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Appraisal of Washington State workers' compensation-based return-to-work programs and suggested system improvements: A survey of workers with permanent impairments

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Abstract

Background: Following a work-related permanent impairment, injured workers commonly face barriers to safe and successful return to work (RTW). Examining workers' experiences with the workers' compensation (WC) system could highlight opportunities to improve RTW outcomes. Objectives included summarizing workers': (1) appraisal of several WC-based RTW programs, and (2) suggestions for vocational rehabilitation and WC system improvements to promote safe and sustained RTW.

Methods: In telephone interviews, 582 Washington State workers with work-related permanent impairments were asked whether participation in specified WC-based RTW programs helped them RTW and/or stay at work. Suggestions for program and system improvements were solicited using open-ended questions; qualitative content analysis methods were used to inductively code responses.

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Authors' contributions:

JMS and EM participated in the conception and design of the work, JMS and DFK participated in acquisition of data, JMS and ATE conducted the analysis, and JMS drafted the work. All four authors participated in interpretation of data and revising the work critically for important intellectual content, provided final approval of the version to be published, and agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

Institution at which the work was performed: University of Washington, Seattle

Institution and Ethics approval and informed consent: This study was approved by the University of Washington Institutional Review Board. All survey participants gave informed consent.

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Results: Most respondents reported positive impacts from RTW program participation; e.g., 62.5% of vocational rehabilitation participants reported it helped them RTW, and 51.7% reported it helped them stay at work. Among 582 respondents, 28.0% reported that no change was needed to the WC system, while 57.6% provided suggestions/critiques. Reduce delays/simplify process/improve efficiency was the most frequent WC system theme—mentioned by 34.9%. Among 120 vocational rehabilitation participants, 35.8% reported that no change was needed to vocational rehabilitation, while 46.7% (N=56) provided suggestions/critiques. More worker choice/input into the vocational retraining plan was the most frequent vocational rehabilitation theme—mentioned by 33.9%.

Conclusions: This study's findings suggest that there is substantial room for improvement in workers' experience with the WC system. In addition, injured workers' feedback may reflect opportunities to reduce administrative burden and to improve worker health and RTW outcomes.

Keywords

workers' compensation; vocational rehabilitation; return to work; occupational injuries; permanent partial disability; permanent impairment; reinjuries; job accommodation; administrative burden; unemployment

1 INTRODUCTION

Every year in the U.S., nearly three million workers are injured at work.[1] While the substantial majority return to work (RTW) fairly soon after injury, some workers face a more challenging RTW trajectory and may receive workers' compensation (WC) for extended periods.[2,3] In particular, roughly 10% of workers injured at work incur a permanent impairment (e.g., vision or hearing loss, amputation, spinal impairment) that prevents working at full physical capacity, but that does not fully preclude RTW nor result in permanent total disability.[1] WC-based permanent partial disability (PPD) awards provide limited compensation for workers with such injuries. Despite having been deemed able to work, many workers with PPD awards do not RTW.[4,5] Those that do RTW face elevated risks of delayed RTW, RTW interruption, and reinjury (relative to workers without PPD awards),[5,6] which may be related to factors such as long-term functional disability, pain, unstable health, layoff, early retirement, negative treatment by managers and coworkers, lack of accommodation, and discrimination.[4,6–12] Some of the multiple factors predisposing workers to negative outcomes—particularly workers with permanent impairments—may be amenable to intervention via WC-based vocational rehabilitation and other RTW programs, and overall WC system improvements.

The purpose of WC-based RTW programs, which may include features such as worker assessments, vocational retraining, job accommodation subsidies, or incentives to employers for injured worker hiring/retention, is to facilitate RTW for workers who have faced RTW barriers or have been unable to return to their previous job after an occupational injury. Vocational rehabilitation programs are particularly important to workers with permanent impairments, who account for the overwhelming majority (roughly 90%) of WC-based vocational rehabilitation program participants.[5,6] Vocational rehabilitation programs play a critical role in retraining workers to RTW in a new occupation when needed, yet substantial

service delivery problems have been identified.[10,13–17] WC-based RTW programs hold potential to address workplace-level barriers to safe and sustained RTW at the broader WC system level, which could result in population-level improvements in worker health and economic stability.

Improvements to administrative features of the WC system may also enhance RTW outcomes. Just as patients' experience of care has long been recognized as an important indicator of health service quality, injured workers' experience of and satisfaction with service delivery could be used to inform WC-focused quality improvement efforts.[18,19] In particular, there is growing evidence that administrative burdens may influence how social insurance programs such as WC are experienced, with implications for the effectiveness and equity of these programs.[20,21] Administrative burdens in the WC system could include learning about and navigating WC benefits and programs, interacting with potentially unsupportive claim managers, and complying with WC rules. Such burdens could increase stress, hinder the delivery and effectiveness of high-quality health care and RTW services, and compound the substantial economic burden of workplace injury shouldered by injured workers and their families.[22,23]

The Washington State Department of Labor and Industries (L&I) has a history of collaborative efforts with stakeholders to improve the performance of their vocational rehabilitation and other RTW programs, as well as the WC system overall.[3,13,17] Further understanding of injured workers' experiences in these arenas, as well as their suggestions for administrative change, have the potential to provide critical information about opportunities for WC program and system improvement. This study relied on data from a representative survey of Washington State workers with work-related permanent impairments, linked to WC claims data. The survey included open-ended questions intended to facilitate exploring and identifying potential levers for change from the standpoint of the worker.[24] Study objectives included summarizing: (1) workers' appraisal of several Washington State WC-based RTW programs, including Stay at Work (employer reimbursement for light-duty job arrangements), Preferred Worker (employer incentives for hiring workers with permanent impairments), and vocational rehabilitation; and (2) workers' suggestions for WC system and vocational rehabilitation program improvements to promote safe and sustained RTW.

2 METHODS

2.1 Study population and data sources

The Washington State Department of Labor and Industries (L&I) administers the WC system, which includes the State Fund (covering about 70% of workers specified by Washington's Industrial Insurance Act[45]), and self-insured employers (covering the remaining 30%). Private WC insurers do not operate in Washington State. Washington State is one of only four states with no private WC insurers, which facilitates population-based research.[25,26]

We surveyed Washington State workers who had RTW—for the same or a different employer—after incurring a work-related permanent impairment. In Washington State,

impairment is defined as permanent anatomic or functional abnormality or loss of function, once maximum medical improvement has been achieved.[27] If, after completing treatment, workers have suffered permanent loss of function but are able to work, their degree of impairment may be rated for a PPD award. The survey was conducted about a year after PPD rating and claim closure. Several months before the survey, we obtained L&I WC administrative data and contact information associated with closed claims for potentially eligible workers.

Washington State workers were potentially eligible for this study if they met inclusion criteria by having an accepted State Fund or self-insured WC claim that closed with a PPD award between January 1, 2018 and April 30, 2018. Prior to delivering data to the research team, L&I staff applied six exclusion criteria (the approximate percentage meeting each exclusion criterion is reported in parentheses; many claims met multiple exclusion criteria): (1) no valid telephone number on record (9%); (2) under age 18 when injured (<1%); (3) medical-only, fatal, and permanent total disability claims (24%); (4) residence outside Washington State (9%); (5) L&I employees and other confidentiality exclusions imposed by L&I (<1%); and (6) deceased workers (<1%). L&I staff identified 2,541 workers who were potentially eligible for the survey during this timeframe. Of this sample, 1,152 workers could not be contacted after multiple attempts (e.g., no answer, busy signal), and eligibility was undetermined. Ten workers were contacted but declined to participate, 411 were ineligible due to unavailable/incorrect telephone numbers, 11 were ineligible because they had moved out of state, and 4 were deceased. Additional exclusion criteria identified by interviewers during eligibility screening included: (1) language or comprehension barrier (excluding n=154); (2) no recall of the permanent impairment or WC claim (excluding n=29); and (3) no RTW (excluding n=171), as determined by a worker's response to the question, "Have you returned to work since the injury that caused your impairment or disability, even if only very briefly?"

Trained interviewers conducted live telephone interviews using computer-assisted telephone interviewing technology (i.e., automated dialing, software-managed interview script, responses typed into the computer interface by interviewers). Interviews were conducted between February 6 and April 20, 2019, 11 to 15 months after claim closure (mean: 12.8 months). In total, 582 complete and 17 partial interviews were conducted, with a response rate of 53.8%. Respondents did not notably differ from nonrespondents with regard to age, gender, State Fund versus self-insured WC coverage, or the closed claim being their first Washington State WC claim. Further details regarding survey development, survey administration, numbers of ineligible workers excluded for specific criteria, response rate calculation, and response bias assessment are available in a previous publication.[4] The 17 partial interviews were excluded from this study because they all terminated before questions relevant to this study could be asked. This study was approved by the University of Washington Institutional Review Board. All survey participants gave informed consent.

