Evaluation of the Vocational Rehabilitation Pilot Program

Report to the Washington State Legislature (third of three annual reports)
As required by ESSB 5920 (Chapter 72, Laws of 2007)

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KEY TO ABBREVIATIONS

AAPOR	American Academy of Public Opinion Research
AWA	Ability to work assessment
ATW	Able to work
BLS	Bureau of Labor Statistics
CI	Confidence interval
CM	Claim manager
EI	Early intervention
ESD	Employment Security Department
ESSB	Engrossed Substitute Senate Bill
FTE	Full-time equivalent
IRR	Incidence rate ratio
IW	Injured worker(s)
L&I	Washington State Department of Labor and Industries
LAUS	Local Area Unemployment Statistics
N/A	Not applicable
NS	Not statistically significant
OJT	On-the-job training
Opt2	Option 2
PD	Plan development
PI	Plan implementation
RTW	Return(ed) to work
UBI	Unified Business Identifier
UW	University of Washington
Voc	Vocational
Voc rehab	Vocational rehabilitation
VIP	Vocational Improvement Project
VRC	Vocational rehabilitation counselor
VRS	Vocational Rehabilitation Specialist
VSS	Vocational Services Specialist
WA	Washington State
WAC	Washington Administrative Code

EXECUTIVE SUMMARY

Introduction

Engrossed Substitute Senate Bill (ESSB) 5920 from the 2007 legislative session created a pilot program in an effort to make needed improvements to the workers' compensation vocational rehabilitation system. The legislation was implemented January 1, 2008 and is scheduled to sunset June 30, 2013. The legislation included provisions for an independent evaluation so that informed decisions could be made regarding permanent continuation of the entire pilot program or selected components. Pursuant to ESSB 5920, the Washington State Department of Labor and Industries (L&I) implemented the Vocational Improvement Project (VIP). L&I contracted with the University of Washington (UW) to conduct an independent evaluation of this pilot program (contract number K1009). The research findings and views expressed throughout this report are the responsibility of the authors, and do not necessarily reflect the views of L&I.

This report is the third of three reports to be prepared and submitted to the Legislature documenting the findings of the evaluation. The first evaluation report was submitted in December 2010, and the second in December 2011.

ESSB 5920 directed the following changes from January 1, 2008 through June 30, 2013:

- Provides access to better training opportunities by increasing available tuition to up to $12,000 and allowing programs up to two years. The benefit amount is indexed to changes in Washington's community college tuition rates.
- Permits eligible workers to select an alternative to retraining and instead receive a vocational award equivalent to six months of time-loss, and immediately close their claim, with the ability to use their retraining funds after claim closure. [This is known as Option 2.]
- Increases accountability for the worker and VRC by requiring accountability agreements, defining acceptable reasons for interrupting a plan and establishing time limits on plan development.
- Sets expectations for employers by limiting valid job offers by employers that must be accepted by the worker to those within 15 days of plan development commencing.
- Sets expectations for the department by requiring them to act on a submitted plan within 15 days or the plan is deemed approved.
- Establishes partnerships with a number of WorkSource locations and provides vocational services from these locations.
- Creates new return-to-work opportunities by engaging with business and labor organizations to identify or establish training opportunities in high-demand occupations focusing on keeping workers in their industry of choice.

Evaluation Approach

The scope of this evaluation includes both State Fund and self-insured claims for injured workers. These two populations are quite distinct. As a brief description, at the time of plan eligibility determination under the pilot program:[1]

- All self-insured injured workers had large employers (defined as 50 or more full-time employees), compared with 39% of State Fund injured workers ($p<.0005$)
- 22% of State Fund injured workers were female, compared with 43% of self-insured ($p<.0005$)
- Average age was 46 for State Fund injured workers compared with 51 for self-insured ($p<.0001$)
- 35% of State Fund injured workers lived in a rural county, compared with 29% of self-insured ($p=.002$)
- Average adjusted monthly pre-injury wages were $3,525 for State Fund workers and $3,833 for self-insured (not directly comparable, due to different reporting requirements for State Fund versus self-insured employers)
- On average, about 3.5 years had passed since the injury for both State Fund and self-insured workers

Three data sources were available to us: (1) data from two surveys conducted specifically for this evaluation, (2) L&I's administrative databases, and (3) wage data from the Employment Security Department (ESD). Survey A collected baseline data from workers as they were determined eligible and referred for plan development. Survey B collected follow-up information on use of acquired skills, employment outcomes, and satisfaction from workers who had a plan approved after January 1, 2008. The State Fund maintains detailed administrative data regarding vocational services utilization and vocational referral outcomes. The data available for self-insured claims were much more limited, particularly prior to 2008. Rules to implement the pilot program addressed this by identifying new reporting requirements for self-insurance (e.g., reporting of plan development and plan implementation referrals to L&I is now required for self-insured claims). However, most administrative data analyses comparing pre-pilot to post-pilot time periods were not possible to implement for self-insured claims, and self-insured claims were necessarily excluded from many analyses contained in this report. We conducted a complex set of statistical analyses, which are described in detail in the body of the report, to assess various aspects of the VIP.

[1] The sample constructed for these comparisons includes injured workers determined eligible for a retraining plan between January 1, 2008 and December 31, 2011. If a worker was determined eligible more than once during this time period, the first eligibility determination was retained. This sample contained 7,446 injured workers (6,634 State Fund and 812 self-insured).

The pilot program began January 1, 2008. For descriptive presentations of plans approved under the pilot, we generally included qualifying plans with an approval date on or after January 1, 2008. For most other analyses where we drew comparisons between pre-pilot and post-pilot practices or events, we used the following dates to define 18-month baseline and pilot periods:

Baseline: January 1, 2006 through June 30, 2007

Pilot: January 1, 2010 through June 30, 2011 for shorter-term efficiency measures
January 1, 2008 through June 30, 2009 for plan completion/employment outcomes

Each of the elements required by ESSB 5920, along with supplementary elements requested by L&I to meet additional informational needs, is addressed in this final report. This report covers the following elements:

- The department's performance with regard to the provision of vocational services.
- The skills acquired by workers who receive retraining services and whether they are used in workers' re-employment.
- The types of training programs approved.
- Whether the workers are employed, at what jobs and wages after completion of the training program and at various times subsequent to their claim closure.
- The number and demographics of workers who choose to opt out of vocational services, and their employment and earnings status at various times subsequent to claim closure.
- Whether Option 1 workers participating in training programs under the new system have better employment outcomes compared with workers who participated in training programs under the old system.
- Whether workers who select Option 2 are different from workers who select Option 1 and how they differ.
- The number of Option 2 workers who request tuition benefits.
- Whether workers who choose Option 2 have different employment outcomes than those who choose Option 1.
- Whether the characteristics of those referred to WorkSource vs. the private sector differ, and whether their employment outcomes differ.

Findings and Discussion

In this section, we discuss our findings and present our assessment of L&I performance and of whether the pilot Vocational Improvement Project (VIP) has contributed to improvements in Washington State's vocational rehabilitation program for injured workers. We also provide a discussion of study limitations, our overall conclusions, and our recommendations as to the future of the VIP, as well as issues we believe merit further study.

Summary of Changes under the VIP

The most noteworthy findings and related conclusions for each major aspect of the VIP evaluation are summarized below. Exhibit E.1 (on page xiii) provides a one-page diagrammatic summary of key evaluation findings.

WorkSource: Although the WorkSource pilot locations had a slower-than-expected roll-out, and consequently there have been relatively few referrals so far, there is preliminary evidence that workers are satisfied with services received at WorkSource and that RTW outcomes for those referred to WorkSource may be better than for those referred to the private sector.

Efficiency: We found evidence for a number of improvements in efficiency under the pilot program (compared with baseline). In fact, all three repeat referral measures and every time-dependent process measure we assessed were significantly more efficient under the VIP compared with baseline. However, contrary to expectations, the percentage of plans completed did not improve under the VIP.

Training strategy: Although there were few on-the-job training (OJT) plans relative to formal retraining, especially under the VIP, workers going through an OJT plan had markedly better RTW outcomes. There was no evidence that longer plans were associated with better employment outcomes, with the possible exception of higher mean wages for longer plans (there has not been enough follow-up time as yet for adequate mean wage comparisons). Based on the data available to date, we can't say whether outcomes would have been different if longer plans had not been available or more OJT plans had been implemented under the VIP. There is likely some benefit to having a wider variety of training options available in order to enable the best fit between plans and workers' needs. However, unless sufficient attention is paid to the best-fit concept, longer formal retraining plans may actually confer potential disadvantages to some workers if they were placed into an academic program that wasn't a good fit for them.

Labor market demand: Under the VIP, there has been gradual improvement over time in the percent of plans having goal occupations with a high labor market demand rating. However, it does not appear that labor market demand ratings are associated with better employment outcomes.

Use of acquired skills: When interviewed 3-6 months after claim closure, more than 85% of all workers who had completed their retraining plan stated that the training was useful. 71% of workers who had completed retraining **and** returned to work used the skills acquired during retraining.

Option choice: Option 2 was chosen by 28% of workers with State Fund claims and 31% of workers with self-insured claims. There were few notable differences between those choosing Option 2 over the Option 1 approved retraining plan. It did not appear that having been determined eligible for plan development more than once (an indication of problems with previous plans) was associated with choosing Option 2. This was surprising, since Option 2 had been described as a mechanism to allow workers to exit the system who previously had no viable means to do so. However, Option 2 was more often chosen by survey respondents who, prior to plan development, thought that the retraining plan that would be developed would have a negative effect on their ability to return to work. After plan development, 57% of Option 2 workers stated that their retraining plan would have been a poor fit for them, either physically, emotionally, logistically, or in terms of their own interests. 27% gave financial reasons for choosing Option 2, and 21% gave reasons related to wanting more control or independence. Workers choosing Option 2 were significantly less satisfied with their vocational rehabilitation counselor (VRC), less likely to think their claim manager had a positive effect on their ability to return to work, and less likely to think that the vocational services they had received were appropriate. There was little difference between Option 1 and Option 2 workers with regard to whether they would make the same option choice if they had the opportunity to revisit their decision.

There were no significant differences in average employment outcomes between Option 1 (measured after retraining) and Option 2 (measured after option choice), with the exception that Option 2 workers were less likely to RTW immediately (possibly because Option 2 workers had not yet undergone retraining for re-employment, and had just received 6 months of time-loss compensation). Retirement, whether voluntary or involuntary, may have affected employment outcomes but did not appear to influence option choice. Option 2 workers were more likely to be receiving Social Security or other retirement/pension benefits 3-6 months after claim closure, yet only 1 worker reported choosing Option 2 because they were able to retire or had another income source.

Option 2 may benefit workers with the physical capacity and motivation to identify and complete retraining on their own. However, many chose Option 2 because they felt unable to meet retraining demands or thought the approved retraining plan wasn't a good fit for them. Option 2 may in fact represent the best alternative for that group of workers, but it is also possible that some could have benefited from being offered a different retraining plan; we did not have adequate data to make that assessment. Retraining may benefit workers who complete it, but those choosing Option 1 who didn't successfully complete the retraining plan appeared to have the worst employment outcomes.

Use of Option 2 retraining funds: There was a large discrepancy between the percentage of Option 2 workers who said they planned to use retraining funds when surveyed 3-6 months after claim closure (64%) and the percentage that actually used retraining funds within 3 years of claim closure (21%). State Fund, younger workers, English-speaking workers, and workers with at least some college education were more likely to use their retraining funds. Preliminary

evidence suggests that Option 2 workers have relatively good RTW outcomes once they complete independent retraining, however this observation was tentative and was based on only 18 workers.

Comparison of the VIP with baseline: Retraining plan referral outcomes for all workers pre-pilot were very similar to referral outcomes for Option 1 workers under the VIP. Because most Option 2 workers are not using their retraining funds, a significantly lower percentage of workers approved for retraining are being retrained under the VIP compared with baseline (conservatively estimated as at least a 21% overall decrease). For VIP workers who had completed retraining plans, there were no significant differences in employment outcomes compared with baseline, with the exception of sustained RTW at full pre-injury wage, perhaps the hardest measure to meet in the face of the economic recession. Employment outcomes overall appeared to be worse under the VIP, likely due to a combination of factors that cannot be disentangled due to the near simultaneous impact of all features of the VIP as well as the economic recession. Those choosing Option 1 who didn't complete their retraining plan appeared to have the worst outcomes; this was also the group accounting for most of the poorer RTW outcomes for the VIP relative to the pre-pilot period. We could not identify any specific feature of the VIP that might account for the poorer observed employment outcomes. Mediating factors such as retraining plan referral outcomes, Option 2 training fund use, and OJT (vs. formal retraining) did not account for the entire decrement in RTW outcomes. Because the various aspects of the VIP were implemented simultaneously, we were unable to distinguish differential effects on outcomes.

Workers' opinions: Prior to retraining plan development, most workers (69%) had positive opinions about the workers' compensation system in general and the vocational rehabilitation system more specifically. Negative opinions were strongly associated with having been referred for plan development more than once and with more time passing since the injury (among other factors). It appeared that retraining plan development and/or the approved retraining plan often did not meet the workers' perceived needs/abilities and that many workers didn't feel they had enough input into the choice of training goal or that their needs weren't understood or respected. This theme emerged in several different ways:

- In general, workers heading into retraining plan development were likely to overestimate their likelihood of future RTW after retraining and were more satisfied with the vocational rehabilitation system at that time than they were after vocational rehabilitation services had ended.
- Among those choosing Option 1 who did not complete their retraining plan, the most frequently reported primary reason for non-completion was that the worker was unsuccessful in training or training was too hard (38%). The second most frequent reason was that the worker could not physically continue training (26%).

