletal disorders, work-related stress was a common health concern managed by clinicians:

> "We have a great social worker here who helps me a lot with that. If I notice that a patient seems to be talking about work and how it's making them, you know, not sleep well or they're worried about tomorrow's, you know, plan...what they need to get done. I'll try to call in my social worker because she helps with stress management and helps with any kind of anxiety type of, um, symptoms. So, we work hand in hand with...here's the psychosocial aspect of it and then I come in with is there a medication that maybe we could help with? Is there a continued visit that we can kind of reassure the patient and see where they're going?" (Interview 11).

The available mental health resources within these FQHCs facilitated clinicians' responsiveness to patients' mental health concerns arising from work-related stress. However, clinicians highlighted the difference in resources available to patients who did not file a workers' compensation claim and sought care at an FQHC. Participant 5 explained:

> "I work with them to try and get them plugged in with, uh, the resources we have for care. If it's like pain and non-medication modalities for pain we can't really refer to [physical therapy], or we can but the cost is greater out in the community without any insurance. And then trying to use some of the resources here within our clinic that we can refer, umm, whether it's a sports clinic if they need some sort of injection for chronic pain [...] but we're kind of limited in terms of what we can do. Even like imaging or things you'd normally do if I were a workers' comp type doctor, like, doing x-rays and all of that. It's kind of weighing with the patient together [...] or kind of working with them and seeing whether [treatment options are financially] feasible or not but just kind of working with them and managing their symptoms. Umm, but it's a little more limited than the resources you may have if they actually have for workers' comp" (Interview 5).

Clinicians noted Latina/o immigrant patients who were uninsured and lacked the financial resources available through a workers' compensation claim were left with few treatment options due to costs. As Participant 5 described, some clinicians navigated this dynamic by discussing treatment options with patients to identify a strategy best suited for patients' financial circumstances.

3.4 | Strategies to improve occupational health outcomes

Clinicians were asked about strategies for improving health outcomes and occupational exposure assessments in their respective FQHC. Their responses were grouped into two categories, (i) clinic-based strategies and (ii) limitations of a clinic.

3.4.1 | Clinic-based strategies

One strategy for improving occupational health outcomes for Latina/o immigrant patients offered by some clinicians was to address gaps in their medical training by incorporating trainings in the clinic where they practice regarding patients' occupational contexts. Participant 3 explained:

> "I think specific training would be really helpful. Kind of knowing, umm, like, you know, patients' that, umm, restaurant workers or, umm, you know patients that do industrial cleaning or these specific categories that we see frequently, if we knew more about what's, you know, what are specific questions that we should be screening for, what are some of the known, umm, risks" (Interview 3).

Trainings focused on the types of jobs commonly held by the clinic's patient population offered a potentially feasible pathway to increasing clinicians' occupational medicine knowledge. Participant 13 echoed a similar sentiment: "It may be that whoever runs that [occupational medicine clinic] can come over to our FQHC and give us a training, that might be helpful." For this group of clinicians, increasing their knowledge of occupational health risks offered a tangible strategy to better provide care to low-wage Latina/o immigrant workers. Of note, most resident physicians included in this study stated they had received some occupational medicine training in their residency program.

Some clinicians pointed to gaps in patients' knowledge of safe work practices as a potential point for intervention. Participant 11 stated:

> "I think having some sort of [safety] basics. Like, maybe a class or maybe some kind of like small, um, video they could watch online, like on their phone that would let them know, you know, if you work in an office you want to make sure you have a good keyboard, you have a good chair. Um, if you work in agriculture, like depending on what you do, wear some comfy clothes, wear knee pads if have to, like, something basic but still at least to get you to know what are, what are the things that I [worker] deserve that I [worker] should have while you work in these kinds of environments" (Interview 11).

From the perspective of these clinicians, readily accessible ergonomic and safety trainings might reduce work-related injuries and illnesses among Latina/o immigrant workers.