2.2 Worker, injury, and claim characteristics

Descriptive characteristics obtained or constructed from administrative data included gender, age when interviewed, primary body part for the PPD award (i.e., contributing most to

the permanent impairment rating), and WC coverage type for closed claim (State Fund versus self-insured employer). Descriptive characteristics obtained from the survey included educational level, pre-tax earnings during past year, race/ethnicity, whether born in the U.S, and union membership. The amount of missing data was negligible. Data were tabulated using Stata/MP 15.1 for Windows.[28]

2.3 Worker appraisal of WC-based return-to-work programs

Stay at Work is a Washington State WC-based financial incentive program. Under this program, L&I reimburses employers for certain costs of providing temporary light-duty or transitional jobs for workers, while they recover. Costs eligible for reimbursement can include: up to half of the worker's base wages for up to 66 days (maximum of $10,000 per claim); up to $1,000 per claim for training fees or materials such as tuition, books and supplies; up to $2,500 per claim for equipment or tools; and up to $400 per claim for clothing. Workers were asked whether they had participated in the Stay at Work program during the past year. Workers who reported participating were then asked two separate questions: (1) "Do you think the Stay at Work program helped you return to work?" and (2) "Do you think the Stay at Work program helped you stay at work?"

The Preferred Worker Program is another Washington State WC-based financial incentive program. On request, L&I may certify a worker with eligible permanent medical restrictions as a "preferred worker." Employers may then be eligible to receive financial incentives when they hire a certified preferred worker for a medically-approved, long-term job. Employer incentives include financial protection against subsequent claims, premium relief, a one-time incentive payment for continuous employment, reimbursement for 50% of base wages, and reimbursement for certain tools, clothing, and equipment that the worker needs to do the job. Participation and appraisal questions were asked in the same manner as for the Stay at Work program.

Vocational rehabilitation services are intended to assist eligible injured workers to overcome return-to-work barriers (e. g., assessment, work hardening, vocational retraining plan with new occupational goal).[29] Some injured workers who can no longer work in their previous occupation may be determined eligible for WC-based vocational retraining for a new occupation, subject to L&I approval of a vocational retraining plan. Workers were first asked, "Did you participate in vocational rehabilitation related to the injury that caused your impairment?" Workers who reported participating were then asked the two program appraisal questions described above. We tabulated responses for all vocational rehabilitation participants, and also for two subsets: (1) workers who had a vocational retraining plan developed, and (2) workers who RTW in an occupation aligned with the vocational retraining plan's goal occupation.

2.4 Worker-suggested WC system improvements

We used qualitative content analysis methods to inductively code responses to two open-ended telephone survey questions: "If you could suggest one change to the WC system that would help you to continue working or prevent reinjury, what would it be?," followed by "If you could suggest one change to the vocational rehabilitation system that would help you to

continue working or prevent reinjury, what would it be?" Response options included: open-ended narrative, no change needed, don't know, or refused. Trained interviewers recorded workers' narrative responses verbatim or in summary.

Following a content analysis approach,[30] and with the assistance of Dedoose[31] qualitative software, two coders (ATE and JMS) began the code development process by independently coding one-third of the responses. Codes were developed inductively, rather than by approaching these data with a priori frameworks. As responses were often detailed and multifaceted, each person's response could be assigned more than one code. We then compared our code assignments and came to consensus on an initial coding scheme and codebook. The remaining responses were independently coded using this schema, discordant codes between coders were reviewed, and consensus on final codes was reached. Coding of the vocational rehabilitation question was initially based on the same set of codes, and codes were adjusted or added as needed. Codes for both questions were grouped into themes for improved interpretability where appropriate, and frequencies of codes and themes were tabulated. A variable was constructed to represent the general response options for this question, after coding and some reclassification based on coded text: (1) no change needed, (2) codable response, (3) vague/unclear response, or (4) don't know/no suggestions.

3 RESULTS

Although all eligible respondents (N=582) had RTW, 12.7% (N=74) were no longer working when interviewed. Time between the injury and the claim closure conferring survey eligibility ranged from one to 320 months, with a median of 18 months. Table I presents worker, injury, and claim characteristics for eligible workers with completed interviews (N=582). Two-thirds (67.0%) of the sample were men, 80.4% were non-Latino White, and 42.2% were union members when interviewed. For nearly half the sample (47.9%), an upper extremity injury was the primary contributor to the permanent impairment rating for the PPD award. For 62.9% of workers, the closed claim with a PPD award was covered by the State Fund, while for 37.1%, the claim was covered by a self-insured employer.

Workers participating in three specific WC programs were asked whether each program helped them (1) RTW, and (2) stay at work. Although the numbers of workers eligible to appraise each program were small, responses were generally favorable (Table II). With respect to vocational rehabilitation, there were increasingly positive ratings for both measures among three ordered subsets of workers: (1) those who received any vocational rehabilitation services, (2) those for whom a vocational retraining plan was developed, and (3) those who RTW in an occupation aligned with their vocational retraining goal occupation. Among workers in the latter group, a striking 96.2% (all but one worker) reported that the vocational rehabilitation program had helped them RTW.

Overall, 28.0% of respondents reported that no change was needed to the WC system to promote sustained RTW or prevent reinjury, while 57.6% (N=335) provided codable narrative comments or suggestions (Table III). Only 4.1% provided narrative comments or suggestions that were too vague or unclear to code, and 10.3% responded that they didn't know or did not have suggestions to make. There were 120 respondents who had

received some vocational rehabilitation services, and who were thus asked the ensuing comparable question focused on vocational rehabilitation. Of these 120 respondents, 46.7% (N=56) provided codable narrative comments or suggestions. Of the 120, 35.8% reported that no change was needed to the vocational rehabilitation program; this percentage was 41.0% among the subset for whom a vocational retraining plan was developed, and was 50.0% among those who RTW in an occupation aligned with their vocational retraining goal occupation.

For ease of presentation, coded themes for each of the two questions were grouped into six major themes (Figures 1 and 2). The same set of six major themes was used to organize response themes for both questions, though the rank ordering of major themes, response theme content, and frequency of themes within those major themes varied across the two questions. Some major themes only included one coded theme (varying by question). Respondents offered numerous constructive suggestions for system improvements. Some were very specific (e.g., hiring more in-house versus subcontracting vocational rehabilitation counselors), while others were very general or high-level (e.g., “overhaul the system”). We present a selection of these suggestions for each major theme in Table IV (WC system) and Table V (vocational rehabilitation). (Note: The vocational retraining plan major theme was not included in Table IV, to avoid redundancy with Table V.) Some suggestions selected for inclusion were unique, while others were offered by many workers, using varying phraseology. Inclusion in these tables is not intended to suggest degree of importance, but rather is intended to show the breadth of suggestions offered and topics covered. For each major theme, we describe constituent themes in detail. Percentages reported below reflect the prevalence of themes and major themes (i.e., for the WC system question, the percentage of 335 respondents mentioning the theme; for the vocational rehabilitation question, the percentage of 56 respondents). Theme percentages do not sum to 100%; many responses involved multiple coded themes and themes were not mutually exclusive.

Efficiency, access, services.

With respect to the WC system question, the 13 coded themes in this major theme were mentioned by 59.7% of respondents (n=200). Notably, reduce delays/simplify process/improve efficiency was by far the most frequent of all coded themes, mentioned by 34.9% of respondents (n=117). Of those 117, 38.5% (n=45) specifically mentioned delays with the health care authorization process, e.g., approvals for surgery or imaging. Numerous workers emphasized the need to reduce delays and speed up the process in general terms, and often linked those issues to delayed recovery and/or delayed RTW, e.g., “had I had the care I needed in a timely manner, my recovery would have been a lot faster”; “if injuries were treated in a timely manner, people would not suffer as much”; “every minute counts when injured…the faster medical help is received, the faster pain is relieved and the healing process can begin”; and “speed it up so people can get back to work faster.” Some suggested incorporating deadlines for WC response times, and for health care providers to complete paperwork. Numerous workers also emphasized the need to simplify the process and make it less confusing, including making it easier to open a claim, navigate the system, file an appeal, and reopen a closed claim. To that end, workers suggested “less paperwork,” “less red tape,” “less bureaucracy,” and “not having to jump through so many hoops.” The theme

of better/faster compensation was mentioned by 8.1% of respondents (n=27). This included higher compensation levels for temporary wage replacement and permanent disability, as well as improving and accelerating payment processes. Workers reported intense financial stress, e.g., “I was constantly stressed out about money and how I was to support my family”; “I almost lost my house”; “I had to get food stamps”; “I’ll have to work past retirement”; “I spent my 401K making up for lost wages”; and “often times I would receive my checks several days late, not being able to pay my rent and other bills on time.”