- The most frequent primary reason given for choosing Option 2 was being physically or emotionally incapable of Option 1 (27%). Pooling the top 3 reasons given, 57% of Option 2 workers stated that their retraining plan would have been a poor fit for them, either physically, emotionally, logistically, or in terms of their own interests.
- Among the 22% of workers who reported they would choose a different option if given a chance to do things over, the training plan being inadequate or unsatisfactory was cited among the top 3 reasons by 65% of those with completed plans, 23% of those with incomplete plans, and 35% of those with Option 2. Being physically, emotionally, or academically incapable of the training plan was cited among the top 3 reasons by 38% of those with completed plans, 59% of those with incomplete plans, and 24% of those with Option 2. Fully a third of those with incomplete plans said they would choose Option 2 if given the chance to do things over.
- Nearly half of those with incomplete plans (46%) or Option 2 (49%) who did not receive legal advice on their option choice thought legal advice would have been helpful.
- Finally, and perhaps most telling, the two most frequently suggested improvements to the vocational rehabilitation system were: (1) that there 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 (suggested by 25% overall, and more than 36% of Option 2 workers), and (2) that various players listen to, respect, and/or understand the worker (e.g., their interests, goals, and limitations) (suggested by 17% overall, and more than 27% of Option 2 workers).

Because these surveys were conducted only after the VIP had begun, we can make no comparisons with pre-pilot worker opinions. However, taken together, these findings suggest that there is at least great room for improvement in worker satisfaction with the plan development and plan implementation process. The good news is that if these opinions do reflect opportunities to improve the fit of retraining plans to workers' needs and abilities, there should also be corresponding opportunities to improve overall employment outcomes.

Exhibit E.1 Summary of key evaluation findings

*Although we controlled for unemployment rate, it is unclear how much of the reduction in RTW was due to the economic recession rather than the VIP.

Notes: An upward (vs. downward) arrow indicates a statistically significant benefit or improvement. In some cases the arrows represent a summary of related findings, not all of which may have the same direction of effect or statistical significance. A tilde (~) indicates mixed findings or no statistically significant difference.

Study Limitations

There were a number of challenges to this evaluation, which need to be acknowledged in order to properly interpret the findings and understand the compromises involved in the study design. This study was not designed or contracted until the VIP program was well underway and the new changes had already been implemented, making it impossible to conduct baseline surveys for comparison purposes. Most VIP-related changes were implemented simultaneously, making it difficult or impossible to separate the effects of various changes. The budget was limited, which constrained the number of surveys and analyses that could be completed. Claim maturation time in the vocational rehabilitation system is typically very long, which limited the ability to observe employment outcomes (especially sustained employment) within the timeframe allotted for this study. This was compounded by the built-in processing delays for quarterly ESD data. Some findings (or lack thereof) reflect the compressed timeframe, and might change or attain statistical significance if assessed after the passage of more time (e.g., higher mean wage outcomes for longer plans).

There were specific additional challenges with regard to evaluating Option 2. It was unclear at what point Option 2 employment outcomes could be reasonably compared with those for Option 1. Option 2 workers receive 6 months of time-loss compensation when their claim is closed, are not considered able to work immediately after claim closure, and may delay use of their retraining funds for up to 5 years (therefore very few had used their full retraining fund benefit during this study's timeframe, and most had not yet used any retraining funds). We chose to survey both Option 1 and Option 2 workers 3-6 months after claim closure, to avoid problems with differential follow-up (L&I does not track contact information for either Option 1 or Option 2 workers after claim closure). With regard to both the Option 1/Option 2 post-pilot comparison and the "all plan" pre-post comparison of employment outcomes, both pre-pilot workers and post-pilot Option 1 workers had their chance to finish training and RTW, but most Option 2 workers hadn't yet started their training (assuming they ever would). Only 18 Option 2 workers had completed retraining and were perhaps comparably ready to re-enter the labor market or RTW. To mitigate these difficulties, we presented several descriptive views of employment outcomes at various times after claim closure for both groups, and excluded Option 2 workers from some pre-post comparisons.

Lastly, the most serious challenge facing this evaluation was the lack of a suitable concurrent comparison group that would enable adequate control for self or system-based selection into various new features of the VIP as well as for the near-simultaneous impact of the severe economic recession. Ideally, we would have been able to construct a comparison group similar with respect to all important characteristics except for VIP exposure. The economic recession hit very shortly after the VIP began, which interfered with our plan to use a pre-VIP baseline period as the comparison group, and there was no staggered roll-out of most features, nor randomization of any kind (for example, randomizing implementation to different regions at different times). We do not suggest that such randomization might have been feasible or should have been done, only that its absence hindered this evaluation.

It was very difficult to adequately control for changing economic conditions with a pre-post design in the absence of an adequate comparison group. We did control for unemployment rate in these models (with an unemployment rate assigned to each worker by quarter of labor market entry and last known residence county), however, the recession was severe and the unemployment rate may not have captured its full impact on injured workers. We tried many variations of the unemployment rate, including creating an inverse 6 month lag for the unemployment rate, squaring the unemployment rate (which weights higher unemployment rates more heavily), and using other versions of the unemployment rate available from the BLS such as those that include part-time or underemployed workers in the calculated rate. None resulted in markedly different findings. Difference-in-difference models using workers found "able to work" during Ability to Work Assessments (those workers that did not RTW with the same employer and were expected to be in the general labor market) as a non-equivalent comparison group provided some evidence that labor market conditions did have some residual effect on injured workers over and above that of the unemployment rate. In addition, it appeared that the recession strongly affected RTW for injured workers about 6 months earlier (approximately July of 2008) than it strongly affected the unemployment rate (approximately January of 2009). The wage measure that involved meeting the highest threshold of 100% of pre-injury wages after post-injury RTW appeared to be the most sensitive to the recession, as could be expected. In sum, we implemented numerous approaches to attempt to control for the severe economic recession, but none appeared to strengthen the employment outcome models. It seems unlikely that the economic recession in and of itself was wholly responsible for the decline in employment outcomes observed under the VIP, given the robustness of these findings to all approaches.

Recommendations

Taking into consideration our findings along with the study limitations, we provide the following recommendations as well as comments regarding potential areas for improvement and areas needing further study.

The original Description of Services Requested (DSR) listed a number of expected outcomes of the VIP legislation. Below we comment briefly on whether each expected change has occurred.

- Shifting the cost of vocational rehabilitation and time-loss away from repeated attempts at counseling and plan development to retraining workers to return to the workforce – that is, the pilot should reduce "repeat referrals." **This expected outcome did occur.**
- Reducing the amount of time it takes to develop a viable retraining plan. **This expected outcome did occur.**
- Providing better support for workers who better fit non-academic training, such as OJTs. **This expected outcome does not appear to have occurred. In fact, the percentage of plans involving OJT decreased by two-thirds under the VIP, despite evidence that OJT plans lead to favorable RTW outcomes.**
- Improving the percentage of workers who successfully complete their retraining plan. **There has been no measurable change in this area.**
- Returning workers to higher wage jobs compared to the workers trained prior to the benefit change. **We have no evidence that this occurred, however the nearly concurrent severe economic recession interfered with the ability to observe any progress in this regard.**
- Allowing workers the flexibility to pursue training or alternatives on their own. **This expected outcome did occur, and appears to have worked well for some workers. However, survey responses suggest that some workers may not receive adequate information and support to enable making the optimal choice for their circumstances.**

In the DSR, L&I expressed interest in specific recommendations regarding: (1) whether one or more of the VIP features should be adjusted for increased efficiencies or improved outcomes, and (2) which, if any, should be adopted on a permanent basis, post-pilot. As explained earlier, it was difficult or impossible to determine the effects of each change individually because the VIP changes were implemented simultaneously and there was no available concurrent comparison group. However, we saw no evidence that any particular aspect of the VIP was overwhelmingly negative, and we did observe many indications of positive change. For example:

- There were early indications of benefit related to the WorkSource feature of the pilot (referrals to L&I staff based at WorkSource locations), and workers expressed an interest in and satisfaction with the services that WorkSource offers.
- There were significant reductions in inefficient and costly repeat plan development and plan implementation referrals.

- Due to the new timelines and accountability features of the VIP, there were significant reductions in potentially costly delays at several key points in the process.
- Workers were offered the option to decline the approved retraining plan and pursue funded retraining of their own choice, on their own initiative, and at a time of their preference up to 5 years in the future. Alternatively, they could choose not to undergo retraining at all. More than 25% did choose Option 2. Based on preliminary estimates, the workers in this group that made use of the Option 2 retraining funds, while small in number, appeared to have the best employment outcomes of any group analyzed.
- In general, employment outcomes were not worse for the subset of workers that completed retraining under the VIP compared with pre-pilot workers, even though the pilot was implemented in the midst of a severe economic recession.

Therefore, we recommend that the VIP in its entirety be continued on a permanent basis. We also recommend that the subcommittee remain intact in order to continue to monitor progress and make further adjustments as needed.

Opportunities for Further Study and Improvement

Over the course of this evaluation we have identified several potential opportunities for further improvement, which we offer for consideration by the subcommittee and/or the department. Each of these areas has some empirical or theoretical support, but also involves some degree of speculation due to lack of pertinent data or the inability to separate the effects of various aspects of the VIP from each other and from pre-existing/ongoing program features.

1. **Consider additional efforts to ensure that workers have reasonable input into retraining plan development, that they are offered adequate retraining choices and plans well-suited to their circumstances, and that they receive adequate communication and support from their vocational counselor.** The most frequently suggested improvement to the vocational rehabilitation system by workers interviewed for Survey B was that there 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 (suggested by 25% overall, and more than 36% of Option 2 workers). The reasons workers gave for incomplete retraining plans also suggested that, in at least some cases, workers felt that they were not ready for retraining when they were referred or felt that the retraining plan was not a good fit for them. Although we have no evidence bearing on whether these issues have improved or worsened under the VIP, these patterns are sufficient to raise concern. Even if these responses reflect misperceptions by workers rather than inadequacies with VRC services or retraining plan fit, such perceptions could be expected to interfere with willingness to accept the approved Option 1 retraining plan (perhaps inducing workers to choose Option 2 even if they would rather have stayed within the system for retraining) or to interfere with successful plan completion.[2] Although we can't say whether the retraining plan offered to each worker was optimal in every case or not, certainly it is quite possible that improvement in these areas could lead to better observed outcomes, without changing any details of the VIP.

2. **Facilitate on-the-job training (OJT) plans when appropriate.** OJT plans had very favorable employment outcomes relative to formal retraining. This is likely in part due to workers being offered a job by the training employer once they have demonstrated capability for the work. Research suggests that supportive work environments are key to successful RTW.[3] OJT arrangements may be especially conducive to a successful RTW transition, since both the employer and worker have invested energy into the worker's success. However, although one goal of the VIP was to facilitate OJT plans, the percentage of OJT plans dropped markedly under the VIP. It has been suggested that the 90-day plan development timeline may be too short for development of an OJT plan. Although VRCs have the opportunity to request an extension, they may not be highly motivated to do so. We

[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):349-66.

[3] Young AE. Return to work following disabling occupational injury--facilitators of employment continuation. Scand J Work Environ Health. 2010;36(6):473-83.

recommend a renewed focus on ways to increase the use of OJT plans when appropriate for the worker's situation. The optimal limit for plan development completion (currently 90 days) may need to be re-assessed as well (discussed in the section on further study).

3. **Offer access to Option 2 or a reconfigured retraining plan as a contingency if workers attempt the approved Option 1 retraining plan but then realize it was not a good fit.** Workers should not be penalized if they, in conjunction with their VRC and L&I, made overly optimistic assessments of their ability to complete a particular retraining plan. ESSB 5920 states that not attaining passing grades is considered a vocational plan interruption that is under the control of the worker and therefore subject to benefit suspension. According to Survey B, 38% of workers who did not complete their retraining plan identified the primary reason as the training being too difficult. Improvements commonly suggested by workers included asking L&I to make changes that would ease college re-entry, and allowing for more flexibility for older age and other individual circumstances. In 2008, 18-24 month (probably academic-based) retraining plans accounted for 65% of approved retraining plans. Workers with incomplete retraining plans appeared to have the worst employment outcomes, even in comparison with Option 2 workers who did not use their retraining funds. In combination with the stricter accountability requirements, access to either a reconfigured retraining plan or a graceful exit via Option 2 might be a more effective and humane way of assisting workers who were unable to meet the demands imposed by their approved retraining plan. Improving access to OJT plans may also be beneficial in this respect. There can be conflict between the goal of equal treatment based on clear accountability standards and the goal of fairness based on meeting differing needs, and optimizing worker outcomes will require a balance of the two.[4,5]

4. **Promote use of Option 2 retraining funds.** It appears that Option 2 workers who use their retraining funds have better employment outcomes than those who do not. This observation may be due to selection bias; however, if there is any value to vocational retraining, it is likely that encouraging such training would have positive benefit. L&I does provide information about retraining fund use prior to claim closure, and there is information on L&I's website. However, there was a large discrepancy between the percentage of Option 2 workers who reported planning to use retraining funds and the percentage who actually used them. The relatively minor investment required to send reminders may be well worth the cost, considering the potential costs to other state and federal programs if return-to-work never occurs (and potentially to L&I itself if claims are re-opened). ESSB 5920 required that L&I maintain a register of workers who have been retrained or have selected either Option 1 or Option 2 for at least the duration of the pilot program (both State Fund and self-insured). We propose that this register be continued for Option 2 workers at minimum, and used to

[4] 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):1404-11.

[5] Cooper TL. Big questions in administrative ethics: a need for focused, collaborative effort. Public Administration Review. 2004;64(4):395-407.

send annual reminders to State Fund and self-insured workers who have not yet begun to access their retraining funds, until their funds expire. These annual reminders could also be used to update addresses in the register (via use of USPS address correction services), so that longer-term interviews could be carried out to answer some of the important remaining questions described in the section on further study.