In addition to trainings, some clinicians suggested the clinics adopt an occupational health screening. Participant 9 explained:

> "Maybe getting a little questionnaire just with 10 questions or something, you know, to ask do you [...] Have a lot of stressors in your life or at work? Maybe we get like 10 questions or something for everybody that, that, that would be really good, you know, to assess the patient a little bit more in depth" (Interview 9).

However, some clinicians pushed back on the feasibility of implementing additional screenings. For instance, Participant 4 stated:

> "I think that we as physicians can do more it's just like right now obviously everyone is so overwhelmed and we don't know, we don't want to check another box, is what I'm saying. I don't want to have to do another thing, check another box" (Interview 4).

It appears clinicians are overextended in FQHCs and completing an additional health screen might be a burden for clinicians. Participant 15 elaborated on this point:

> "I think there's a balancing act of thinking about the occupational things when the patient's chief concern points to [occupational factors] as a particular, as a potential factor in why they're there that day. Versus, uh, versus building that into every assessment 'cause then it becomes more of a documentation burden than, than experienced as an actual, you know, helpful tool for the provider" (Interview 15).

Participant 15 points to the utility of an occupational health screening if the patient's health concern is work-related. However, a universal occupational health screening tool might be cumbersome as it becomes another item on an already long to-do list clinicians must cover in their short appointment times. An alternative offered by several clinicians included delegating the task of screening patients to other clinic staff. Participant 5 explained:

> "Having our front desk staff or even our [medical assistants] ask a kind of a set of questions that can kind of help alert or flag someone as maybe we need to spend more time delving into this type of risk and how it's impacting our patients' health" (Interview 5).

Under this approach, clinicians would only be made aware of the responses to the occupational health screening tool in the event the

patient had a positive screen. This approach might reduce the "documentation burden" placed on clinicians.

3.4.2 | Limitations of a clinic

Some clinicians expressed concerns about the expectation and feasibility of making the FQHC a primary site for intervention. Participant 8 stated:

> "I can deal with the health care here. Like, I can help them with medication, exercise, um, even diet, I can help them with. But for those resources that they may need supp – support in their fields or their work I will tell them, number one check if you have an HR [Human Resources] department that you can talk to. Number two these are the resources in the community that are available for you" (Interview 8).

Participant 8 described the limitations of an FQHC and the resources available to support the complex needs of Latina/o immigrant workers, of which they are aware because of the FQHC model. Clinicians are trained in providing medical care and require support in addressing the social determinants of health. Participant 2 further elaborated on this point:

> "The other thing is we need help because, you know, physicians cannot do everything themselves. [...] [Addressing work-related health concerns] are not the sole responsibility of physicians [...] it should become part of like a public health campaign, uh, with mass media" (Interview 2).

Some clinicians perceived they were under significant pressure to solve a multitude of health-related problems. Instead, they called for coordinated effort between agencies to improve health outcomes for low-wage and immigrant workers.

A few clinicians suggested structural interventions were needed to improve the health outcomes of Latina/o immigrant workers. For instance, Participant 16 stated:

> "I don't think, I don't think the solution is probably, like, in, in a clinic room. I think the solution is probably societal and in the industry. Um, I think if employers or as a society realized like, oh, like this is, like, unhealthy habits or when people don't get sick days it's just worse off for the rest of society. I think, I'm not sure if the solution is inside a doctor's office" (Interview 16).

These clinicians pointed to the role of upstream factors in shaping occupational health inequities and suggested modifying work-related policies might be more effective in reducing occupational health inequities compared with clinic-based interventions.

4 | DISCUSSION

The purpose of this study was to investigate how primary care clinicians assessed and addressed the role of occupational exposures in shaping the health and well-being of Latina/o immigrant workers in an urban setting with a heterogenous labor market. Most primary care clinicians were aware of the role of occupational physical hazards and psychosocial stressors in shaping the physical and mental health of their Latina/o immigrant patient population. A subset of clinicians that mostly identified as Latina/o/x and spoke Spanish initiated conversations about work conditions with their Latina/o immigrant patients more often. Clinicians delivered care to Latina/o immigrant workers who did not report their injury or health concern to their employer or required additional care after their workers' compensation claim was closed. Clinicians differed in their opinions about the feasibility of implementing strategies for improving occupational health outcomes and occupational health assessments for Latina/o immigrants in a clinical setting.