The theme of employer/WC should follow health care recommendations was mentioned by 6.3% of respondents to the WC system question (n=21), which most often was described as WC disagreeing with or not authorizing a recommended surgical or imaging procedure, sometimes one recommended by several health care providers. Several workers described hiring attorneys specifically to resolve this situation. In other cases, this was described as WC mandating certain health care protocols that delayed what the worker perceived as necessary care, e.g., requiring physical therapy prior to imaging/surgery. Workers also expressed frustration with conflicts of opinion between their own health care provider and the Independent Medical Examination (IME) physician. Although not specific to the WC system, workers mentioned also wanting their employers to follow their health care provider’s recommendations in terms of RTW timing. The theme of don’t fight legitimate WC claims was mentioned by 6.0% of respondents (n=20), who generally described an oppositional process, using phrases such as “fight tooth and nail,” “combative experience,” “such a battle,” and often linked this process to unnecessary recovery delays and economic hardship, e.g., “I had to spend thousands of dollars to get what I deserved”; “they make it a combative experience, delaying recovery”; “they make it so difficult to reopen a claim, that is what I am fighting with right now”; “everything has been a fight from day one.” One worker explained, “initially they declined my claim, by declining it, it caused a long appeal process and multiple visits to different medical providers to justify the treatment—it should have been a six-month process, which turned into a three-year process, and in those entire three years I remained injured.” The theme of don’t close WC claim too soon was mentioned by 4.8% of respondents (n=16), which was often described as cutting off access to ongoing or future medical treatment for the work injury (e.g., physical therapy to enable sustained RTW, pain injections, surgery). Workers described hiring attorneys specifically to reopen their claim due to medical needs. Several workers pointed out that when the claim is closed immediately upon RTW, exacerbations or other unforeseen issues can require reopening, and suggested that WC claims be kept open for some period of time after initial RTW.

The theme of more knowledgeable/skilled claim managers was mentioned by 3.9% of respondents to the WC system question (n=13), which most often was described as having a claim manager who was new to the job, or uninformed about procedures, about the specific claim, or about health/injury. One worker remarked that their self-insured employer’s third party administrator was in a different state, and seemed unfamiliar with Washington State laws. Workers suggested additional training for claim managers, and one suggested a focus on understanding job descriptions (with respect to RTW). Other less-frequently coded themes included: (1) reduce eligibility/participation barriers for RTW/vocational programs (n=8; e.g., “I could have used vocational training,” “making the programs easier to get

into"); (2) improve staff continuity (n=6; e.g., fewer claim managers involved with a claim, fewer transitions, more transparent hand-offs and vacation coverage); (3) WC staff should better understand/investigate workplace/job (n=6; e.g., understanding the injured worker's job description, investigating the injury/work situation, expecting the employer to obey the law as much as the employee); (4) more flexibility for special circumstances/ needs (n=5; e.g., adjust for pre-existing conditions, tailor RTW expectations to individual differences); (5) improve WC staffing/hire more claim managers (n=3; e.g., "hire more people," "overwhelmed case workers"); (6) follow up after WC claim closure (n=2; e.g., provide longer-term follow-up care, with options if still having problems); and (7) reduce subcontracting to vocational rehabilitation counselors (n=1; i.e., hire in-house).

With respect to the vocational rehabilitation question, the nine coded themes within the efficiency, access, services major theme were together mentioned by 41.1% of vocational rehabilitation participants (n=23); this major theme was a close second in frequency to the vocational retraining plan major theme, which is described further below (42.9%, n=24). The theme of more knowledgeable/skilled vocational rehabilitation counselors was mentioned by 12.5% of vocational rehabilitation participants (n=7). Some workers pointed to their vocational rehabilitation counselors' inadequate knowledge of or research into the job demand and earning potential of new occupations, and wanted them to be better prepared to identify new occupations that would fit the injured worker's specific situation and interests. Several workers commented that their vocational rehabilitation counselor "didn't really know her job," "did not fill out forms right," "was not well informed about the classes," and/or was not very effective. One worker suggested that WC screen vocational rehabilitation counselors before referring injured workers to them. The theme of reduce eligibility/participation barriers for vocational retraining was mentioned by 8.9% of vocational rehabilitation participants (n=5). Workers described various issues with access to vocational retraining, including eligibility and service-related barriers, and two workers described having a retraining plan developed that was later removed as an option. Notably, the coded theme of reduce delays/simplify process/improve efficiency was mentioned by only 7.1% of vocational rehabilitation participants, in contrast to the 34.9% of respondents overall who mentioned this theme with respect to the WC system. Counts and percentages for the remaining theme are reported in Figure 2; comments and suggestions within these themes were very similar to those made in response to the WC system question, except that the focus was naturally on vocational rehabilitation.

Social/navigational support, communication, respect.

With respect to the WC system question, the five coded themes in this major theme were mentioned by 34.6% of respondents (n=116). Better communication was suggested by 12.8% of respondents (n=43); comments in this theme were often very vague or general, but often included aspects such as responsiveness, style, and tone. Most of these comments focused on improving the communication by WC or the third-party administrator with injured workers, but five workers (11.6%) focused on communication between WC and employers, and six workers (14.0%) focused on communication between WC and health care providers. Three workers (7.0%) suggested specific communication mechanisms, which focused on preferring in-person or telephone communication over email, and any of these

mechanisms over letters. Beyond the general communication theme, 7.2% of respondents (n=24) mentioned the more specific provide more/clearer information about process theme. The social/navigational support theme was mentioned by 10.4% of respondents (n=35), with nearly half of those (n=17) specifically mentioning support from an attorney, advocate, or RTW coordinator as an alternative to inadequate support from the WC system/claim manager. The need for navigational/social support was often suggested in the context of describing negative aspects of the WC system/process, e.g., “confusing system,” “entire process was hell,” “no one on my side,” “the system is a racket,” “it’s a long and hellish process,” “WC was not helpful in any regard.” The fair/humane treatment theme was mentioned by 7.8% of respondents (n=26). This theme was dominated by descriptions of unfair or otherwise negative treatment by the WC system generally or claim managers more specifically. Multiple workers described, often in strikingly similar terms, feeling “harassed,” “threatened,” “shamed,” or “bullied” to RTW too soon, being treated as “numbers” rather than as people, or being “treated like criminals.” Systemic distrust and suspicion of injured workers was frequently mentioned, e.g., WC “treats everyone like they are going to abuse the system,” “wère treated like wère faking it,” “they treated me like I was not honest.” One worker theorized that “the people that work in that system for too long, they lose their compassion for injured people and jump to the conclusion that people are lying.” Several workers described feeling blamed for having been injured. Workers noted that “WC is designed to be confrontational,” and that WC is “a combative experience delaying recovery.” Another worker suggested that WC should “not write us off. They send you a check, they’re done, even if you’re not done and still hurting and not able to work.” The value workers over costs theme was mentioned by 3.0% of respondents (n=10). Workers described WC as a “safety net” that they paid into (unique to Washington State), but which then didn’t adequately value their needs once injured, e.g., “we pay into the system and they do everything in their power not to pay out”; “L&I is like all insurance companies, they don’t want to payout.” Several workers suggested that WC refocus on workers’ needs over employers’ needs or the “bottom line.”

With respect to the vocational rehabilitation question, the four coded themes within this major theme were together mentioned by 21.4% of vocational rehabilitation participants (n=12). Theme counts and percentages are reported in Figure 2. Comments and suggestions were very similar to those made in response to the WC system question, except that the focus for improvements in social/navigational support and communication was naturally on the vocational rehabilitation counselor. Specifically, many workers suggested they wanted closer interactions with their vocational rehabilitation counselor, or that the vocational rehabilitation counselor should prioritize listening to and understanding injured workers.

Law/system change.

With respect to the WC system question, 17.6% of respondents (n=59) made comments or suggestions assigned to the law/system change major theme, which contained three coded themes: (1) improve rating/IME system (n=34), (2) improve self-insurer/third party administrator system (n=11), and (3) system overhaul or other law/policy change (n=19). The latter category included both very specific suggestions (e.g., start a safety panel, claims should automatically stay open for one year after RTW) and very high-level

suggestions (e.g., complete overhaul, get rid of WC completely, replace WC with socialized medical system). With respect to the vocational rehabilitation question, only one vocational rehabilitation participant (1.8%) made a comment assigned to this major theme; the comment—that the system needs to change to actually help people—was quite general in nature, but also evocative.

Physical rehabilitation/health care.

With respect to the WC system question, the physical rehabilitation/health care theme/major theme was mentioned by 11.3% of respondents (n=38). The majority of those (n=21) made comments/suggestions related to better quality health care, including: facilitate referrals to appropriate and competent physicians/surgeons/physical therapists, specifically those who understand the WC system; ensure better assessment/evaluation before starting treatment; decrease reliance on protocols (tailor treatment to individual worker); provide more support with medical mishaps/mistakes; and provide a more comprehensive approach to health care. One worker suggested that WC should drop providers who “treat patients like garbage.” Workers also frequently suggested improved/expanded WC coverage of certain treatments, such as physical therapy, chiropractic care, Pilates, mental health services/counseling, and a less restrictive medication formulary (n=12). Five workers recommended better access to providers, describing issues such as few providers accepting WC, tight provider schedules, or not being offered any choice of providers. Two workers mentioned the need to provide/continue regular health insurance in addition to WC coverage, to facilitate routine and preventive health care.