5. **Track requests for and use of Option 2 retraining funds.** L&I reported that legitimate Option 2 retraining fund requests by State Fund workers are rarely if ever denied, however they were unable to provide data to address this point. We also observed that self-insured workers were significantly less likely to use their retraining funds than State Fund workers. This observation may have been due to several factors, the relative contribution of which we are unable to tease out at this time: (1) possible under-reporting of retraining fund expenditures by self-insured employers to L&I, (2) a known data collection issue within L&I data systems, so that some information that was reported by self-insured employers was not completely recorded, and/or (3) lower use of retraining funds by injured workers who had self-insured employers. This will require further research, as described in the next section. Although we stress that we have no evidence of any bad intentions or misconduct, and cannot even say whether there was actually lower use of retraining funds in the self-insured sector, it is conceivable that workers may be reluctant to request funds from their previous employers for a variety of reasons, and/or that some self-insured employers might be reluctant to approve retraining fund requests due to immediate and direct economic impact. To alleviate any potential for negative perceptions along these lines, we would recommend that Option 2 retraining funds be administered by L&I for both State Fund and self-insured employers, or at minimum, that self-insured employers be required to report retraining fund requests and denials (not just expenditures) to L&I with some degree of accountability (e.g., an audit trail).

6. **Consider further use of and integration with WorkSource.** There was generally high satisfaction with WorkSource services and many workers reported that WorkSource helped them return to work. In addition, the third most frequently suggested improvement to the vocational rehabilitation system (suggested by 9.2% of workers who made specific suggestions) was that L&I provide more support with job placement, job search skills, work re-entry skills, and RTW in general. Workers who have been retrained are still likely to be at significant disadvantage in the labor market, given such potential barriers as having been unemployed for an extensive period of time, inexperience in their new occupation, and their history of work-related injury and probable ongoing disability.[6,7] Previous vocational rehabilitation research has suggested that this labor market disadvantage could potentially be

[6] Kaye HS. Stuck at the bottom rung: occupational characteristics of workers with disabilities. J Occup Rehabil. 2009;19(2):115-28.

[7] Organisation for Economic Co-operation ad Development (OECD). Sickness, Disability and Work: Breaking the Barriers: A Synthesis of Findings across OECD Countries. Paris: OECD Publishing; 2010.

addressed in part by allocating resources to career-long job support.[8] It may be that L&I could both improve satisfaction with its own services and improve employment outcomes by providing more direct and ongoing integration with WorkSource for all workers in the vocational rehabilitation system.

7. **Incorporate initial approved plan length as a preserved data element.** This is a relatively minor data-related recommendation, but the lack of this information arose as a hindrance at several points during this evaluation and required much additional work on the part of L&I staff. Initial approved plan length is not currently preserved by L&I data systems, but would be a valuable addition for descriptive, evaluative, and research purposes. Its availability would carry indirect potential to improve system performance.

We have also identified a number of unanswered questions that merit further study:

1. Although the VIP was designed to improve outcomes for injured workers, retraining plan completion rates and employment outcomes remain poor. Further investigation into the causes and potential solutions for these problems should receive high priority.

2. Taking retraining via both options into account, a lower overall percentage of the workers approved for retraining are being retrained under the VIP compared with baseline. Is this decrease a negative consequence of the VIP, in part due to suboptimal Option 1 plan fit (which might contribute to both incomplete Option 1 plans and/or overuse of Option 2)? Or does it simply reflect that retraining may not always be the optimal path for injured workers?

3. There is a need for longer-term study of the use of Option 2 retraining funds and subsequent RTW outcomes. It is important to understand why so many workers are not using their funds, whether they see not using the funds as a problem, and what might assist them in taking full advantage of their retraining funds. It would be very useful to compare employment outcomes for Option 1 workers at the point their retraining plans are completed with Option 2 workers at the point their independent retraining is completed.

4. Do workers fully understand the potential outcomes and consequences of both Option 1 and Option 2? Are there avenues to providing additional assistance to workers in making optimal choices via informational/educational support and additional counseling? Are VRCs consistent in providing full and adequate information about each of the choices to workers?

5. Can innovative ways be found to address the common perceptions among injured workers that they do not have enough input into training plans, that they are offered inadequate retraining choices, and that they receive inadequate communication/support from the VRCs? More generally this raises the question of whether there has been sufficient communication,

[8] MacEachen E, Kosny A, Ferrier S, Lippel K, Neilson C, Franche RL et al. The 'ability' paradigm in vocational rehabilitation: challenges in an Ontario injured worker retraining program. J Occup Rehabil. 2012;22(1):105-17.

coordination, and expectations established between L&I and the VRC community. It also raises the question of whether there needs to be more investigation into developing incentives for VRCs that would foster desirable outcomes with respect to RTW and worker satisfaction, as well as whether any existing policies function as misaligned incentives. In this regard, there may be much to learn from the experience of other jurisdictions in addition to L&I's own historical experience.

6. There is a need to investigate whether the 90-day limit for plan development is both reasonable and optimal, and whether it may be unduly motivating VRCs to either avoid OJT plans or to route too many people into academic/longer plans. A compressed timeframe that discourages interaction with workers might result in poorer plan fit. OJT plans appear to work very well for at least certain workers; that training strategy should not be discouraged. It would also be undesirable to encourage longer (and more expensive) plans for those workers who don't want them or can't benefit from them. Identifying the optimal time limit would require systematic input from VRCs and other informed parties (surveys, focus groups). VRCs are permitted to request extensions when there is good cause; it would be useful to learn whether VRCs find the process of requesting and justifying these extensions as onerous or something to be avoided. The new and stricter plan development timelines may be leading to unanticipated negative consequences. This has been observed in several qualitative studies in other countries; strict timelines have been associated with increasingly passive vocational service providers, as well as an increased burden on both injured workers and service providers.[9,10]

7. Existing labor market demand ratings do not appear to identify high demand jobs in a way that positively affects employment outcomes. Is there any alternative way of identifying occupational goals that might facilitate RTW after plan completion at wages comparable to pre-injury wages?

8. For various reasons, some workers did not have a retraining plan approved even as much as a year after referral for plan development. These workers differed significantly from those who did have a plan approved and subsequently chose an option. Obtaining a better understanding of the particular needs of workers in this category will likely be critical in order for L&I to be able to appropriately address the needs of all injured workers. Previous research suggests that both ability and health require ongoing attention during vocational rehabilitation.[11] There may be a need for initiatives to address the needs of workers with the most challenging health situations and those who get "stuck" or continue to cycle repeatedly through the system.

[9] 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):1404-11.

[10] MacEachen E, Kosny A, Ferrier S, Lippel K, Neilson C, Franche RL et al. The ideal of consumer choice: challenges with implementation in an Ontario injured worker vocational retraining program. [Unpublished manuscript.]

[11] MacEachen E, Kosny A, Ferrier S, Lippel K, Neilson C, Franche RL et al. The 'ability' paradigm in vocational rehabilitation: challenges in an Ontario injured worker retraining program. J Occup Rehabil. 2012;22(1):105-17.

Conclusions

Although we have compared the pilot Vocational Improvement Project (VIP) with a baseline period and taken great care to make our samples for each analysis as comparable as possible, we cannot say with certainty whether the changes we observed were due only to the VIP. The VIP is a highly complex program with many facets and there was no available concurrent comparison group. L&I has implemented process changes and improvements in an ongoing way, not all of which were related to the VIP. Such internal process changes, as well as changes over time in external social conditions and the severe economic recession, would also have contributed to some of the changes we observed.

However, this report provides evidence that there have indeed been a number of improvements in efficiency under the VIP. There is also substantial room for further improvement, particularly in the areas of facilitating OJT plans, addressing workers' perceptions of inadequate input, choice, and support regarding retraining plans, offering contingency plans when a workers' ability to complete a retraining plan was mis-assessed, promoting and tracking the use of Option 2 retraining funds, making full use of WorkSource resources, and developing better ways to meet the needs of injured workers so that more than a small proportion eventually return to work in employment within their physical capabilities and approaching pre-injury wages.

In conclusion, we recommend that the VIP in its entirety be continued on a permanent basis. We also recommend that the subcommittee remain intact in order to continue to monitor progress and make further adjustments as needed.

CHAPTER 1. INTRODUCTION

Engrossed Substitute Senate Bill (ESSB) 5920 from the 2007 legislative session created a pilot program in an effort to make needed improvements to the workers' compensation vocational rehabilitation system. The legislation was implemented January 1, 2008 and is scheduled to sunset June 30, 2013. The legislation included provisions for an independent evaluation so that informed decisions could be made regarding permanent continuation of the entire pilot program or selected components. Pursuant to ESSB 5920, the Washington State Department of Labor and Industries (L&I) implemented the Vocational Improvement Project (VIP). L&I contracted with the University of Washington (UW) to conduct an independent evaluation of this pilot program (contract number K1009). The research findings and views expressed throughout this report are the responsibility of the authors, and do not necessarily reflect the views of L&I.

This report is the last of three reports to be prepared and submitted to the Legislature documenting the findings of the evaluation. The first evaluation report was submitted in December 2010, and the second in December 2011.

This introductory chapter of the report (1) provides background information on the vocational rehabilitation program; (2) describes the goals of ESSB 5920, the operational changes it brought about, and its anticipated outcomes; and (3) outlines key elements of the evaluation. In addition, we present information on new legislation passed during the recent legislative session that may affect future demand for vocational rehabilitation services. The second chapter describes in more detail the methods used to perform the analyses presented in this report. The third chapter presents the findings of the analyses. In the fourth and final chapter, we discuss our findings, present our assessment of the pilot program, and provide some recommendations for programmatic adjustments and further study.

Background

The goal of getting injured workers back to work in a timely fashion has presented and continues to present significant challenges for the workers' compensation system. While the substantial majority of injured workers return to work fairly soon after injury, a small percentage remain off work and on disability for extended periods of time that may in some cases last for years. The purpose of workers' compensation vocational rehabilitation programs is to assist workers with compensable injuries or illnesses to return to work. Vocational rehabilitation programs support activities aimed at assessing whether the injured worker can return to work for the employer of injury, determining the worker's ability to work if he or she cannot return to work for the employer of injury, developing a plan for retraining the worker if needed, and supporting the training effort if retraining is initiated.

To be successful, vocational rehabilitation programs must be well-designed, must have effective coordination among stakeholder groups and parties involved in the rehabilitation process, and

must offer appropriate incentives that both foster efficiency and effectiveness and support the general goals of the rehabilitation program. The design and operation of cost-effective vocational rehabilitation programs within workers' compensation settings have proven to be challenging. Often program goals are unclear, program activities are not well coordinated, and parties and stakeholder groups involved in the rehabilitation process may work at cross-purposes. A recent article by researchers at the Institute for Work and Health in Toronto, Canada outlines some of the problems encountered in fostering return to work and in retraining workers in workers' compensation vocational rehabilitation programs.[12] Despite the importance of vocational rehabilitation programs and the cost (Washington State vocational rehabilitation expenditures in 2006 were nearly $50 million[13]), little formal research or evaluation specific to the workers' compensation setting has been published.

Like many workers' compensation vocational rehabilitation programs, the vocational rehabilitation program in Washington State has faced a number of challenges and has evolved over time. L&I has a history of collaborative efforts with stakeholders to improve the performance of the vocational rehabilitation program. ESSB 5920 represents the latest—and most ambitious and comprehensive—effort to revamp the system, one with the potential to create real opportunity for improving the system's efficiency and effectiveness and for achieving return-to-work goals. Understanding the historical context of ESSB 5920 and L&I's past efforts to improve performance is useful. Some of these efforts were discussed in a report prepared by the Upjohn Institute for Employment Research that reviewed the L&I pension system, which we summarize below.[14]

Prior to 1982, vocational rehabilitation services were provided on a discretionary basis, and an injured worker was not entitled to time-loss payments if he or she was medically stable. In 1982, the Legislature enacted mandatory vocational rehabilitation and stipulated that time-loss payments could continue if the injured worker was receiving vocational rehabilitation assistance. Shortly thereafter, the number of referrals to vocational rehabilitation increased, as did average time-loss duration. At the same time, vocational rehabilitation expenses paid by L&I increased significantly, from approximately $1.1 million in 1981 to $22.4 million in 1985.

In 1985, mandatory vocational rehabilitation was repealed, and L&I adopted a new approach that made the Claim Manager (CM) responsible for the referral process. Previously Vocational Rehabilitation Specialists (VRS) working in the claims units had been responsible for managing referrals. The VRS's became responsible for advising the CMs with regard to referrals and

[12] 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. Journal of Occupational Rehabilitation; 2010, 20(3), 349-366.

[13] Barth P, Grob H, Harder H, Hunt A, Silverstein M. *Washington Pension System Review, Upjohn Institute Technical Report No. 08-025*. Prepared for the State of Washington, Department of Labor & Industries, Contract No. K1018. Kalamazoo, MI: W.E. Upjohn Institute for Employment Research; 2008. Available at: http://www.upjohninst.org/publications/tr/tr08-025.pdf (accessed 8/12/10).

[14] Ibid.

decisions and issues affecting them. Up to 2001, L&I contracted with large firms to provide vocational rehabilitation services and these firms provided a certain degree of internal quality control. In 2001 the Washington Administrative Code (WAC) was changed, eliminating the contract arrangements and allowing more vocational rehabilitation counselors to establish independent businesses. The focus of the vocational rehabilitation program was on moving injured workers through the system and on developing individual plans for retraining. Less emphasis was placed on getting an injured worker back to work in a timely fashion or on establishing that an injured worker could indeed benefit from vocational rehabilitation services. Program costs continued to rise and time-loss duration increased. The change in the WAC opened the system up and created greater capacity, but in some ways had the effect of reducing accountability needed to ensure the operational effectiveness and efficiency of the system. In order to address some of these issues and deliver more timely and effective services, L&I introduced the Vocational Improvement Initiative in 2005 and implemented aspects of the initiative through mid-2007.