Consistent with previous literature, FQHC clinicians perceived work as a significant contributor to the health and well-being of their Latina/o immigrant patients.[34,35] However, a subset of clinicians described a more flexible understanding of the influence of occupational stressors on patients' health including, for example, ways in which work can constrain management of chronic conditions in addition to other injuries or conditions incurred in the workplace. This group of clinicians were more likely to identify as Latina/o/x and speak Spanish. This finding aligns with prior studies that found evidence that Latina/o patients preferred to be treated by Spanish-speaking and culturally concordant clinicians,[40] patients fared better when they received language-concordant care,[41] and clinician–patient racial/ethnic concordance was associated with increased likelihood of visiting their clinician.[42] The shared language and cultural identity might have broader implications for treatment of Latina/o immigrant patients. Latina/o/x clinicians might draw on their own experiences when working with Latina/o immigrant patients or Latina/o immigrant patients might feel more comfortable confiding in clinicians that share their language and/or cultural identity. Further research is needed to better understand how racial/ethnic and language concordance between patients and clinicians shape patient care in FQHCs for Latina/o immigrants.

Clinicians' observations regarding Latina/o immigrants' motivations for seeking care at an FQHC for work-related injuries and illnesses are consistent with the current body of literature. Clinicians in our study identified fear of being fired, precarious work arrangements, and legal status as common barriers that discouraged patients from filing a workers' compensation claim; similar barriers were identified in previous studies in which low-wage workers were surveyed about their experiences with workers' compensation.[43,44] These barriers to filing a worker's compensation claim signal that the current structure of the workers' compensation system might be less responsive to the changes that have occurred in the workplace over the last 40 years.[11,45] California's labor code has adapted more to our current labor realities by extending workers' compensation benefits

to undocumented immigrants and people who have worked for an employer for at least 52 h and have earned at least $100 within 90 days of their injury or illness.[46] Yet, a recent study found evidence that workers employed as day labors in construction/maintenance or gardening/landscaping—jobs typically held by Latina/o immigrants in California—were more likely to be injured on their first day of work and, therefore, unlikely to have their treatment covered by the workers' compensation system.[47]

In addition, FQHCs deliver care to Latina/o immigrants in need of additional treatment following the termination of their workers' compensation claim. Previous studies have found evidence that occupational medicine physicians' distrust of Latina/o workers in the workers' compensation system and prioritization of anatomical findings over patient's subjective experiences can result in the rejection or early termination of a workers' compensation claim.[33,48] In turn, this might place the onus on injured Latina/o immigrant workers to procure treatment through alternative means. Thus, it is possible that clinicians' reliance on clinical indicators over patient reports inhibits the recovery of injured workers that would benefit most from obtaining care through workers' compensation system. Some clinicians leveraged work modification notes to support the well-being of patients. However, this strategy can result in negative ramifications for patients and points to the need for upstream intervention.

The trends observed in this study indicate the cost of care provided to injured workers typically covered by workers' compensation might be absorbed by some FQHCs. Studies have found that in recent decades the cost of work-related injuries and illnesses has shifted away from workers' compensation to workers and their families, private health insurance, and the government.[15,49–51] Clinicians' observations regarding the delivery of care to injured Latina/o workers suggests some community clinics are also taking on the financial burden of providing care to injured workers and buffering against the gaps in care for Latina/o immigrants stemming from the current structure of the workers' compensation system and lack of a universal healthcare policy.[52,53]