With respect to the vocational rehabilitation question, the physical rehabilitation/health care theme/major theme was mentioned by 8.9% of vocational rehabilitation participants (n=5). Most suggestions were focused on better access to or quality of physical rehabilitation; one worker emphasized the lack of and need for mental health care and emotional support during vocational rehabilitation.

RTW issues.

With respect to the WC system question, the theme/major theme of RTW issues was mentioned by 9.3% of respondents (n=31). Comments were focused on not forcing RTW too soon (i.e., before adequate recovery), and/or on support for job re-entry (e.g., assistance with job search, assistance with finding an appropriate job with adequate pay). One worker succinctly expressed a recurrent sentiment as: “Provide help for injured workers to get a job. Don`t leave them hanging.”

With respect to the vocational rehabilitation question, the RTW issues theme/major theme was mentioned by 14.3% of vocational rehabilitation participants (n=8). As for the WC system question, comments were focused on timing of and support for RTW; the majority of suggestions related to wanting the system to focus on identifying/facilitating a (physically appropriate) RTW job more comparable to the pre-injury job, in terms of pay level or fit with interest/experience.

Vocational retraining plan.

With respect to the WC system question, three respondents (0.9%) suggested more worker choice/input to the vocational training plan (no other themes emerged within this major theme). In contrast, when vocational rehabilitation participants were questioned specifically with respect to vocational rehabilitation, vocational retraining plan was the most frequent major theme; grouped together, the two coded themes within this major theme were mentioned by 42.9% of vocational rehabilitation participants (n=24): (1) more worker choice/input to the vocational retraining plan (n=19), and (2) higher quality/longer duration vocational retraining plans (n=6). Notably, more worker choice/input to the vocational retraining plan was mentioned by 33.9% of vocational rehabilitation participants, and was by far the most frequent of all vocational rehabilitation-related themes.

4 DISCUSSION

This study provides important new information regarding injured workers' appraisals of and suggestions to improve WC-based RTW programs and the WC system as a whole. The majority of workers appraised RTW programs favorably; for example, 62.5% of vocational rehabilitation participants reported that vocational rehabilitation helped them RTW, and 51.7% reported that it helped them stay at work. Relatively few respondents had participated in each of the three WC RTW programs (i.e., Stay at Work, Preferred Worker, vocational rehabilitation), and we were unable to assess outcomes beyond self-reported appraisals. However, in related studies using administrative data, we found that participation in the Stay at Work program was associated with significantly and substantially better employment outcomes, compared to those who did not participate.[5] We also found that completion of a vocational retraining plan, compared to those who did not complete their plan, was associated with significantly and substantially better employment outcomes,[5] and with lower reinjury rates.[6]

Although most respondents reported positive impacts from WC-based RTW program participation, many workers suggested improvements. Overall, 28.0% of 582 respondents reported that no change was needed to the WC system, while 57.6% (N=335) provided suggestions or critiques. Among 120 vocational rehabilitation participants, 35.8% reported that no change was needed to vocational rehabilitation, while 46.7% (N=56) provided critiques/suggestions. Respondents offered numerous constructive suggestions for system improvements. Some were very specific, while others were very general or high-level. Some suggestions were unique, while others were offered by many workers. With respect to the WC system overall, the most frequent theme—mentioned by 34.9%—was reduce delays/simplify process/improve efficiency in the WC system. With respect to vocational rehabilitation, the most frequent theme—mentioned by 33.9%—was more worker choice/input into the vocational retraining plan. This echoes the most frequent suggestion from workers participating in an earlier evaluation of the vocational rehabilitation program in Washington State (i.e., there should be more training choices, more worker input into the retraining goal, and/or a better fit of the retraining goal with the workers' experience and abilities).[16] Similar issues have been reported in other jurisdictions. For example, a vocational rehabilitation evaluation in New Zealand found that nearly a third of claimants

surveyed did not think their own goals were taken into account, and nearly a third did not feel fully involved in setting goals.[15] A qualitative study of WC-based vocational rehabilitation in Canada described the sometimes illusory and constrained nature of worker choice in this arena.[14]

Many of the themes discussed by respondents related to the more general concepts of social insurance literacy and administrative burden. Social insurance literacy has been defined as the extent to which individuals can obtain, understand and act on information in a social insurance system, related to the comprehensibility of the information provided by the system.[32] This concept emerged repeatedly, cutting across several coded themes, including reduce delays/simplify process/improve efficiency, social/navigational support, and others. Administrative burden has been described as consisting of three categories of costs experienced by individuals interacting with government systems: (1) learning costs (e.g., investigating eligibility and filing processes), (2) compliance costs (e.g., burdensome paperwork), and (3) psychological costs (e.g., stress or stigma experienced while interacting with the system).[20,21] Despite numerous studies highlighting system deficiencies and onerous administrative burdens imposed on workers by the WC system, which can interfere with successful physical, mental, and economic recovery, these issues remain prevalent and persistent.[2,10,14,16,33–36] With regard to WC, administrative burden can serve the systemic purpose of limiting the costs to employers that are assessed via WC insurance premiums, while focusing public attention on excluding ineligible workers from compensation (versus inclusively identifying eligible workers for compensation).[20] Administrative burden is one of the mechanisms through which much of the economic burden of WC is diverted from employers to workers and their families, to other health care and disability insurers, and to the social safety net.[22] Administrative burden also has the potential to directly and negatively affect the health of injured workers via the accumulated stress induced by its psychological costs—a potential outcome at odds with the goal of promoting safe and sustained RTW.[20] Workers' suggestions and critiques often related directly to one or more of the three categories of administrative burden. For example, the provide more/clearer information about process theme addresses learning costs, the reduce delays/simplify process/improve efficiency theme addresses compliance costs, and the fair/humane treatment theme addresses psychological costs. Notably, workers often directly linked the administrative burdens they described to negative impacts on health or recovery time.

On the other hand, many worker suggestions were not directly related to administrative burden. For example, many workers suggested improvements in health care quality or in the type of health care they received, beyond WC system-regulated access or coverage issues. Yet, even in those cases, workers often suggested ways that the WC system could act to improve the situation, e.g., doing better screening or not making referrals to health care providers, independent medical examiners, or vocational rehabilitation counselors who provide low-quality services.

Although it is not feasible to discuss each theme in depth, a few additional areas merit discussion based on current trends relevant to WC research and system change. For example, several workers suggested that WC cover mental health services or counseling to assist with stress, transitions, and recovery related to having a permanent injury. This aligns

with growing research attention on the downstream mental health impacts of work-related injury—impacts which may in part be direct health impacts of the injury, but may also be preventable sequelae of WC-related administrative burdens and their psychological costs,[23,37–40] or of post-injury economic burdens, which were described with alarming frequency and stress.[4,5,22]

A large number of workers (N=45) emphasized the need for easier and earlier access to specific procedures, particularly imaging and surgery. Workers reported experiences with protocol mandates or long delays in the health care authorization process that they perceived to be both unnecessary and responsible for delays in recovery and RTW. Some workers commented that mandating physical therapy before approving other interventions also did them physical harm. These mandates and approval delays were generally attributed to WC system delays, rules, or inattention, or in some cases to poor communication between WC and providers. L&I has issued a number of guidelines (e.g., lumbar fusion, advanced imaging, pain treatment) intended to encourage or mandate best practices in clinical care, and there is evidence—at least for certain guidelines—of resulting population-level improvements.[41–44] However, the purpose of and rationale for such guidelines may not be transparent to workers, or workers may be hearing disparate opinions from their health care providers. It is possible that making pertinent guideline rationale more directly and transparently available to affected injured workers might help to reduce demand for treatments or procedures that are not evidence-based. On the other hand, though guidelines may be beneficial on average, a recurrent comment was that the system needed to be more personalized and take individual worker circumstances into better account.

More than a few workers commented that the permanent impairment rating system needs improvement or overhaul. In particular, several specifically suggested that chronic pain should be considered when rating impairment/disability. This suggestion resonates with a recent paper describing the historical origins of excluding pain from compensation, and concluding that the resulting WC systems fail to address certain harms and may contribute to perceptions of injustice and adverse health outcomes.[45]

The findings of this study suggest that, although the majority of workers appraised WC-based RTW programs favorably, there is also substantial room for improvement in workers' experience with the WC system. In addition, injured workers' feedback may reflect opportunities to reduce administrative burden and to improve health and RTW outcomes. Even if these findings sometimes reflected misperceptions rather than system inadequacies, or might be attributable to factors beyond the purview of the WC system, such perceptions could be expected to interfere with worker satisfaction, the recovery process, and RTW outcomes.[2,19] For example, in a Washington State study focused on satisfaction with health care related to the workplace injury, injured workers who reported less-favorable treatment experience had 3.5 times the odds (95% CI: 1.20, 10.95) of being on long-term time-loss compensation for work disability (6 or 12 months after filing a claim), compared to workers whose treatment experience was more positive.[19] Thus, the identification and implementation of system improvements that address injured workers' perceptions have potential to improve both satisfaction and RTW outcomes.