In the meantime in 1998, a Joint Legislative Audit Review Committee determined L&I was not in compliance with the requirement to monitor the quality of the external vocational rehabilitation services. This finding led initially to the STAR system, developed by William Mercer Inc., and later to the development of the Complexity-Adjusted-Cost-Outcome (CACO) system in 2000. Both of these monitoring systems encountered substantial criticism within the vocational rehabilitation community. In particular, it was felt that CACO rewarded early vocational referral closure at the cost of a successful outcome that could move the claim toward resolution. With the benefit of hindsight, one might conclude these efforts to improve L&I's ability to monitor system performance did little to foster real system improvement, in part because they created at least the perception of disincentives for effective achievement of return-to-work goals and built an administrative layer of oversight onto a system that was not well-designed in the first place. In 2006, as a result of litigation brought against L&I, the Department was ordered to replace CACO with a different system for monitoring the performance of vocational rehabilitation service providers.

ESSB 5920

ESSB 5920 was passed in 2007 and established a five-and-a half year (January 1, 2008 to June 30, 2013) pilot Vocational Improvement Project (VIP). It directed the implementation and evaluation of a number of fundamental changes in the design and operation of vocational rehabilitation services during this pilot program. ESSB 5920 also directed L&I to create a vocational rehabilitation subcommittee for at least the duration of the pilot program. The subcommittee is responsible for making recommendations to L&I and the Legislature regarding any additional statutory changes needed, including extension of the pilot program, as well as advising the Department regarding implementation of the legislation.

The following summary of changes and expected outcomes pursuant to ESSB 5920 was provided to us by L&I in the Description of Services Requested, issued on May 27, 2008.

The legislation implements the following changes from January 1, 2008 through June 30, 2013:

- Provides access to better training opportunities by increasing available tuition to up to $12,000 and allowing programs up to two years. The benefit amount is indexed to changes in Washington's community college tuition rates.
- Permits eligible workers to select an alternative to retraining and instead receive a vocational award equivalent to six months of time-loss, and immediately close their claim, with the ability to use their retraining funds after claim closure.
- Increases accountability for the worker and VRC by requiring accountability agreements, defining acceptable reasons for interrupting a plan and establishing time limits on plan development.
- Sets expectations for employers by limiting valid job offers by employers that must be accepted by the worker to those within 15 days of plan development commencing.
- Sets expectations for the department by requiring them to act on a submitted plan within 15 days or the plan is deemed approved.
- Establishes partnerships with a number of WorkSource locations and provides vocational services from these locations.
- Creates new return-to-work opportunities by engaging with business and labor organizations to identify or establish training opportunities in high-demand occupations focusing on keeping workers in their industry of choice.

Examples of expected outcomes of the legislation include:

- Shifting the cost of vocational rehabilitation and time-loss away from repeated attempts at counseling and plan development to retraining workers to return to the workforce – that is, the pilot should reduce "repeat referrals."
- Reducing the amount of time it takes to develop a viable retraining plan.
- Providing better support for workers who better fit non-academic training, such as OJTs.
- Improving the percentage of workers who successfully complete their retraining plan.
- Returning workers to higher wage jobs compared to the workers trained prior to the benefit change.
- Allowing workers the flexibility to pursue training or alternatives on their own.

New Legislation

Three laws were passed during the legislative session concluding May 25, 2011 that could potentially affect future demand for vocational rehabilitation services, though not within the timeframe of the current evaluation. The first law (SB 5801) takes effect July 1, 2011 and requires that 50 percent of injured workers covered by the State Fund have access to medical care provided through Centers of Occupational Health and Education (COHEs) starting in December 2013, with all injured workers having access to COHE services by December 2015. In an evaluation of the COHEs conducted by researchers at the University of Washington, it was found that the COHEs were associated with reduced incidence of long-term disability. As the COHEs expand over the next several years, it is possible that they could, by reducing the incidence of long-term disability, also reduce the demand for vocational rehabilitation services. Given the timing of the COHE expansion created by SB 5801, however, we do not anticipate this law will have any effect on the VIP evaluation.

The second law (HB 2123) took effect June 15, 2011 and contains several provisions designed to improve the effectiveness and efficiency of the workers' compensation system. One provision, the Stay-At-Work Program, offers financial incentives to employers to provide injured workers with light duty or transitional work as an approach to reducing lost work time and fostering recovery. It is unclear to what extent the Stay-At-Work Program will affect the VIP. While the program was initiated within the timeframe of the VIP evaluation, it will likely affect workers with more minor injuries than those incurred by workers who eventually obtain vocational rehabilitation services. A second provision of HB 2123 provides the option of resolving a claim through a structured settlement agreement between the involved parties. This provision took effect January 1, 2012 for workers aged 55 and over as of that date. The eligible age for structured settlements drops to 53 on January 1, 2015 and then to 50 on January 1, 2016. Almost 20 percent of the injured workers determined eligible for retraining plans under the VIP are 55 or over. Thus, HB 2123 may eventually lower the demand for vocational rehabilitation services among older injured workers, however, not within the effective timeframe of the VIP evaluation.

The third law (HB1726) amended and clarified several aspects of the original VIP law (ESSB 5920), as requested by L&I's vocational rehabilitation subcommittee. These changes were minor in nature and did not affect the analysis plan or conduct of this evaluation.

Evaluation Approach

Exhibit 1.1 presents a diagram of our overall approach to this evaluation, including the changes produced by the legislation and the measures available to capture the effects of those changes. The scope includes both State Fund and self-insured claims. Three data sources were available to us: (1) data from two surveys conducted specifically for this evaluation, (2) L&I's administrative databases, and (3) wage data from the Employment Security Department (ESD).

The following list of the elements required by ESSB 5920 and the supplementary elements requested by L&I guided the design and analysis of this evaluation. Each of these elements will be covered in this final report. This report updates the analyses included in the first two reports and includes several new elements as shown in Exhibits 1.2 and 1.3. (The reader will note that the Results section of this report is organized somewhat differently in order to allow for a more intuitive flow.)

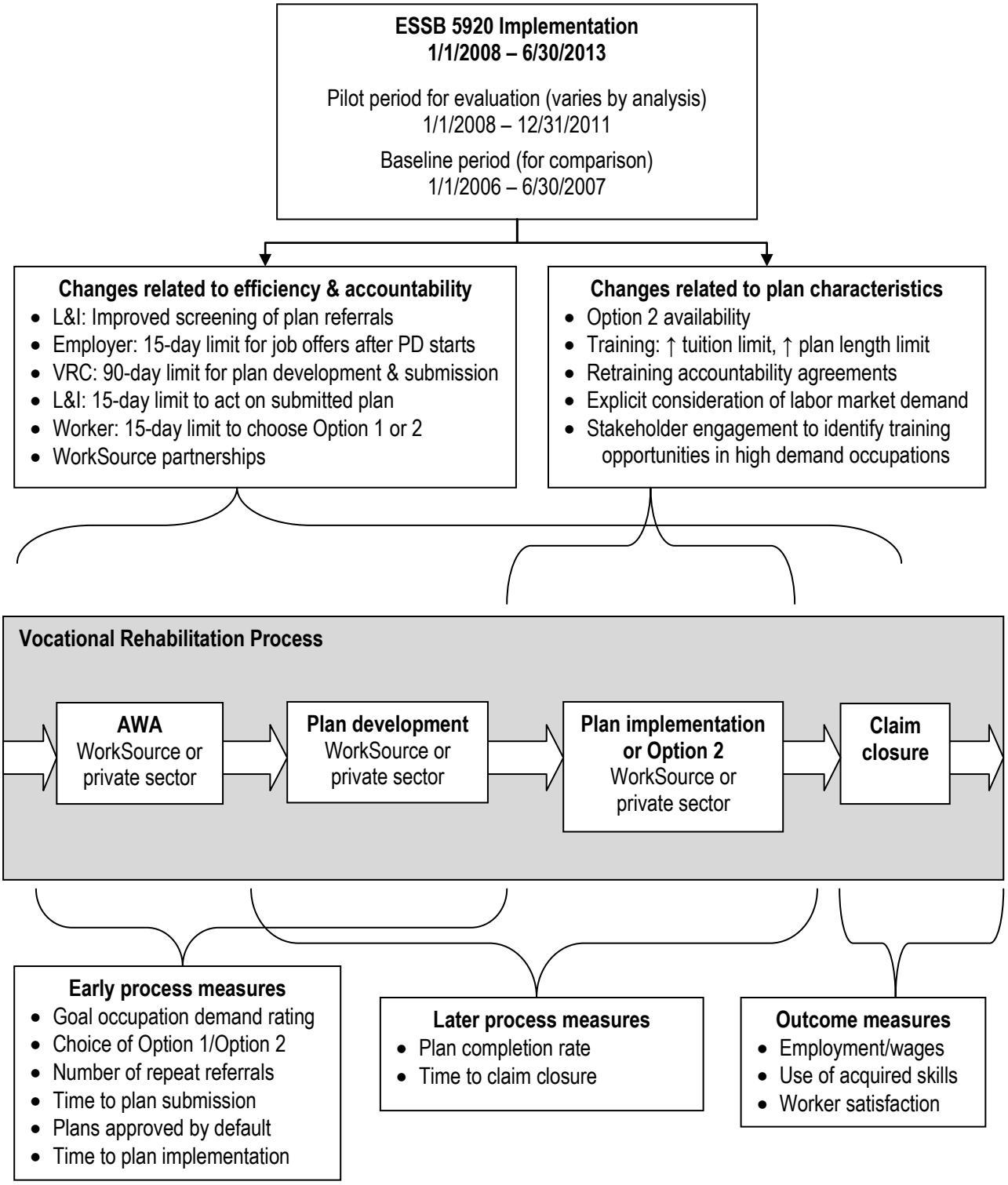
ESSB 5920 specifically required the following research elements:

1. A report on the department's performance with regard to the provision of vocational services.
2. The skills acquired by workers who receive retraining services.
3. The types of training programs approved.
4. Whether the workers are employed, at what jobs and wages after completion of the training program and at various times subsequent to their claim closure.
5. The number and demographics of workers who choose to opt out of vocational services, and their employment and earnings status at various times subsequent to claim closure.

L&I requested several supplementary elements to meet additional informational needs:

6. Do Option 1 workers participating in training programs under the new system have better return-to-work outcomes, including higher employment rates, return at higher wages as a share of the individual workers' pre-injury wage and employment that is sustained as opposed to workers who participated in training programs under the old system?
7. Are workers who select Option 2 different from workers who select Option 1? If so, how are they different? How many Option 2 workers can the Department anticipate requesting tuition? Do workers who choose Option 2 have different return-to-work outcomes than those who choose Option 1?
8. Do workers use the skills acquired in retraining in their re-employment?
9. Do the characteristics of those referred to WorkSource vs. the private sector differ, and how do they differ? Controlling for those differences, do outcomes differ?

Exhibit 1.1 Diagram of evaluation approach



Note: Upper brackets indicate process region affected by each change category.
Lower brackets indicate process region captured by each group of measures.

Exhibit 1.2 Evaluation elements

Evaluation Element	2010 Report	2011 Report	2012 Report
Elements required by the legislation:			
1. A report on the department's performance with regard to the provision of vocational services. (See Exhibit 1.3 for more detail.)	X (partial)	X (partial)	X
2. The skills acquired by workers who receive retraining services.			X
3. The types of training programs approved.	X	X	X
4. Whether the workers are employed, at what jobs and wages after completion of the training program and at various times subsequent to their claim closure.			X
5a. The number and demographics of workers who choose to opt out of vocational services.	X	X	X
5b. Employment and earnings status at various times subsequent to claim closure for workers who choose to opt out of vocational services.		X	X
Additional research questions requested by L&I:			
6. Do option 1 workers participating in training programs under the new system have better return-to-work outcomes, including higher employment rates, return at higher wages as a share of the individual workers' pre-injury wage and employment that is sustained as opposed to workers who participated in training programs under the old system?			X
7a. Are workers who select Option 2 different from workers who select Option 1? If so, how are they different?	X	X	X
7b. How many Option 2 workers can the Department anticipate requesting tuition?			X
7c. Do workers who choose Option 2 have different return-to-work outcomes than those who choose Option 1?			X
8. Do workers use the skills acquired in retraining in their re-employment?			X
9a. Do the characteristics of those referred to WorkSource vs. the private sector differ, and how do they differ (for each referral type)?	X	X	X
9b. Controlling for differences between those referred to WorkSource vs. the private sector, do outcomes differ?			X

Exhibit 1.3 System performance measures (Item 1 in Exhibit 1.2)

Measure	Compare pilot with baseline?	2010 Report	2011 Report	2012 Report
Repeat referrals (for each referral type)	Yes	X	X	X
Plans submitted to L&I	Yes	X	X	X
Plan completions	Yes		X	X
Plans approved by default	Yes	X	X	X
High-demand goal occupations	No	X	X	X
Time from plan development referral to retraining	Yes	X	X	X
Time from plan completion to claim closure	Yes		X	X
Disputes [a]				
Use of acquired skills	No			X
Satisfaction outcomes	No			X
Employment outcomes, by option choice	No			X
Employment outcomes, by referral outcomes	Yes			X
Employment outcomes, by job demand rating	No			X

[a] We had planned to assess numbers of disputes, but administrative data regarding disputes were not available.

CHAPTER 2. METHODS

This evaluation was designed to address all of the elements required by ESSB 5920, along with additional elements described in the Description of Services Requested issued by L&I as well as subsequent communications with L&I. The scope includes both State Fund and self-insured claims. Where possible, the State Fund and self-insured analyses were similar. However, the analyses for self-insured claims were necessarily more limited due to the more limited data available about self-insured claims (particularly prior to January 1, 2008).