In line with previous studies, clinicians' suggestions for improving occupational health outcomes and assessments for Latina/o immigrant workers consisted of implementing occupational trainings for clinicians, identifying safety training resources for patients, and developing occupational health screenings for patients.[34,35] Although Simon et al.[34] and Baron et al.[35] found that clinicians perceived these interventions to be feasible, clinicians in our study expressed concerns about the growing documentation burden put on clinicians and patients in FQHCs. FQHCs are incentivized to perform a series of health screens on their patients and a recent study identified that ~35% of health screens conducted within a network of FQHCs were excessive, which were defined as screenings conducted more frequently than the recommended time interval.[54] Excessive health screens can negatively affect the experiences of clinicians and patients, alike. Inefficient work processes and disruptive workflows may contribute to clinician burnout,[55,56] which can result in medical errors.[55] Moreover, overloading the clinician with more information than can be addressed in one visit can decrease the quality of the visit.[57] Thus, additional health screens should be administered sparingly and when deemed appropriate by the clinician.

Surprisingly, a few clinicians in our study discussed the limitations of the FQHC and called for a coordinated effort between agencies outside of the healthcare system and structural interventions to address occupational health inequities. This finding raises questions about the expectations we place on FQHCs to address not only the medical but also the social needs of patients and their capacity to remain responsive to the multitude of patients' needs. These findings suggest that in addition to implementing clinic-based interventions, we also need to address upstream factors that are putting Latina/o immigrant workers at risk.

Interventions at different levels of the social ecological model (e.g., clinic, system, societal) are needed to improve public health approaches that address work-related health inequities disproportionately affecting Latina/o immigrant workers.[36] One potential downstream intervention is to increase occupational medicine training during medical school and residency training. A recent study found that nearly one in three medical students surveyed had not heard of occupational and environmental medicine (OEM) and among those that reported knowing about OEM, 60% had only one OEM lecture during their medical school education.[58] The AAFP has curriculum guidelines for family medicine resident training that includes occupational medicine.[29] Increasing exposure to OEM during medical school and adopting AAFP's residency occupational medicine training guidelines would better prepare primary care clinicians to probe more broadly about the ways in which work my affect their patients' heath, regardless as to whether the condition is compensable by workers' compensation.

In the absence of robust occupational health training during medical school and residency and given the un- or under-reported work-related injuries and illnesses concentrated among FQHC patient populations, FQHCs would benefit from establishing a relationship with occupational medicine clinics. The partnerships can facilitate knowledge sharing, including guidance on how and when clinicians in the FQHC should contact employers to protect workers. These partnerships can also provide primary care clinicians with training in recognizing conditions compensable by workers' compensation, which might reduce the cost shifting of care from workers' compensation to FQHCs. Additionally, clinics can obtain training from the Migrant Clinicians Network, which has expertise in supporting health centers serving migrant populations.[59]

A second downstream intervention that may support the health and well-being of Latina/o immigrant workers are collaborations between worker centers and FQHCs. Worker centers have expertise and experience addressing the issues affecting low-wage workers and can educate Latina/o immigrant workers about their rights and healthcare resources available to them, including workers' compensation.[60] Collaborations between worker centers and FQHCs might improve health outcomes for Latina/o immigrants by garnering greater access to the workers' compensation system and its financial resources, which might mitigate the financial barriers Latina/o

immigrant workers encounter when seeking care for work-related injuries and illnesses outside of the workers' compensation system.

An upstream intervention needed to improve the health and well-being of Latina/o immigrant workers is the adoption of the American Public Health Association's single-payer health system policy recommendation.[61] The universal healthcare policy would extend free healthcare coverage to everyone in the United States, including immigrants regardless of their legal status.[61] Work is a social determinant of health and distinguishing between work and nonwork causes of disease can be challenging and counter-productive.[31,53] Moreover, excluding immigrants from healthcare policies only exacerbates health inequities.[27,62] Thus, adopting a single-payer health system that extends health coverage to immigrants regardless of their legal status may eliminate the financial and legal barriers Latina/o immigrants encounter when seeking medical care, including for work-related injury and illness, and might lead to greater health equity.