Many of the suggestions made by injured workers aligned with system factors that have either an existing evidence base or inherent cost incentives supporting attention for quality improvement, such as reducing administrative burden, improving efficiency, supporting best practices in clinical care, etc. Others, particularly novel suggestions, may warrant further research. L&I has several standing stakeholder committees that include labor representatives, but the route for individual injured workers to provide input for system improvement is not obvious. Amplifying workers' voices during intervention design, implementation, and evaluation is crucial.[24,46]

There has been limited research specific to injured workers' satisfaction with the WC system or WC-based RTW programs. Surveys of injured worker satisfaction conducted in Washington State and California focused on WC-related health care, rather than on the WC system itself.[19,47] Notable exceptions include an evaluation of the Vocational Improvement Program in Washington State,[16,17] a set of qualitative studies conducted in Ontario[2,10,14] and the evaluation of New Zealand's vocational rehabilitation system (covering both occupational and non-occupational injuries)[15] that together offer an unusual in-depth window into workers' experiences and assessments. These studies elucidate numerous challenges and barriers to meeting injured workers' needs and goals within WC and vocational rehabilitation systems, such as time constraints, conflicting values and priorities, power imbalances, restrictive rules and system-driven expectations, the lack of outcome-based evidence regarding particular interventions, and barriers to meaningful and effective claimant involvement in goal-setting and decision-making. Despite jurisdictionally widespread quality improvement efforts, there remains a great deal of room for vocational rehabilitation and WC system improvement internationally.[2,13,33,36,48,49] The current study adds to the existing literature by presenting potential improvements suggested by a large number of workers, organized by theme.

4.1 Strengths and limitations

The primary strength of this study is that the use of open-ended questions enabled us to present potential WC system improvements from the standpoint of the worker.[24] Many studies, including most of our own related studies, focus on more easily available administrative outcomes (e.g., reinjury via WC claim filing, and work disability via duration of compensated time loss or administrative wage files). Administrative outcomes are generally framed from the standpoint of impact on WC system and employer costs, though they may also benefit workers. Even when fielding worker surveys, the topics covered by survey instruments and closed-ended questions generally focus on existing frameworks, which may serve to prioritize WC system and employer perspectives over those of workers; workers' primary concerns may lie elsewhere. In this study, we did not use a priori frameworks when coding responses to the open-ended questions; rather we allowed workers' own priorities for WC system improvement and insights into potential levers for change to emerge from the data. The open-ended questions we included enabled the presentation of workers' voices with respect to the factors they considered most important to their wellbeing. Another strength was that the survey was focused on the first year after claim closure—a time period which is high-risk for reinjury and job loss, and which may also determine long-term employment prospects.[5,6] Finally, this study involved a large

population-based sample, larger than typical for qualitative research, and the nonresponse assessment revealed no consequential bias. Our inclusion of workers with any type and degree of permanent impairment enhances generalizability to a broad range of injuries and conditions.

On the other hand, at least three features of this survey sample distinguish it from the larger population of workers with a PPD award. First, by design, all workers included in this survey had RTW at least briefly. This likely impacted worker appraisals of the WC system and RTW programs. In surveys conducted for an evaluation of the Washington State vocational rehabilitation system (2009–2011), RTW status was highly associated with satisfaction ratings.[16] Second, survey respondents reported a high prevalence of union membership (42.2%)—more than double the estimated 19.8% of Washington State employed workers who were union members in 2018, and more than quadruple the estimated 10.5% for the U.S. overall.[50] The high level of union membership may indicate relatively low job precarity among this sample, as well as relatively high potential for union support and representation through the RTW process.[51] We did not have union membership status for survey non-respondents, so we could not be certain whether response bias was a factor; however, we did not observe notable differences in the many other characteristics used to assess response bias.[4] Speculative mechanisms that might account for overrepresentation of union members in the underlying eligible survey sample, even in the absence of response bias, include: (1) if more hazardous types of jobs are more likely to have union representation, union members might more often be injured; (2) union members might feel safer reporting an injury and filing a WC claim; (3) union members might have better access to legal resources, which might facilitate obtaining a PPD award; and (4) union members may be more likely to RTW after a PPD award, which was an eligibility criterion for this survey. Even in the absence of response bias with respect to union membership, our sample certainly does not reflect the prevalence of union membership in the general workforce. It is possible that the more general workforce might have less positive appraisals of WC and RTW programs, related to higher job precarity, or to less support or representation in accessing compensation after incurring a work injury. Third, this survey was conducted only in English, which likely resulted in a less diverse set of respondents compared to all workers with a PPD award. We could not test this supposition because the administrative WC data did not include race/ethnicity; however, 80.4% of respondents were non-Latino White. Potential overrepresentation of non-Latino White workers may also be reflective of broader structural issues related to WC coverage and access. Specifically, workers from racialized or otherwise marginalized groups may face larger barriers to accessing WC benefits after experiencing a work-related permanent impairment, due to coverage exclusions for certain types of work (e.g., domestic workers, independent contractors) or other barriers to access (e.g., stigma, fear of retaliation).[52] It is unclear what impact an increased representation of racialized workers or precariously-employed workers might have had on study findings.

4.2 Conclusions

Although most injured workers with permanent impairments reported positive impacts from participating in WC-based RTW programs, many workers suggested improvements. Reduce

delays/simplify process/improve efficiency was the most frequent theme with respect to the WC system overall—mentioned by 34.9%. More worker choice/input into the vocational retraining plan was the most frequent theme with respect to vocational rehabilitation—mentioned by 33.9% of vocational rehabilitation participants. Addressing worker-suggested WC system and WC-based RTW program improvements may promote safe and sustained RTW, which is essential for worker health and economic stability.

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The data that support the findings of this study are not available for data-sharing due to privacy and third party restrictions.

REFERENCES

1. Murphy G, Patel J, Weiss E, Boden LI. Workers' Compensation: Benefits, Costs, and Coverage (2018 data). Washington, DC: National Academy of Social Insurance; 2020.
2. MacEachen E, Kosny A, Ferrier S, Chambers L. The "toxic dose" of system problems: why some injured workers don't return to work as expected. J Occup Rehabil. 2010;20(3):349–366. [PubMed: 20140752]
3. Wickizer TM, Franklin G, Plaeger-Brockway R, Mootz RD. Improving the quality of workers' compensation health care delivery: the Washington State Occupational Health Services Project. Milbank Quarterly. 2001;79(1):5–33.
4. Sears JM, Schulman BA, Fulton-Kehoe D, Hogg-Johnson S. Workforce reintegration after work-related permanent impairment: a look at the first year after workers' compensation claim closure. J Occup Rehabil. 2021;31(1):219–231. [PubMed: 32651725]
5. Sears JM, Fulton-Kehoe D, Hogg-Johnson S. Initial return to work and long-term employment patterns: associations with work-related permanent impairment and with participation in workers' compensation-based return-to-work programs. Am J Ind Med. 2021;64(5):323–337. [PubMed: 33616241]
6. Sears JM, Schulman BA, Fulton-Kehoe D, Hogg-Johnson S. Estimating time to reinjury among Washington State injured workers by degree of permanent impairment: using state wage data to adjust for time at risk. Am J Ind Med. 2021;64(1):13–25. [PubMed: 33210293]
7. Butler R, Johnson W, Baldwin M. Managing work disability: why first return to work is not a measure of success. Industrial and Labor Relations Review. 1995;48(3):452–469.
8. Young AE. Return to work following disabling occupational injury--facilitators of employment continuation. Scand J Work Environ Health. 2010;36(6):473–483. [PubMed: 20414630]
9. Price J, Shi J, Lu B, et al. Nonoccupational and occupational injuries to US workers with disabilities. Am J Public Health. 2012;102(9):e38–46. [PubMed: 22742060]
10. MacEachen E, Kosny A, Ferrier S, et al. The 'ability' paradigm in vocational rehabilitation: challenges in an Ontario injured worker retraining program. J Occup Rehabil. 2012;22(1):105–117. [PubMed: 21894535]