Data Sources

Three data sources were available to us: (1) data from two surveys conducted specifically for this evaluation, (2) L&I's administrative databases, and (3) wage data from the Employment Security Department (ESD). The two surveys are described in more detail in the Survey Methods section. Survey A collected baseline data from workers as they were determined eligible and referred for plan development. Survey B collected follow-up information (3 to 6 months after claim closure) on use of acquired skills, employment outcomes, and satisfaction from workers who either completed Survey A or who had a plan approved after January 1, 2008.

The bulk of the data for this research were drawn from L&I's administrative databases, which contain detailed population-based information for workers participating in the vocational rehabilitation system. The State Fund maintains detailed administrative data regarding vocational services utilization and vocational referral outcomes. The data available for self-insured claims were much more limited, particularly prior to 2008. Rules to implement the pilot program addressed this by identifying new reporting requirements for self-insurance (e.g., reporting of plan development and plan implementation referrals to L&I is now required for self-insured claims). However, most administrative data analyses comparing pre-pilot to post-pilot time periods were not possible to implement for self-insured claims, and self-insured claims were necessarily excluded from many analyses contained in this report.

For the purposes of this evaluation, we obtained data about four types of vocational referrals: (1) early intervention (EI), (2) ability to work assessment (AWA), (3) plan development (PD), and (4) plan implementation (PI). (The Early Return to Work program and forensic vocational referrals were outside the scope of this evaluation.) The complete sample included State Fund and self-insured workers' compensation claims that had any vocational rehabilitation referral (of the four listed types) between January 1, 2006 and December 31, 2011. L&I employees and injured workers who were under 18 at the time of the data pull were excluded from this sample. All vocational referrals and related events on record for each of those claims were included in the master data set for this evaluation. L&I also provided us with ESD wage for the identified claims sample. There were a total of 57,048 claims meeting these criteria in the data sets provided for this final report. Subsamples were selected as appropriate for each analysis.

Baseline and Pilot Periods

The pilot program began January 1, 2008. For descriptive presentations of plans approved under the pilot, we generally included qualifying plans with an approval date on or after January 1, 2008. For most other analyses where we drew comparisons between pre-pilot and post-pilot practices or events, we used the following dates to define 18-month baseline and pilot periods:

Baseline: January 1, 2006 through June 30, 2007

Pilot: January 1, 2010 through June 30, 2011 for shorter-term efficiency measures
January 1, 2008 through June 30, 2009 for plan completion/employment outcomes

Where different time periods were used, the details are in the corresponding Results section. For this report, we had data available through December 31, 2011. The event(s) used to assign claims to baseline or pilot periods (or to exclude them) varied for each analysis and are described in each results section (e.g., plan approval date, first start date of a specific type of referral). Our primary motivation was to ensure to the extent feasible that the baseline and pilot samples were comparable both in terms of having been exposed to either only baseline or only pilot practices and in terms of the amount of time available to observe specific events. The baseline period was set to begin after the implementation of the earlier Vocational Improvement Initiative in 2005 (as described in the Introduction), in order to minimize confounding. Our other motivation for the relatively recent and brief baseline period was to minimize confounding due to economic and other secular trends.

The baseline period excludes July 1, 2007 through December 31, 2007. The six months leading up to implementation of the pilot was a transitional period, and there were practice changes in anticipation of the pilot program's start date (for example, approval of a number of "transitional" plans was intentionally deferred until after the pilot). We also excluded the early months of the pilot program from most comparisons. Deferred approval of "transitional plans" occurred during this period, as well as some other changes in vocational referral practices that did not continue long-term. For example, Exhibits 2.1, 2.2, and 2.3 depict trends in the monthly incidence of first-time State Fund referrals for AWA, PD, and PI referrals respectively (repeat referrals of the same type for the same claim were excluded from these graphs). The arrow indicates the start of the pilot program. The straight line shows the overall trend from January 2006 through December 2011. The wavy line shows the referral incidence for the previous 6 month moving average, which makes it easier to see trends in the monthly bars. The darker bars emphasize the 18-month baseline and pilot periods used for comparison of efficiency measures (an earlier period was used for plan completion and employment outcomes in order to allow for longer follow-up).

These graphs suggest transitional changes in referral incidence that may still be continuing. Undoubtedly there has been a learning curve for all involved, workers, vocational service providers, as well as L&I. In addition, there have been ongoing practice adjustments and trainings related to the pilot program.

Exhibit 2.1 Incidence of initial ability to work assessment (AWA) referrals by month

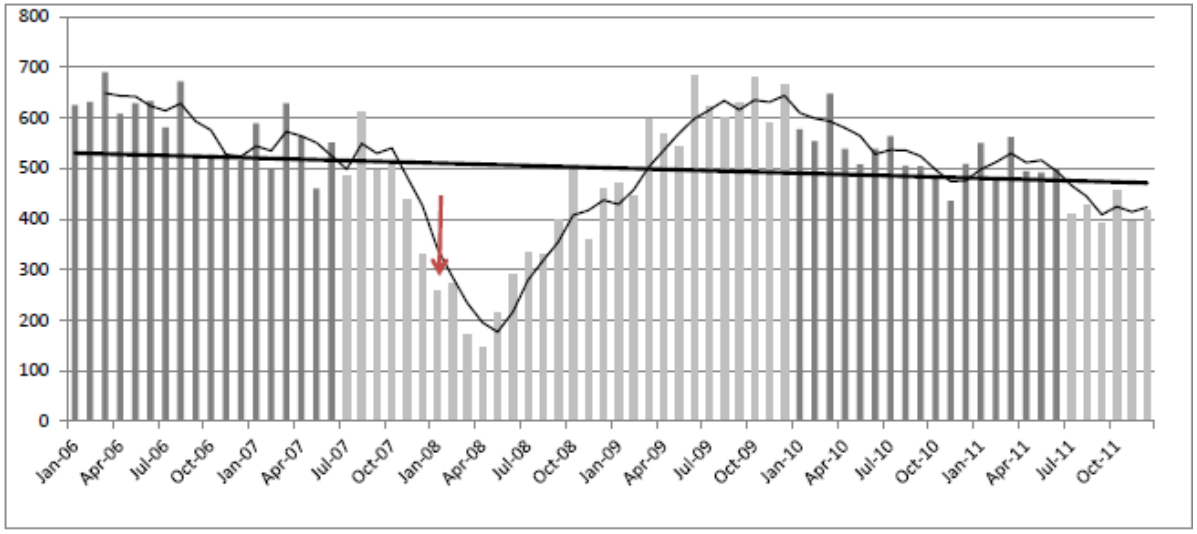


Exhibit 2.2 Incidence of initial plan development (PD) referrals by month

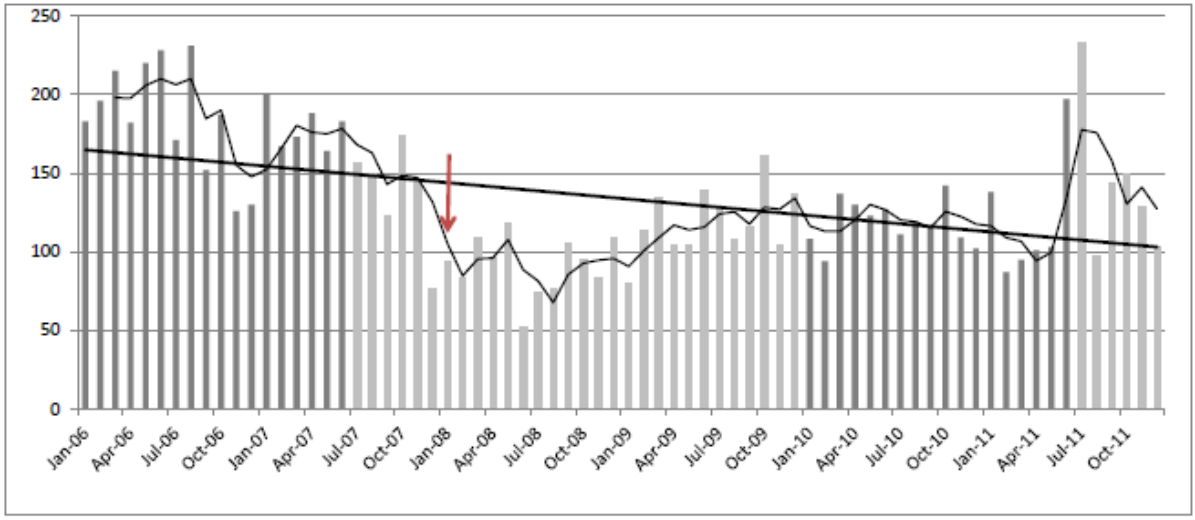
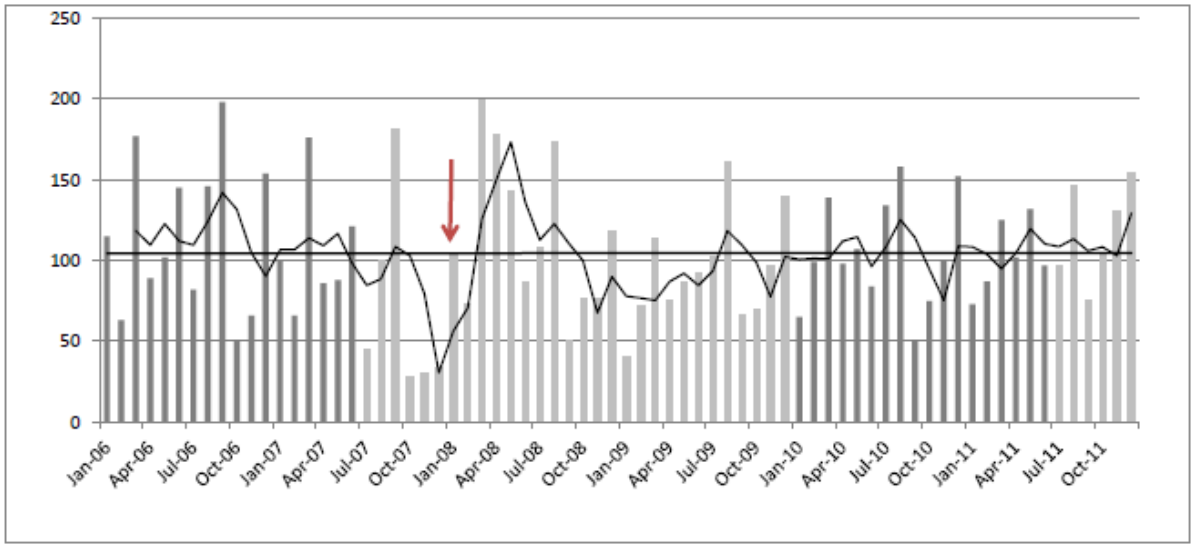


Exhibit 2.3 Incidence of initial plan implementation (PI) referrals by month



Data Definitions

Adjusted monthly pre-injury wage. This measure was based on the monthly wage at date of injury obtained from L&I claims data, standardized to January 2008 using the Consumer Price Index. Wages may or may not include health insurance payments made by the employer, depending on whether the employer continued to contribute after the injury. This measure is not directly comparable across State Fund claims and self-insured claims due to differences in reporting requirements.

Adjusted pre-injury ESD wages. This measure was derived using ESD data and represents the average quarterly wage over the 4 quarters prior to the injury quarter, standardized to January 2008 using the Consumer Price Index. This measure was used in employment outcome models.

Age. Age was calculated as the difference between the relevant date or event (as identified in each results section) and date of birth (obtained from L&I claims data).

Coexisting conditions that might delay recovery. Obtained from L&I claims data (from the accident report submitted to L&I by the health care provider).

Distressed residence county. Residence county was obtained from L&I claims data. The indicator for distressed residence county was set using the 2010 Distressed Areas List published by the Labor Market and Economic Analysis Branch of the Washington State Employment Security Department.[15] A distressed county was defined as having an average unemployment rate of 7.6% or more for January 2007 through December 2009, based on being ≥120% of the 6.3% statewide average unemployment rate for the same three-year period. There were 13 distressed counties: Clark, Columbia, Cowlitz, Ferry, Grays Harbor, Klickitat, Lewis, Mason, Pacific, Pend Oreille, Skamania, Stevens, and Wahkiakum.

Economic risk. Survey A included three questions related to economic problems (see Appendix C, questions A15, A16, and A17). For ease of analysis, we constructed a single ordinal measure from those three questions as follows:

Low:	Infrequent worry about bills, no collection agency contact, housing not at risk
Moderate:	Often worries about bills OR collection agency contact OR housing at risk
High:	Often worries about bills AND either collection agency contact or housing at risk

Education. This information was obtained from L&I referrals data, and is based on the AWA report that recommended plan development. Continuous years of education were collapsed to 3 categories: (1) Grade 0-11, (2) High school graduate (12 years), and (3) Any post-secondary education (≥13 years). In regression models, education was further collapsed to high school graduate (vs. not). This measure was not recorded by L&I until April of 2009, so was available for only a subset of injured workers.

Female. Obtained from L&I claims data.

[15] Available at: http://www.workforceexplorer.com/article.asp?articleId=10268&PAGEID=&SUBID= (accessed 6/15/10).

Large employer. Constructed from L&I payroll data and Employment Security Department (ESD) wage records. This binary indicator was set to large employer if the employer where the worker was injured reported 50 or more full time equivalents (FTE) either to L&I or to ESD during the quarter the worker was injured. Hours were aggregated at the business level using the Unified Business Identifier (UBI).

Married. Obtained from L&I claims data.

North American Industry Classification System (NAICS). NAICS codes for the industry of injury were obtained from L&I claims data and collapsed to 9 categories (see Exhibit A.2; A10).

Occupational disease. This indicator was set if L&I claims data indicated "Maybe" or "Yes" for the presence of an occupational disease.