A final upstream intervention needed to improve the health and safety of Latina/o immigrant workers is the adoption of the National Council for Occupational Safety and Health's (COSH) National Agenda for Worker Safety and Health.[63] National COSH is calling for the strengthening and enforcement of current safety laws and regulations, the expansion of labor protections to marginalized and exploited workers, including undocumented immigrants, and the implementation of policies like paid sick leave for all workers.[63] Adopting these policies might mitigate occupational health inequities by creating a safer and healthier workplace for all workers.

5 | STUDY LIMITATIONS AND STRENGTHS

This study is characterized by some limitations. Study participants were recruited from one FQHC with two sites that have ties to a large research university. The FQHC and clinicians might have had access to resources that are not readily available to FQHCs not affiliated with a university. Therefore, the results should not be generalized to all FQHCs. Future research should examine clinician perceptions of work's contribution to health in FQHCs and community health clinics not affiliated with a university.

Physician associates were not included in the sample of primary care clinicians interviewed for this study, because no physician associates were employed in the FQHC from which participants were recruited. Similarly, community health workers were not included in this study. Although some FQHCs employ community health workers who act as bridges to public health resources outside of the FQHC and have the potential to transform systems,[64,65] they were excluded from this study, because they were not employed at the participating FQHC. However, physician associates and community health workers are an important component of healthcare delivery in FQHCs. In excluding physician associates and community health workers, we might be missing an important perspective on providing care to Latina/o immigrants with work-related injuries and illnesses in nonoccupational medicine settings. Future research on this subject should include the perspectives of these health professionals.

Six interviews were conducted after the start of the COVID-19 pandemic. The data gathered in these six interviews were not sufficient to examine how COVID-19 influenced clinicians' process for examining and addressing occupational exposures given COVID-19's devastating impact on the Latina/o community and essential workers.[66,67] A study found that 17% of Latina/o workers were employed in essential jobs and were overrepresented in some high-risk occupations such as those in the meatpacking industry, in which some meat processing plants became transmission hot-spots.[67,68] Additional research is needed to examine how COVID-19 has influenced clinicians' perceptions about work's contribution to the health and well-being of low-wage Latina/o immigrant workers, especially those employed in essential work.

Despite these limitations, this study expands upon the literature by identifying additional barriers to assessing occupational health concerns in an urban primary care setting located within a heterogenous labor market, including concerns about documentation burden among clinicians and the perceived limits of the capacity of an FQHC. These additional barriers suggest additional research is needed to understand the acceptability of interventions within the clinic.

6 | CONCLUSION

This study investigated how primary care clinicians assessed and addressed the role of occupational exposures on the health and well-being of Latina/o immigrant workers in an FQHC setting. The results indicate some overlap between primary care and occupational medicine in FQHCs. Primary care clinicians responded to Latina/o immigrant occupational health needs within the bounds of the resources available in FQHCs. Clinicians differed in their opinions about the acceptability of interventions to improve occupational health assessment in the clinic. Increased training on occupational injuries in medical schools and residency, partnerships between worker centers and FQHCs, the adoption of a universal healthcare policy, and the adoption of National COSH's Agenda for Worker Safety and Health might benefit the health and well-being of low-wage Latina/o immigrant workers.

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CONFLICTS OF INTEREST

The authors declare no conflicts of interest.

DISCLOSURE BY AJIM EDITOR OF RECORD

John Meyer declares that he has no conflict of interest in the review and publication decision regarding this article.

AUTHORS' CONTRIBUTIONS

Ivy R. Torres was involved in the conceptualization of the study, acquisition, analysis, interpretation, drafting, and final approval of the manuscript to be published. Ivy R. Torres is responsible for all aspects of the work. Sarah Shklanko and Alana M.W. LeBrón were involved in the analysis and interpretation of the data, as well as drafting the work. All authors (including Cynthia Haq) contributed to revising the work critically for important intellectual content.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

ETHICS APPROVAL AND INFORMED CONSENT

The study and methods were approved by the Institutional Review Board of the University of California, Irvine, in August 2019. Changes to interview methods and compensation were approved in July 2020. All participants provided verbal informed consent.

DISCLAIMER

The contents are solely the responsibility of the authors and do not necessarily represent the official view of CDC.

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