11. de Jong M, de Boer AG, Tamminga SJ, Frings-Dresen MH. Quality of working life issues of employees with a chronic physical disease: a systematic review. J Occup Rehabil. 2015;25(1):182–196. [PubMed: 24832893]
12. Casey R, Ballantyne PJ. Diagnosed chronic health conditions among injured workers with permanent impairments and the general population. J Occup Environ Med. 2017;59(5):486–496. [PubMed: 28486345]
13. Barth P, Grob H, Harder H, Hunt A, Silverstein M. Washington Pension System Review, Upjohn Institute Technical Report No. 08–025. Prepared for State of Washington, Department of Labor & Industries, Contract No. K1018. November 12, 2008. 2008; http://research.upjohn.org/cgi/viewcontent.cgi?article=1028&context=up_technicalreports. Accessed April 30, 2017.
14. MacEachen E, Kosny A, Ferrier S, et al. The ideal of consumer choice: challenges with implementation in an Ontario injured worker vocational retraining program. Disabil Rehabil. 2013;35(25):2171–2179. [PubMed: 23614377]
15. McPherson K Evaluation of Vocational Rehabilitation under the IPRC Act 2001. 2007. 2007; http://armstrongthompson.co.nz/evaluation-of-vocational-rehabilitation-under-the-iprc-act-2001-kathryn-mcpherson-phd-2007/. Accessed June 11, 2021.
16. Sears JM, Wickizer TM, Schulman BA. Injured workers' assessment of vocational rehabilitation services before and after retraining. J Occup Rehabil. 2014;24(3):458–468. [PubMed: 24065344]
17. Sears JM, Wickizer TM, Schulman BA. Improving vocational rehabilitation services for injured workers in Washington State. Evaluation and Program Planning. 2014;44:26–35. [PubMed: 24509051]
18. Sitzia J, Wood N. Patient satisfaction: A review of issues and concepts. Soc Sci Med. 1997;45(12):1829–1843. [PubMed: 9447632]
19. Wickizer TM, Franklin G, Fulton-Kehoe D, Turner JA, Mootz R, Smith-Weller T. Patient satisfaction, treatment experience, and disability outcomes in a population-based cohort of injured workers in Washington State: implications for quality improvement. Health Services Research. 2004;39(4 Pt 1):727–748. [PubMed: 15230925]
20. Herd P, Moynihan D. How Administrative Burdens Can Harm Health. Health Affairs - Health Policy Brief [2020; https://www.healthaffairs.org/do/10.1377/hpb20200904.405159/full/.
21. Moynihan D, Herd P, Harvey H. Administrative burden: learning, psychological, and compliance costs in citizen-state interactions. Journal of Public Administration Research and Theory. 2015;25(1):43–69.
22. Sears JM, Edmonds AT, Coe NB. Coverage gaps and cost-shifting for work-related injury and illness: Who bears the financial burden? Med Care Res Rev. 2020;77(3):223–235. [PubMed: 31018756]
23. Orchard C, Carnide N, Smith P, Mustard C. The association between case manager interactions and serious mental illness following a physical workplace injury or illness: a cross-sectional analysis of workers' compensation claimants in Ontario. J Occup Rehabil. Online First: 4, 5, 2021; DOI: 10.1007/s10926-021-09974-7.
24. Eakin JM. Towards a 'standpoint' perspective: health and safety in small workplaces from the perspective of the workers. Policy and Practice in Health and Safety. 2010;8(2):113–127.
25. Franklin GM, Wickizer TM, Fulton-Kehoe D, Turner JA. Policy-relevant research: when does it matter? NeuroRx. 2004;1(3):356–362. [PubMed: 15717038]
26. Franklin GM, Fulton-Kehoe D. Outcomes research in Washington state workers' compensation. Am J Ind Med. 1996;29(6):642–648. [PubMed: 8773724]
27. Washington State Department of Labor and Industries. Medical Examiners' Handbook. Publication F252-001-000. Olympia, WA 2019.
28. StataCorp. Stata Statistical Software: Release 15. College Station, TX: StataCorp LLC; 2017.
29. Washington State Department of Labor and Industries. Workers' Compensation Benefits: A Guide for Injured Workers. Publication F242-104-000 [03-2012]. 2012; http://www.lni.wa.gov/IPUB/242-104-000.pdf. Accessed July 17, 2018.
30. Hsieh HF, Shannon SE. Three approaches to qualitative content analysis. Qual Health Res. 2005;15(9):1277–1288. [PubMed: 16204405]

31. Dedoose Version 8.3.35. Desktop application for managing, analyzing, and presenting qualitative and mixed method research data (www.dedoose.com). Los Angeles, CA: SocioCultural Research Consultants, LLC; 2020.
32. Stahl C, Karlsson EA, Sandqvist J, et al. Social insurance literacy: a scoping review on how to define and measure it. Disabil Rehabil. 2021;43(12):1776–1785. [PubMed: 31589073]
33. Franklin G, Wickizer T, Coe N, Fulton-Kehoe D. Workers compensation: poor quality health care and the growing disability problem in the United States. Am J Ind Med. 2015;58(3):245–251. [PubMed: 25331746]
34. Lippel K Workers describe the effect of the workers' compensation process on their health: a Quebec study. Int J Law Psychiatry. 2007;30(4–5):427–443. [PubMed: 17692917]
35. Spieler EA, Burton JF Jr. The lack of correspondence between work-related disability and receipt of workers' compensation benefits. Am J Ind Med. 2012;55(6):487–505. [PubMed: 22271439]
36. Strunin L, Boden LI. The workers' compensation system: worker friend or foe? Am J Ind Med. 2004;45(4):338–345. [PubMed: 15029565]
37. Carnide N, Franche RL, Hogg-Johnson S, et al. Course of depressive symptoms following a workplace injury: a 12-month follow-up update. J Occup Rehabil. 2016;26(2):204–215. [PubMed: 26324252]
38. Orchard C, Carnide N, Mustard C, Smith PM. Prevalence of serious mental illness and mental health service use after a workplace injury: a longitudinal study of workers' compensation claimants in Victoria, Australia. Occup Environ Med. 2020;77(3):185–187. [PubMed: 31896616]
39. Orchard C, Carnide N, Smith P. How does perceived fairness in the workers' compensation claims process affect mental health following a workplace injury? J Occup Rehabil. 2020;30(1):40–48. [PubMed: 31302817]
40. MacEachen E, McDonald E, Neiterman E, et al. Return to work for mental ill-health: a scoping review exploring the impact and role of return-to-work coordinators. J Occup Rehabil. 2020;30(3):455–465. [PubMed: 32002709]
41. Elam K, Taylor V, Ciol MA, Franklin GM, Deyo RA. Impact of a worker's compensation practice guideline on lumbar spine fusion in Washington State. Medical Care. 1997;35(5):417–424. [PubMed: 9140332]
42. Wickizer TM, Franklin G, Gluck JV, Fulton-Kehoe D. Improving quality through identifying inappropriate care: the use of guideline-based utilization review protocols in the Washington State Workers' Compensation System. J Occup Environ Med. 2004;46(3):198–204. [PubMed: 15091281]
43. Graves JM, Fulton-Kehoe D, Jarvik JG, Franklin GM. Early imaging for acute low back pain: one-year health and disability outcomes among Washington State workers. Spine (Phila Pa 1976). 2012;37(18):1617–1627. [PubMed: 22415000]
44. Sears JM, Haight JR, Fulton-Kehoe D, Wickizer TM, Mai J, Franklin GM. Changes in early high-risk opioid prescribing practices after policy interventions in Washington State. Health Serv Res. 2021;56(1):49–60. [PubMed: 33011988]
45. Quintner J, Galbraith M. The Great Tradeoff in workers' compensation: perceptions of injustice by those experiencing persistent pain. Pain Med. Online First: 4 2, 2021; DOI: 10.1093/pm/pnab123.
46. Sears JM, Hogg-Johnson S. Enhancing the policy impact of evaluation research: a case study of nurse practitioner role expansion in a state workers' compensation system. Nursing Outlook. 2009;57(2):99–106. [PubMed: 19318169]
47. Pourat N, Kominski G, Roby D, Cameron M. Satisfaction with care and perceptions of quality among injured workers in California's Workers' Compensation system. J Occup Environ Med. 2007;49(11):1249–1256. [PubMed: 17993929]
48. Stahl C, Mussener U, Svensson T. Implementation of standardized time limits in sickness insurance and return-to-work: Experiences of four actors. Disabil Rehabil. 2012;34(16):1404–1411. [PubMed: 22200168]
49. Dworsky M, Broten N. How Can Workers' Compensation Systems Promote Occupational Safety and Health? Stakeholders Views on Policy and Research Priorities. Santa Monica, CA: RAND Corporation; 2018.

50. Bureau of Labor Statistics (BLS). Union Membership (Annual) News Release, 2018. https://www.bls.gov/news.release/archives/union2_01182019.htm. Accessed January 21, 2021.