One or more dependents. Obtained from L&I claims data. The continuous number of dependents was collapsed to a binary indicator of one or more dependents.

Physical capacity. Obtained from L&I referrals data. This information is based on medical information relevant to a worker's current physical capacity as contained in the AWA report that recommended plan development. This 5 category measure was collapsed to 3 categories: (1) Sedentary, (2) Light, and (3) Medium, Heavy, or Very Heavy. In regression models, physical capacity was further collapsed to Sedentary/Light vs. Medium/Heavy/Very Heavy). This measure was not recorded by L&I until April of 2009, so was available for only a subset of injured workers.

Preferred language not English. Obtained from L&I claims data. This indicator was set if any language other than English was specified.

Prior treatment for same or similar injury. Obtained from L&I claims data (from the accident report submitted to L&I by the health care provider).

Rural residence county. Residence county was obtained from L&I claims data. The indicator for rural residence county was set using 2009 Washington State Office of Financial Management guidelines.[16] A rural county was defined as having a population density of less than 100 persons per square mile or being smaller than 225 square miles. Using this definition, all counties but the following were rural: Clark, King, Kitsap, Pierce, Thurston, Snohomish, and Spokane.

Unemployment rate. County-level monthly unemployment rates for Washington State were downloaded from the Local Area Unemployment Statistics (LAUS) maintained by the Bureau of Labor Statistics (BLS) at bls.gov/data.

[16] Available at: http://www.ofm.wa.gov/pop/popden/rural.asp (accessed 6/15/10).

Data Analysis

We used a combination of descriptive, bivariate and multivariate statistical analyses to address the objectives. The tests used for particular analyses are identified in each results section. Survey analyses included post-stratification weighting as described below. All statistical tests were two-tailed, with statistical significance defined as $p \leq .05$. All analyses were conducted using Stata/SE 11.2 for Windows (StataCorp LP, College Station, TX).

The following four characteristics were unavailable or incompletely populated for self-insured claims and therefore were used only in comparisons among State Fund claims: (1) preferred language, (2) occupational disease, (3) prior treatment for same or similar injury, and (4) coexisting conditions that might delay recovery. In addition, although employer size was available for self-insured claims, all self-insured employers were large employers (≥50 FTE).

Employment Outcome Models

All measures of pre-injury and return to work (RTW) wages that were used in analyses of employment outcomes were based on earnings reported to the Employment Security Department (ESD). The measures themselves are described in the relevant Results section. All wages were standardized to January 2008 using the Consumer Price Index.

Workers with an invalid Social Security number were excluded from these analyses. Workers who were injured prior to the first quarter of 1999 were also excluded, both because the ESD data was less readily available and because the comparison of pre-injury and return to work wages over such a long period of time was thought questionable, even in standardized dollars. Workers with zero pre-injury ESD wages were excluded from only those analyses involving comparison of pre-injury and return to work wages. Although ESD did not capture any wages for these workers, they had in fact been working by definition, and therefore pre-injury ESD wages would not be a good method to measure change in earnings. Workers with total permanent disability or who had died during the relevant observation period were excluded from all employment outcome models.

ESD wage data includes those workers covered by unemployment insurance and exceeds 86% of total employment in Washington.[17] Non-covered employment includes self-employment and a variety of narrowly defined exceptions. ESD wage data would also not capture wages that employers fail to report. Therefore, pre-injury and return to work wages may be underestimated for some workers.

[17] Details about covered and non-covered employment are available in the Washington State Quarterly Census of Employment and Wages (QCEW) reports, available at http://www.workforceexplorer.com/?PAGEID=67&SUBID=159.

For descriptive purposes, we used the following measures to describe employment outcomes:

1. Whether the worker ever returned to work (defined as having any observed wages in the ESD database), and the timing of return to work with respect to the relevant quarter (as described in each Results section).
2. The percentage of all workers attaining each of 5 wage measures:
    a. Any wages.
    b. At least full-time minimum wage (prevailing minimum wage x 500 hours). In other words, if a worker earned at least $4,035 per quarter in 2008 or $4,275 per quarter in 2009 or 2010, they met this standard for that particular quarter.
    c. At least 50% of the worker's pre-injury wage.
    d. At least 75% of the worker's pre-injury wage.
    e. At least 100% of the worker's pre-injury wage.

We assessed employment outcomes using four modeling approaches. We have assigned shorthand names to these approaches that are used throughout this report. The estimates generated from these models can be complex to interpret, and there were limitations to the data available and some difficulties with meeting certain statistical assumptions. Therefore, we focus in this report primarily on direction of effect and statistical significance, rather than the size of the estimates.

Timely RTW (any wages in quarter that referral/plan ended). This approach used logistic regression with robust variance estimates to estimate the presence of any ESD wages in the same quarter that the relevant referral or plan ended. This model estimates an odds ratio, which represents the odds of timely RTW for the group of interest relative to the comparison group (an odds ratio of precisely 1 would signify no difference between groups).

Sustained RTW (any wage level). This approach used negative binomial regression with robust variance estimates to estimate the number of quarters with any ESD wages. The number of quarters available to observe ESD wages (exposure) was accounted for on the worker level (exposure ranged from 1 to 16 quarters, depending on the particular analysis and amount of follow-up time available). This model estimates an incidence rate ratio, or the "rate" of the number of quarters with observed ESD wages given the number of quarters exposed, for the group of interest relative to the comparison group (an incident rate ratio of precisely 1 would signify no difference between groups).

Sustained RTW (at or above pre-injury wage). This approach was the same as the previous approach, with the exception that the employment measure was the number of quarters with adjusted ESD wages that were at least 100% of the average quarterly adjusted pre-injury ESD wages, given the number of quarters exposed. This is a much harder standard to meet, especially in the face of the economic recession.

Ever RTW (first occurrence of any wages). This approach used Cox proportional hazards regression with robust variance estimates to estimate time (measured in quarters after the relevant referral or plan ended) to the first occurrence of any ESD wages. This model estimates a hazard ratio, or the average probability of the occurrence of any ESD wages over time for the group of interest relative to the comparison group (a hazard ratio of precisely 1 would signify no difference between groups).

Post-RTW mean wages. This approach used linear regression with robust variance estimates to estimate mean quarterly wages for the four quarters after the first RTW quarter. Only workers who returned to work were included in these models, thus differences in the proportion of workers returning to work were not captured. For this reason, we used this approach only when there was an a priori hypothesis that mean wages were an important outcome measure for a particular feature of the VIP. Specifically, we estimated mean RTW wages for longer plans (>1 year) compared with shorter plans, and for Option 2 workers who had used all of their retraining funds compared with Option 1 workers who had completed their retraining plans.

Covariates included in employment outcome models (see Data Definitions for details):

- Age
- Female
- Married
- One or more dependents
- Preferred language not English (for models that were SF only)
- Occupational disease (for models that were SF only)
- Adjusted pre-injury ESD wages
- NAICS sector (set of 9 indicators)
- Large employer
- Unemployment rate for county of residence and month/year of referral or plan end
- Rural residence county
- Number of quarters since injury
- Number of months since referral start date or since plan approved, whichever relevant
- Number of days that passed between the first day of the quarter that the referral/plan ended and the date that observation of ESD wages began (0-91): only for "Timely RTW" analysis (because workers with referrals ending later in the quarter would have less time to RTW before that quarter ended than workers with referrals ending early in the quarter)
- Physical capacity: only where indicated
- Education: only where indicated
- Self-insured (for models including both SF & SI claims)

Survey Methods

Two distinct surveys were conducted for this evaluation (see Exhibit 2.4 for a brief description of both). Survey A was completed in December 2009, and Survey B was completed in August 2011. Pertinent results from both surveys are presented in various sections of this report.

Exhibit 2.4 Description of Surveys A and B

Survey A (baseline):

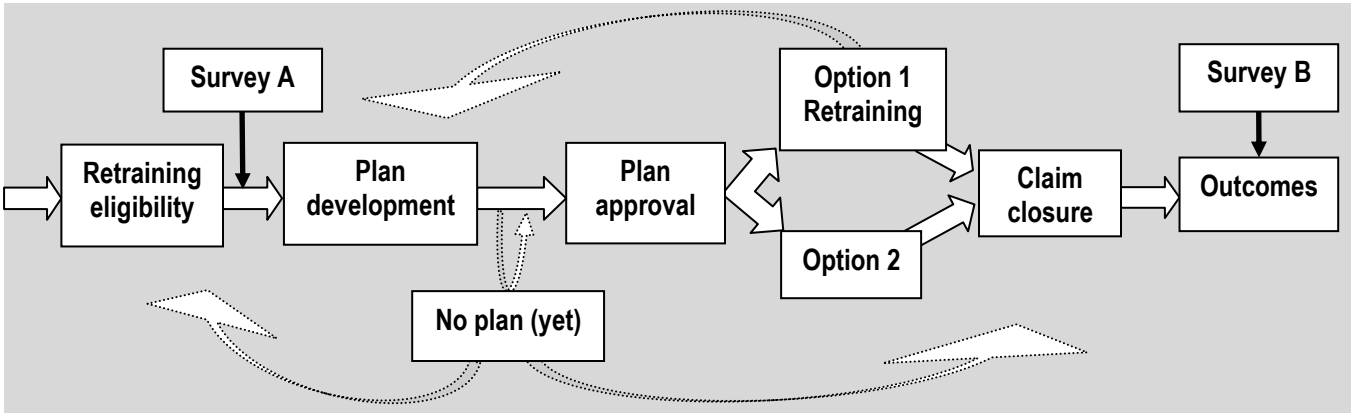
- 361 workers determined eligible and referred for plan development
- Interviewed prior to Option1/Option 2 selection
- Interview dates: 8/27/09-12/31/09
- Focus: Baseline differences between those who chose Option 1 versus Option 2

Survey B (follow-up):

- 360 workers with plans approved after 1/1/08
- Interviewed 3-6 months after claim closure
- Interview dates: 8/11/09-8/17/11
- Focus: Use of acquired skills, employment outcomes, and satisfaction

The primary purpose of Survey A was to provide information about baseline differences between workers who choose Option 1 versus Option 2. The sections on option choice and on workers' opinions in the Results chapter of this report draw from Survey A. Appendix A presents Survey A response frequencies and descriptive information about the population of workers determined eligible for plan development under the pilot program. The primary purpose of Survey B was to provide information about differences in satisfaction and return-to-work outcomes for workers who chose either option, as well as to assess use of skills acquired during retraining and use of Option 2 retraining funds. Appendix B presents Survey B response frequencies. Exhibit 2.5 shows the timing of the two surveys with respect to the vocational rehabilition process.

Exhibit 2.5 Timing of surveys with respect to the vocational rehabilitation process



Survey Development

The questions used in the surveys conducted for this evaluation were developed in collaboration with L&I's vocational experts and stakeholders, Gilmore Research Group, and by consulting the relevant research literature. Where possible, questions were modeled on questions from previously conducted surveys, but many questions were adapted or newly developed to meet the particular needs of this evaluation. Face validity was ascertained through consultation with L&I's vocational experts and stakeholders. The survey questions were reviewed and refined for clarity and comprehensibility by both Gilmore Research Group staff and L&I staff that work closely with injured workers. All survey questions are listed in Appendix C. Sources used in survey question development are listed in Appendix D.

Survey A: Sampling and Administration

Workers became eligible for Survey A when they were determined eligible for development of a vocational plan. We used a consecutive sampling approach. We attempted to interview all workers with plan development referrals occurring between July 20, 2009 and December 4, 2009 (the survey ended when the target number of interviews was reached). The following workers were not eligible for this survey:

- Under age 18 at time of survey
- Residence address outside Washington State
- L&I employees
- Individuals whose claims indicated that employment was through a prison program
- Unable to complete telephone interview in English or Spanish