51. Edmonds AT, Sears JM, O'Connor A, Peckham T. The role of nonstandard and precarious jobs in the well-being of disabled workers during workforce reintegration. Am J Ind Med. 2021;64(8):667–679. [PubMed: 34003515]

52. Azaroff LS, Lax MB, Levenstein C, Wegman DH. Wounding the messenger: the new economy makes occupational health indicators too good to be true. Int J Health Serv. 2004;34(2):271–303. [PubMed: 15242159]

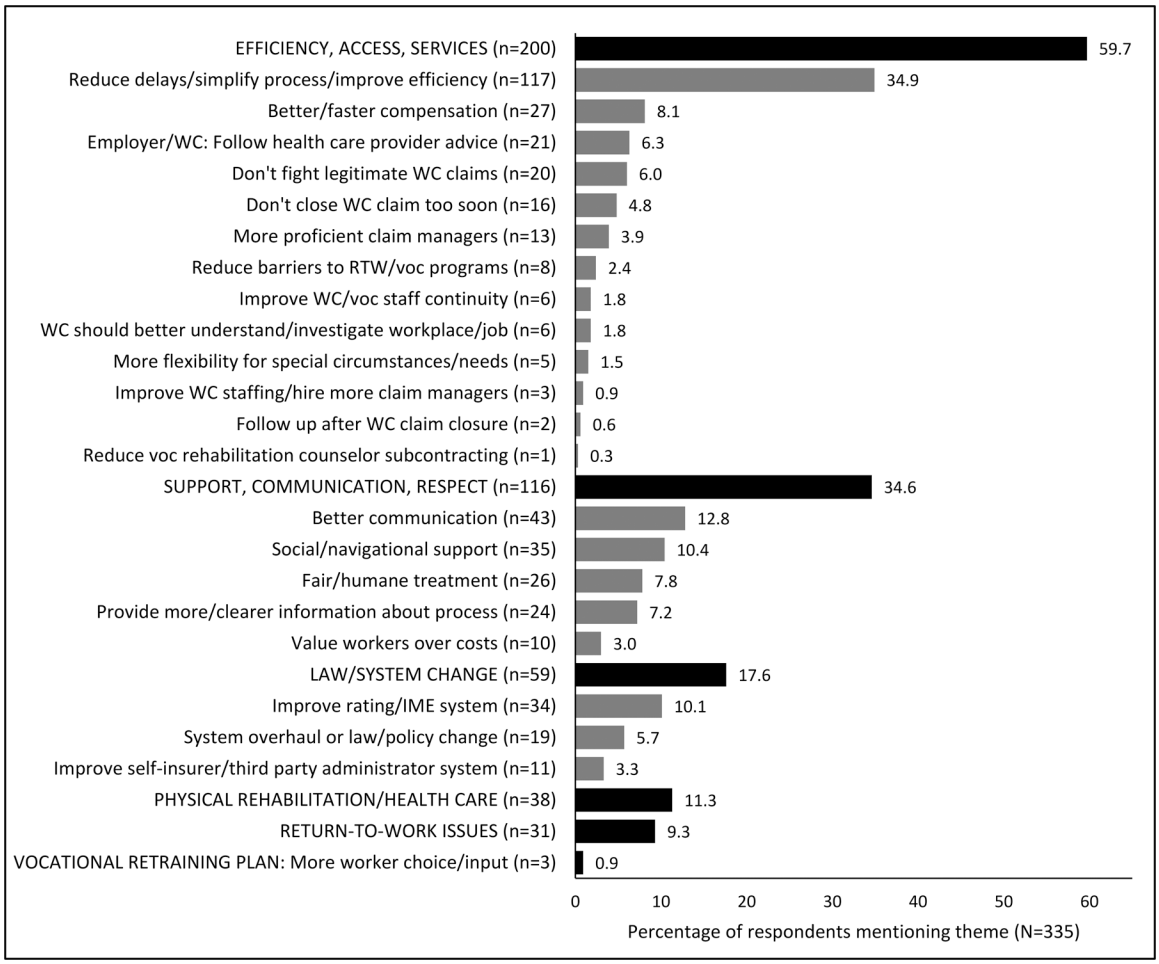

FIGURE 1. Workers' compensation system suggestions (N=335).

Theme and major theme frequencies for coded open-ended responses to "If you could suggest one change to the workers' compensation system that would help you to continue working or prevent reinjury, what would it be?" Coded themes (sentence case and grey bars) are grouped in descending frequency within their respective major themes (uppercase and black bars). Some major themes represented only one coded theme, and thus are not followed by grey bars. Percentages do not sum to 100%; many responses involved multiple coded themes and themes were not mutually exclusive. Abbreviations: IME, Independent Medical Examination; RTW, return to work; voc, vocational; WC, workers' compensation.

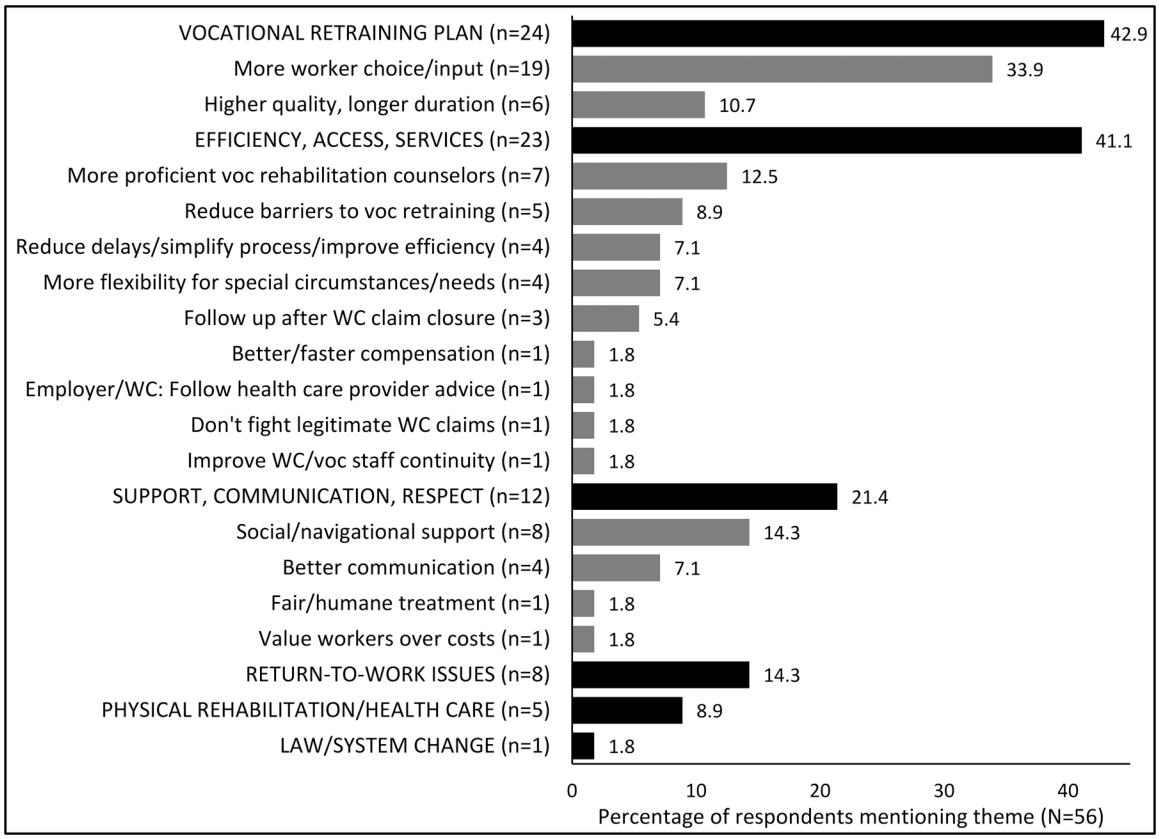

FIGURE 2. Vocational rehabilitation suggestions (N=56).

Theme and major theme frequencies for coded open-ended responses to “If you could suggest one change to the vocational rehabilitation system that would help you to continue working or prevent reinjury, what would it be?” Coded themes (sentence case and grey bars) are grouped in descending frequency within their respective major themes (uppercase and black bars). Some major themes represented only one coded theme, and thus are not followed by grey bars. Percentages do not sum to 100%; many responses involved multiple coded themes and themes were not mutually exclusive. Abbreviations: voc, vocational; WC, workers’ compensation.