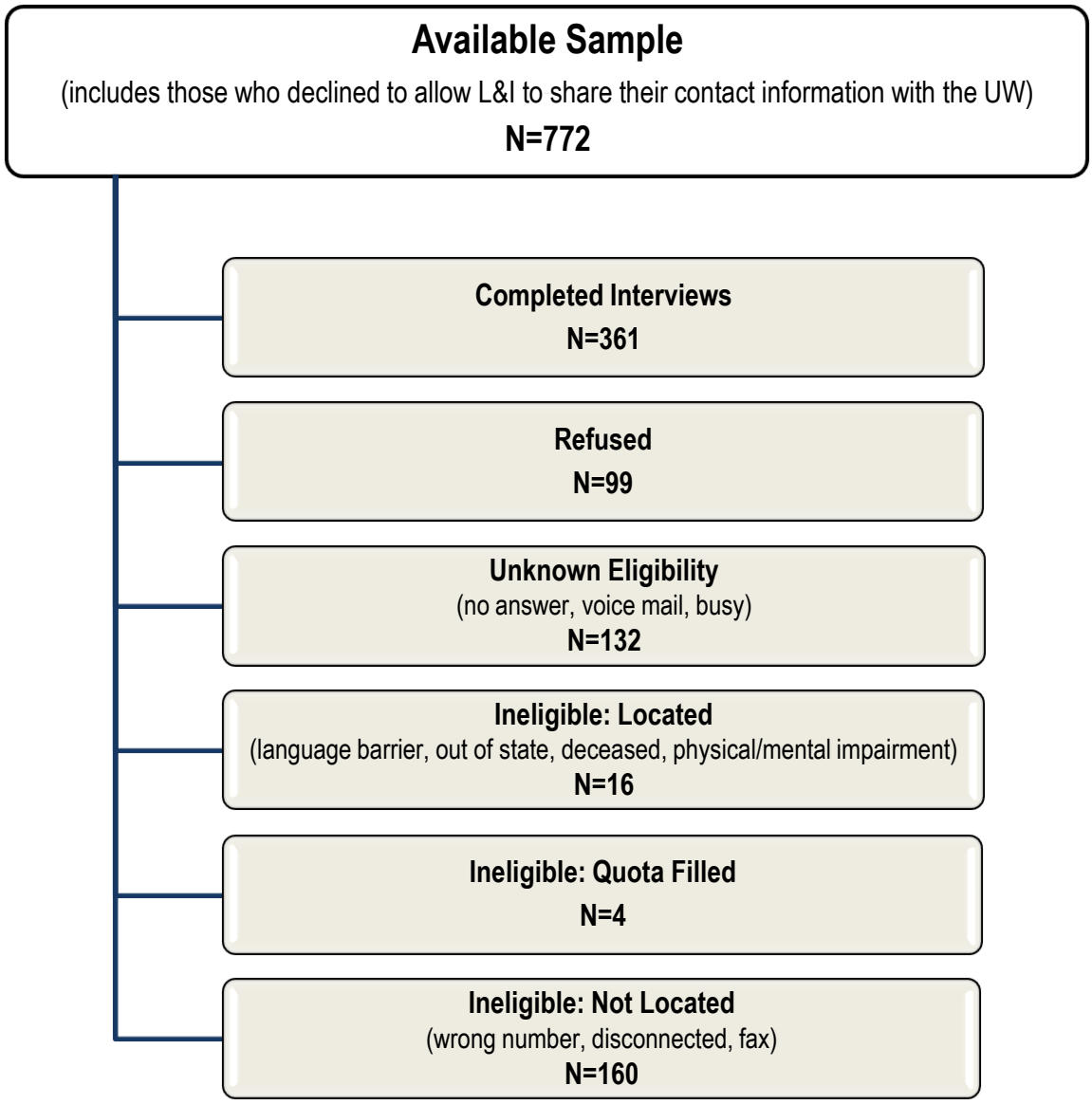
L&I provided us with contact information and other necessary data elements for all newly eligible injured workers, and for their attorneys when applicable/known. As required by the Washington State IRB (the human subjects protection committee), L&I notified potential survey participants by mail of their intent to release contact information to the University of Washington (UW) for purposes of the survey and provided an opt-out mechanism (in English and Spanish). After such notification and a 10-day waiting period, L&I released survey samples to the UW on a weekly basis. We then excluded workers who had already been interviewed and forwarded contact information to Gilmore Research Group, our subcontractor for the telephone interviews.

Computer Assisted Telephone Interviews (CATI) of approximately 9-10 minutes in length were conducted by Gilmore Research Group. In order to minimize non-response, workers were mailed an advance letter, offered the ability to schedule the phone interview at a convenient time, and compensated for their time with a $15 gift card. Ten attempts to call each individual were made, spread out over a number of weeks, and mailed reminder letters as needed. Interviews took place as soon as feasible after claimants were determined eligible for plan development referral (mean=34 days, range=18 to 61 days), between August 27, 2009 and December 31, 2009.

Survey A: Response Rates and Post-Stratification

L&I identified 772 workers eligible for this survey (including those who opted out of sharing their contact information with us). Gilmore Research Group completed 361 interviews (the original goal was 360). 89% of those responding were State Fund (N=321), and 11% were self-insured (N=40). 4% of interviews were conducted in Spanish (N=15). A flowchart showing response and non-response categories for this survey sample is presented in Exhibit 2.6.

Exhibit 2.6 Survey A response flowchart



The overall adjusted response rate was 61.6%. For workers with State Fund claims, the adjusted response rate was 63.6%, and it was 49.0% for those with self-insured claims (see Exhibit 2.7 for all standard response and refusal rate calculations). This response rate is on the high end of expectations for a workers' compensation-related survey.[18] Exhibit 2.8 provides the formulas we used to calculate response and refusal rates following recommendations published by the American Association for Public Opinion Research (AAPOR).[19]

Exhibit 2.7 Survey A response and refusal rates

Rate	Full Sample	State Fund	Self-Insured
Response rate	61.6%	63.6%	49.0%
Cooperation rate	78.5%	80.4%	65.6%
Refusal rate	16.9%	15.5%	25.7%
Contact rate	78.4%	79.0%	74.7%

Exhibit 2.8 Formulas used to calculate response rates

Response rate = I/I+R+e(U)
Cooperation rate = I/I+R
Refusal rate = R/I+R+e(U)
Contact rate = I+R/I+R+e(U)
e = I+R/I+R+ineligL [e was .96 overall; .96 for State Fund; .94 for self-insured]

Key to formula abbreviations:

I	Completed interview
R	Refused
U	Unknown eligibility/not contacted (e.g., phone always busy, no answer, voice mail)
ineligL	Located/contacted, but ineligible
e	Estimated proportion of U that were eligible

[18] Kominski G, Pourat N, Roby D, Cameron M. *Access to Medical Treatment in the California Workers' Compensation System, 2006*. Los Angeles, CA: UCLA Center for Health Policy Research; 2006, page 31. Available at: http://www.dir.ca.gov/dwc/AccessMedTreatmentReport2006/AccessToMedicalTreatmentInCAWC2006.pdf (accessed 8/12/10).

[19] The American Association for Public Opinion Research. *Standard Definitions: Final Dispositions of Case Codes and Outcome Rates for Surveys*. 5th ed. Lenexa, KS: AAPOR; 2008. Available at: http://www.aapor.org/AM/Template.cfm?Section=Standard_Definitions&Template=/CM/ContentDisplay.cfm&ContentID=1273 (accessed 8/12/10).

There were no large or significant differences between the respondents and the overall sample based on age, gender, attorney involvement, marital status, having at least one dependent, rural or distressed county of residence, adjusted pre-injury wages, large employer, occupational disease, prior treatment for a similar injury, or co-existing condition that could delay recovery (the last four were applicable to and tested only for the State Fund subset).

Respondents were somewhat more likely to have State Fund claims than was the case for the overall sample (89%, vs. 85% for the overall sample, p=.03). Respondents were less likely to have been determined eligible for plan development more than once (20%, compared with 25% for the overall sample, p=.04). These two factors were associated with at least some survey responses (for example, satisfaction and optimism about the impending plan's effectiveness). To improve generalizability and reduce non-response bias, post-stratification weights were calculated based on the distribution of these two factors in the full available sample. These weights were used when calculating the response frequencies presented in this report so that responses could be considered to reflect the opinions of all workers[20] in the vocational rehabilitation system who were determined eligible for plan development during the fall of 2009, specifically the 20 weeks from July 20, 2009 through December 4, 2009.

Survey B: Sampling and Administration

Ideally we would have identified a random (perhaps stratified) sample of approved plans, and then interviewed as many of those workers as possible after claim closure. That would provide a true probability sample that could be used to generalize with some confidence to everyone with plans approved under the new program. However, given the timeline for this evaluation and the amount of time it takes for vocational rehabilitation claims to mature, this was not an option. We did not think that enough pre-enumerated claims would close in time to be interviewed, however large the sample. To address this problem, we used quota sampling. We pre-designated 18 cells, defined by all possible combinations of 4 descriptors of interest:

- State Fund vs. Self-insured
- Option 1 vs. Option 2
- Approved plan length in months (4 categories: 0-6, 6-12, 12-18, 18-24)
- Vocational plan completed vs. not completed

This ensured at least minimal representation in each of these important categories. Survey B was essentially a descriptive survey, but because of the quota sampling we are able to describe the responses of workers having a variety of experiences.

[20] With the exception of workers who were ineligible for the survey: under age 18, residence address outside Washington State, L&I employees, employment through a prison program, or unable to complete a telephone interview in English or Spanish.

The preset quotas were adjusted over time as we learned more about opt-out rates, non-response rates, and changing percentages of each type of claim in the underlying population over the survey's timeframe. Cells were collapsed and weighted using post-stratification weights as appropriate to specific analyses (taking into account small cell sizes).

Workers became eligible for Survey B when their claim closed, if they had a retraining plan approved under the VIP. Interviews were conducted 3-6 months after claim closure; from August 11, 2009 through August 17, 2011 (the survey was terminated when the quota for each cell and the maximum number of interviews was reached). The following workers were not eligible for this survey:

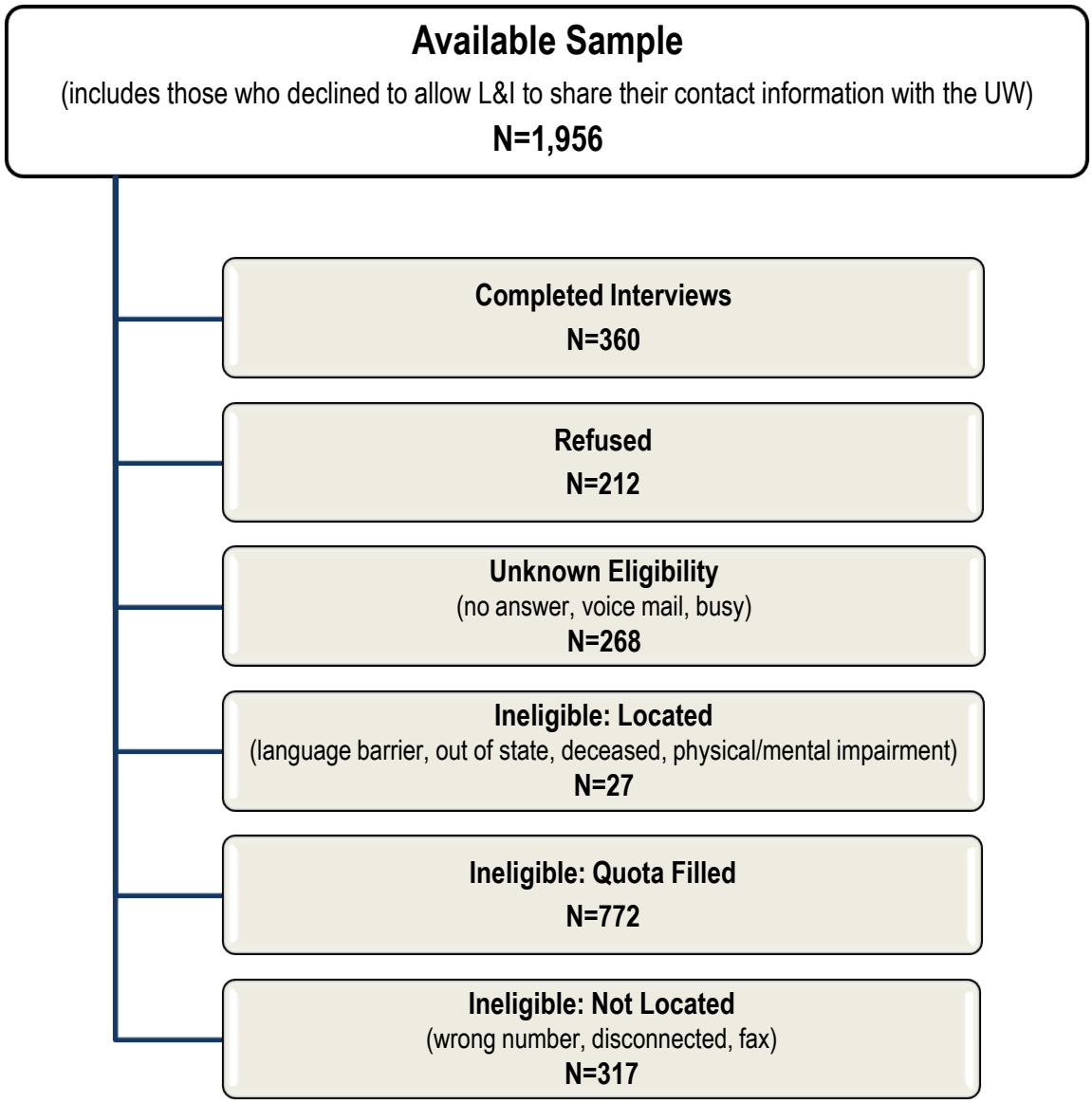
- Under age 18 at time of survey
- Residence address outside Washington State
- L&I employees
- Individuals whose claims indicated that employment was through a prison program
- Unable to complete telephone interview in English or Spanish

L&I provided us with contact information and other necessary data elements for all newly eligible injured workers, and for their attorneys when applicable/known. As required by the Washington State IRB (the human subjects protection committee), L&I notified potential survey participants by mail of their intent to release contact information to the University of Washington (UW) for purposes of the survey and provided an opt-out mechanism (in English and Spanish). After such notification and a 10-day waiting period, L&I released survey samples to the UW on a monthly basis. We then excluded workers who had already been interviewed for Survey B and forwarded contact information to Gilmore Research Group, our subcontractor for the telephone interviews. Computer Assisted Telephone Interviews (CATI) of approximately 14-20 minutes in length were conducted by Gilmore Research Group. Other survey administration details were as described for Survey A.

Survey B: Response Rates and Post-Stratification

L&I identified 1,956 workers eligible for this survey (including those who opted out of sharing their contact information with us). Gilmore Research Group completed 360 interviews (the original goal). 83% of those responding were State Fund (N=299), and 17% were self-insured (N=61). 4% of interviews were conducted in Spanish (N=16). A flowchart showing response and non-response categories for this survey sample is presented in Exhibit 2.9.

Exhibit 2.9 Survey B response flowchart



The overall adjusted response rate was 52.6%. For workers with State Fund claims, the adjusted response rate was 53.8%, and it was 45.1% for those with self-insured claims (see Exhibits 2.10 and 2.11 for all standard response and refusal rate calculations). Although somewhat lower than the response rates for Survey A, this response rate is on the high end of expectations for a workers' compensation-related survey.[21] Exhibit 2.8 provides the formulas we used to calculate response and refusal rates following recommendations published by the American Association for Public Opinion Research (AAPOR).[22]

Exhibit 2.10 Survey B overall response and refusal rates

Response Rates	Full Sample
Response rate	52.6%
Cooperation rate	62.9%
Refusal rate	31.0%
Contact rate	83.6%

Note: The AAPOR-based formulas used to calculate these rates are provided in Exhibit 2.8.