TABLE I

Worker, injury, and claim characteristics for Washington State workers surveyed about a year after workers' compensation claim closure with a permanent partial disability (PPD) award (N=582)

Characteristic	Data Source	N (%)
Gender	Admin	
Men		390 (67.0%)
Women		192 (33.0%)
Age when interviewed	Admin	
19–24		13 (2.2%)
25–34		62 (10.7%)
35–44		114 (19.6%)
45–54		160 (27.5%)
55–64		200 (34.4%)
65–73		33 (5.7%)
Educational level	Survey	
Not high school graduate/no GED		23 (4.0%)
High school graduate/GED		144 (24.8%)
Some college		297 (51.2%)
College graduate		116 (20.0%)
Pre-tax earnings during past year	Survey	
< 20,000 USD		75 (13.4%)
20,000 to < 40,000 USD		124 (22.1%)
40,000 to < 60,000 USD		148 (26.4%)
60,000 to < 80,000 USD		88 (15.7%)
80,000+ USD		125 (22.3%)
Race/ethnicity	Survey	
White/Caucasian		468 (80.4%)
Black/African American		20 (3.4%)
Asian		15 (2.6%)
American Indian/Alaska Native		7 (1.2%)
Native Hawaiian/Pacific Islander		9 (1.5%)
Latino		34 (5.8%)
Multiple		20 (3.4%)
Not reported		9 (1.5%)
Nativity	Survey	
Born in U.S.		527 (90.9%)
Born outside U.S.		53 (9.1%)
Union membership when interviewed	Survey	
Yes		245 (42.2%)
No		335 (57.8%)
Primary body part for PPD award	Admin	
Upper extremity		279 (47.9%)

Characteristic	Data Source	N (%)
Lower extremity		176 (30.2%)
Spine		94 (16.2%)
Mental health		6 (1.0%)
Other		27 (4.6%)
WC coverage type	Admin	
State Fund		366 (62.9%)
Self-Insured		216 (37.1%)

Admin, administrative workers' compensation data; GED, General Educational Development certificate; PPD, permanent partial disability; U.S., United States; USD, United States Dollar; WC, workers' compensation.

Note: Due to rounding, column percentages do not always sum to exactly 100%.

TABLE II

Worker appraisal of workers' compensation-based return-to-work programs

Program/subset	N	Program helped me return to work (vs. No/Don't Know)		Program helped me stay at work (vs. No/Don't Know)	
		n	%	n	%
Stay at Work[a]	26	16	61.5%	19	73.1%
Preferred Worker[b]	22	12	54.6%	11	50.0%
Vocational rehabilitation,[c] if received any vocational services	120	75	62.5%	62	51.7%
Vocational rehabilitation,[c] if vocational retraining plan was developed	61	47	77.1%	38	62.3%
Vocational rehabilitation,[c] if RTW in an occupation aligned with retraining goal	26	25	96.2%	20	76.9%

[a] Reimbursement to employers for offering light-duty job arrangements.

[b] Incentives to employers for hiring workers with permanent impairments.

[c] Services intended to assist injured workers to overcome return-to-work barriers (e.g., assessment, work hardening, vocational retraining plan with new occupational goal).

TABLE III

Response option frequencies for two open-ended questions: If you could suggest one change to the [workers' compensation/vocational rehabilitation] system that would help you to continue working or prevent reinjury, what would it be?

Question/subset	Total	No change needed		Codable response		Vague/unclear response		Don't know/no suggestions	
	N	n	Row %	n	Row %	n	Row %	n	Row %
Workers' compensation	582	163	28.0	335	57.6	24	4.1	60	10.3
Vocational rehabilitation, if received any vocational services	120	43	35.8	56	46.7	9	7.5	12	10.0
Vocational rehabilitation, if vocational retraining plan developed	61	25	41.0	27	44.3	4	6.6	5	8.2
Vocational rehabilitation, if RTW in occupation aligned with retraining goal	26	13	50.0	8	30.8	2	7.7	3	11.5

RTW, returned to work.

TABLE IV

Examples of worker suggestions for WC system improvements, by major theme

Major theme	Worker suggestions
Efficiency, access, services	Simplify the complicated process/paperwork that makes everything much more difficult
	Make it easier to report (hard to find website, where to file)
	Would like someone to walk through accident at site because it`s so hard over the phone
	Focus investigation more on companies, less on employees
	Have the WC system investigate the injury/situation themselves so that investigation is unbiased
	The system needs to become more efficient, every minute counts when injured
	Pay injured workers sooner
	Help people find temporary work that won't exacerbate their injury while waiting on WC claim
	The system should be more compliant with the doctor's orders and recommendations
	Make it easier to get medical imaging taken care of earlier in the process
	Better education of doctors and their offices about the WC claims would be helpful
	Make sure the case manager knows the whole situation and rules
	They need to hire more people and not put so many cases on one overwhelmed case worker
	The system needs to be more case-by-case/personalized
	Make it easier to: get into the programs; appeal a decision; reopen claims when they're closed
	More follow up would be good, and options if still having problems
Social/navigational support, communication, respect	More compassion and understanding for injured worker; less blaming the worker
	Caseworkers need to be proactive in contacting clients and letting them know what's going on
	More willingness to communicate, talk on phone or face to face or email, not letters
	A patient advocate would be helpful to navigate through the confusing system
	Need more support with medical mishaps/mistakes
	Continuity with one case worker would help; communicate with worker about vacation coverage
	More contact between the case workers
	More communication with management of company [employer]
	Improve communication breakdowns between doctors and WC (paperwork and fax system)
	Improve communication between self-insured provider and WC
	The web site needs to have more clear, precise explanations of what forms to fill out
	Use language that everyone can understand; shouldn't need a lawyer to understand language
	Some sort of a manual or class that provides more information about your rights and options
	Provide explanation for why claims are denied
	Be transparent on the level of financial compensation you're going to receive
Law/system change	Don't require use of sick time and vacation time for work injury
	Claims should automatically stay open for one year after RTW [for follow-up]
	Change the way they do the IME evaluation; more in-depth examinations; more competent IMEs
	Change rating guidelines; include pain in disability criteria; re-evaluate categorization of injuries
	Washington needs to get in line with rest of United States in terms of how they rate disability
	I would do away with the entire system; socialized medicine would fix everything
Physical rehabilitation/health care	More options/availability for health care, physical therapy, chiropractor, counseling
	Have better quality doctors available that understand the WC system

Major theme	Worker suggestions
	Longer physical therapy sessions; extend the [length of] time you can do physical therapy
	Have prescribed medication be available to the worker without having to switch medications
	More comprehensive approach to health care after the injury and continued care
	Have health benefits while you're injured -- regular health care not related to the injury
Return-to-work issues	Understand the job description, to avoid sending people back to work too early
	Claim managers shouldn't push you to RTW while denying programs that would help you RTW
	Provide help for injured workers to get a job; don`t leave them hanging
	Facilitate finding more options for a less physical job or part-time work

IME, Independent Medical Examination/Examiner; WC, workers' compensation.

TABLE V

Examples of worker suggestions for vocational rehabilitation improvements, by major theme

Major theme	Worker suggestions
Vocational retraining plan	More options for rehabilitation
	Less restrictions on [retraining] opportunities, allowing individuals more freedom
	Try to find things that will fit the kind of person that they are; tailor to suit their personality
	Suggest ways to reapply my skill sets to accommodate my disabilities
	Take person's prior experience into better consideration, aim for higher quality jobs
	Find job goals that pertain to current interests/pay, versus taking any work history into account
	Improve capacity to work with higher functioning individuals who have been affected by injury
	There should be research about the earning potential of new occupations chosen
	Trying to find us a job [goal] that actually would be able to pay for actual bills (a living wage)
	Offer longer retraining periods
	Allow people to go to school longer
	A little more stress on how to do specific job; skills to be able to function at specific job
Efficiency, access, services	Speed up the process
	There was too much paper work
	Make it easier for the worker to represent himself, instead of having to retain counsel
	Easier access to vocational training
	Don't refer to voc rehab unless you're going to be able to provide retraining
	The voc rehab assessment needs to be less quantitative and more relevant to worker`s situation
	If they had someone go out and actually check the job site, that would make it a lot better
	More consistent service (had to go through several caseworkers)
	Accommodate workers living in rural areas
	If the rehab center had after-work hours
	The person's mental and emotional state should be taken into consideration
	Help with some money for general expenses like food and rent
	If people could go back occasionally to rehab after a few months, would help as a check-up
	Check back with people after claim closes to make sure they're doing well (follow-up program)
Social/navigational support, communication, respect	To really, really have a counselor sit down and try to open up all the doors that are available
	Be more creative and get to know the person you are trying to rehabilitate
	The VRC should be unbiased, unrelated to either the company or client
	Spend more time with clients
	Closer/better communication between the VRC and the injured person
	Following through
	More precise communication with the employer of injury
	Wish they had more in-house VRCs instead of subcontracting
Return-to-work issues	After voc rehab, there should be a way to direct workers to an appropriate job
	Voc rehab needs to focus more on what happens after [retraining], and helping to find a job
	If they can find you a job that pays the same or are interested in, that would be better
	Try to assist folks in finding jobs where there isn't a huge pay cut involved
Physical rehabilitation/ health care	Don't only work on the injured side [of the body], retrain both sides

Major theme	Worker suggestions
	It would help if therapy worked on more strength training
	Injured people need more mental health care as well as physical health care
Law/system change	The system needs to change to actually assist people

Voc rehab, vocational rehabilitation; VRC, vocational rehabilitation counselor.