Exhibit 2.11 Survey B response and refusal rates by sampling category

Response rates by sampling category

Sampling Category	Response Rate
State Fund	53.8%
Self-insured	45.1%
Option 1	58.9%
Option 2	42.4%
Completed plan	63.7%
Incomplete plan	44.2%
0-6 months	40.3%
6-12 months	63.3%
12-18 months	64.6%
18-24 months	53.6%

[21] Kominski G, Pourat N, Roby D, Cameron M. *Access to Medical Treatment in the California Workers' Compensation System, 2006*. Los Angeles, CA: UCLA Center for Health Policy Research; 2006, page 31. Available at: http://www.dir.ca.gov/dwc/AccessMedTreatmentReport2006/AccessToMedicalTreatmentInCAWC2006.pdf (accessed 8/12/10).

[22] The American Association for Public Opinion Research. *Standard Definitions: Final Dispositions of Case Codes and Outcome Rates for Surveys*. 5th ed. Lenexa, KS: AAPOR; 2008. Available at: http://www.aapor.org/AM/Template.cfm?Section=Standard_Definitions&Template=/CM/ContentDisplay.cfm&ContentID=1273 (accessed 8/12/10).

Respondents were more likely to have State Fund claims than was the case for the overall sample (89%, vs. 83% for overall sample, p=.0001); this will be accounted for by poststratification weight adjustments. Respondents were somewhat older at claim closure than those in the overall sample (50 years old, compared with 47 years old, p<.00001).

There were no large or significant differences between the respondents and the overall sample for: gender, attorney involvement, pre-injury wages, having multiple plan development referrals, large employer, occupational disease, prior treatment for a similar injury, or comorbidity that could delay recovery (the last four were checked for the State Fund subset only).

Despite the inability to conduct a random sample (due to timeline constraints), we attempted to make this survey representative of the whole population[23] by:

- Using quotas to boost proportion of self-insured claims, to ensure adequate numbers of completed plans, and to ensure a variety of approved plan lengths.
- Poststratification: weighting responses to match the characteristics of the whole 2008 population (SF/SI, Option 1/Option 2, completed/incomplete plan, approved plan length). This also serves to reduce nonresponse bias.

However, respondents may still not be completely representative of the general population due to several factors:

- Residual non-response bias: Although there was little evidence of bias based on measured variables, there may have been attitude, opinion, or other unmeasured differences that were correlated with non-response.
- Weighting was based on the distribution of plan characteristics for plans approved in 2008 only (due to uncaptured approved plan lengths); it is unknown whether that distribution changed in later years.
- Although we used quotas, it is still the case that faster-closing claims within each cell (quota type) would more likely be included in the overall sample. Therefore, there was inherent and unavoidable bias toward sampling claimants with (1) incomplete plans that were interrupted sooner, and (2) completed plans with fewer delays or multiple plan development/implementation referrals. It is unknown what effect that may have had, but it is possible it would lead to observing more extreme differences between claimants with incomplete and completed plans.

[23] With the exception of workers who were ineligible for the survey: under age 18, residence address outside Washington State, L&I employees, employment through a prison program, or unable to complete a telephone interview in English or Spanish.

CHAPTER 3. RESULTS

To organize our presentation of results, we will start by focusing on several areas of potential change under the pilot program:

- L&I Vocational Service Specialists at WorkSource
- Measures related to accountability and efficiency
  - Repeat referrals
  - Plans submitted to L&I
  - Plans approved by default
  - Time from plan development referral to retraining
  - Completed retraining plans
  - Time from plan completion to claim closure
- Characteristics of vocational plans
  - Training strategy (type of retraining plan and plan length)
  - Labor market demand
  - Goal occupations
  - Return-to-work occupations and use of acquired skills
- Option 2

For each of these general areas, we will discuss the following issues:

- Describe what has occurred under the pilot program, for State Fund and self-insured claims separately
- Where possible, compare the pilot program to a pre-pilot baseline period to describe any changes
- When relevant, describe differences in worker characteristics for different retraining pathways
- When relevant, describe differences in employment outcomes

Then we will compare referral and employment outcomes during the VIP with those at baseline.

Finally, we will describe what we've learned about workers' opinions regarding the effectiveness of the workers' compensation system and their satisfaction with the vocational rehabilitation system. We will conclude this chapter with a list of key findings (beginning on page 82).

L&I Vocational Service Specialists at WorkSource

WorkSource is a joint venture of government and community agencies that provides services such as free use of computers and other career resources, job and training referrals, workshops on how to get a job, and translation services.

Key findings:

- There have been relatively few referrals to the six L&I WorkSource locations so far. The planned rollout was slowed due to the state hiring freeze, staff turnover, and recruitment challenges.
- State Fund claims were more likely to have involved a WorkSource referral if workers:
  - Were younger
  - Had lower pre-injury wages
  - Had a more recent injury
  - Resided in a rural county
- Workers referred to WorkSource for Early Intervention referrals had better employment outcomes for 2 of the 4 RTW measures.

Prior to the pilot program (and since 1981), L&I had been sending vocational referrals exclusively to private sector vocational rehabilitation service providers. Under the pilot program, L&I staff can make vocational referrals to Vocational Service Specialists (VSSs) that were hired by L&I and stationed at six existing WorkSource locations (one in each of the six L&I regions). Exhibit 3.1 lists each of the six L&I-staffed WorkSource locations, areas served, and the date of the first vocational referral made to each location.

There have been relatively few WorkSource referrals so far, and some sites did not begin accepting referrals until late in 2009. In addition, the Mt. Vernon and Tumwater locations did not have VSS staffing from June 2010 until July 2011 due to vacated and unfilled positions. We were informed that the planned rollout was slowed considerably due to the state hiring freeze, staff turnover, and challenges in recruiting appropriate candidates for open VSS positions.

Exhibit 3.1 WorkSource locations (in order of initial VSS placement)

Location	Counties Served	First referral date
Tumwater	Lewis, Mason, Thurston	July 23, 2008
Spokane	Adams, Ferry, Lincoln, Okanogan (shared), Pend Oreille, Spokane, Stevens, Whitman	August 11, 2008
Kennewick	Asotin, Benton, Columbia, Franklin, Garfield, Walla Walla	June 5, 2009
Tacoma	Pierce	July 7, 2009
Mt. Vernon	San Juan, Skagit	October 12, 2009
Renton	King	November 18, 2009

Of 34,390 State Fund claims (for 32,859 workers) with any vocational referrals made since L&I began to place VSSs at WorkSource locations, 442 had at least one referral to a VSS based at WorkSource (1.3%). The vast majority were early intervention (EI) referrals (N=305). There was at least one ability-to-work assessment (AWA) referral to WorkSource for 147 claims. Only 16 claims had at least one PD referral to WorkSource, and only 9 claims had at least one PI referral to WorkSource.

For the comparison of worker characteristics presented in Exhibit 3.2, we excluded workers who did not reside within any of the counties served by L&I WorkSource locations (and where an L&I WorkSource referral would not be expected, see Exhibit 3.1). This limited the comparison to 18,845 total claims, 404 of which had at least one WorkSource referral. (27 claims with a WorkSource referral were excluded because the residence county was unknown, and 11 due to being outside a WorkSource service area.)

Exhibit 3.2 Worker characteristics by WorkSource referral status (State Fund claims within L&I WorkSource service areas with vocational referrals made 7/2008-12/2011)

Characteristic	All claims (N=18,845)	Only private sector (N=18,441)	Any WorkSource (N=404)	p-value
	Mean	Mean	Mean	
Age (as of 12/31/2011)	47.1	47.1	45.8	.03
Adjusted monthly pre-injury wage	$3,152	$3,156	$2,961	.02
Months since injury (to 12/31/2011)	48.8	49.1	34.9	<.001
	Percent	Percent	Percent	
Female	33.6	33.7	32.2	NS
Married	49.8	49.8	49.3	NS
1 or more dependents	35.7	35.7	37.9	NS
Preferred language not English	13.4	13.4	10.2	NS
Occupational disease	12.8	12.8	9.7	NS
Prior treatment for same or similar injury	20.0	20.0	20.0	NS
Coexisting conditions that might delay recovery	8.6	8.6	9.2	NS
Rural residence county	25.3	24.9	41.8	<.001
Distressed residence county	7.3	7.3	9.2	NS
Large employer (≥50 FTE)	50.8	50.8	50.3	NS

State Fund claims were significantly more likely to have involved a WorkSource referral if workers:

- Were younger (though the difference was small)
- Had lower pre-injury wages (income tends to be lower in rural counties, and rural residence was also associated with WorkSource referrals)
- Had a more recent injury (WorkSource was a new option and claim managers tend to refer each individual worker to the same VRC they have already seen, in the absence of a specific reason for a change)
- Resided in a rural county

Employment Outcomes

There have been too few plan development or plan implementation referrals to WorkSource to enable comparison with private VRCs regarding employment outcomes for plan-related activities. Instead, we compared employment outcomes for workers with EI or AWA referrals that were found "ready to work" (meaning they had been assigned a referral outcome code of either "able to work" or "returned to work").[24] Exhibit 3.3 presents the results of these models. This table provides some evidence that those workers referred to WorkSource had better employment outcomes, particularly for EI referrals in the areas of timely RTW and sustained RTW at or above pre-injury wages. There were very few AWA referrals, which likely contributed to the lack of statistical significance for any of the four outcome models; however, the direction of effect is promising and deserves more study as WorkSource referrals accumulate. It is not possible to determine whether unmeasured selection bias contributed to these effects (i.e., it is possible that certain workers were referred to WorkSource because it was thought they would particularly benefit from that avenue).

Exhibit 3.3 WorkSource employment outcome models (ESD data)

	Timely RTW (any wages in quarter that referral ended)	**Sustained RTW** (any wage level)	**Sustained RTW** (at or above pre-injury wage)	**Ever RTW** (first occurrence of any wages)
	Odds ratio	Incidence Rate Ratio	Incidence Rate Ratio	Hazard Ratio
EI referrals	1.62*	1.07	1.27*	1.06
AWA referrals	1.06	1.12	1.34	0.98

*Statistically significant at $p \leq .05$.

Notes: Roughly speaking, a number above 1 means a higher likelihood of the RTW measure for WorkSource referrals relative to referrals to private VRCs. These models have been adjusted for a number of relevant factors as described in the Methods chapter.

[24] There were 159 WorkSource referrals and 4,072 private VRC referrals in the EI models. There were 44 WorkSource referrals and 7,706 private VRC referrals in the AWA models.

Measures Related to Accountability and Efficiency

Several changes were made under the pilot program that may have affected accountability and efficiency in the vocational rehabilitation system. These include:

- Screening of vocational referrals by specialized L&I staff
- L&I has a 15-day limit to act on a submitted plan, or the plan is deemed approved
- Vocational rehabilitation counselors have a 90-day limit for plan development

In the following sections, we present analyses regarding six measures related to accountability and efficiency that may have been affected by these changes:

- Repeat referrals
- Plans submitted to L&I
- Plans approved by default
- Time from plan development referral to retraining
- Completed retraining plans
- Time from plan completion to plan closure

Repeat Referrals

In this section, we assess the incidence of repeat vocational referrals for the same service at the claim level. Although repeat referrals are not always unwarranted, the presence of repeat referrals for the same service is a potential indication of inefficiency and other possible problems with the progress of a claim. We focus here on ability to work assessment (AWA), plan development (PD), and plan implementation (PI) referrals, since those are the activities likely to have been affected by the pilot.

To construct comparable samples for each referral type, we assigned each claim to the baseline or pilot period (or excluded it) based on the start date for the very first referral of the referral type being assessed. (Note that a claim might fall into different categories for each of the three referral types and therefore be included or excluded differently for each of the three analyses.) We then counted the number of repeat referrals for each claim that occurred within the same 18-month baseline or pilot time window (all referrals subsequent to the first referral but occurring within the allotted time window). Although this strategy

Key findings:

- Self-insured claims had fewer repeat plan development and plan implementation referrals under the pilot than did State Fund claims.
- From baseline to pilot, the percentage of State Fund claims with repeat referrals decreased by:
  - 34% for AWA referrals
  - 35% for PD referrals
  - 43% for PI referrals

limited the length of time each claim could be observed, our primary motivation was to ensure to the extent possible that the samples were comparable in terms of having been exposed to either only baseline or only pilot practices. Controlling for employer size did not substantively affect these estimates or comparisons, and was not implemented in the final analyses presented here.

Exhibit 3.4 presents information about repeat PD and PI referrals for State Fund and self-insured claims under the pilot program. AWA referrals were not included in this table, as self-insured employers were not required to report AWA referrals to L&I, even after the pilot. On average, self-insured employers had a significantly lower percentage of claims with repeat PD referrals and repeat PI referrals during the pilot period than did the State Fund. These findings held up even when we controlled for observation time.[25]

We cannot say to what extent the observed differences between State Fund and self-insured claims[26] were truly differences in efficiency, or to what extent they may reflect the fact that the reporting of PD and PI referrals to L&I was a new requirement under the pilot program. It is possible that some self-insured employers are not fully aware of or have not have fully implemented the new requirement, which would tend to lower the number of observed repeat referrals for self-insured employers.

Exhibit 3.4 Repeat referrals under the pilot for State Fund and self-insured claims

Referral type	State Fund Pilot	Self-insured Pilot	p-value
Plan development (PD)	N=2,139	N=278	
Range of repeat referrals	0 to 4	0 to 1	
% of claims with ≥1 repeat referrals	9.8%	2.9%	.001
Plan implementation (PI)	N=1,878	N=237	
Range of repeat referrals	0 to 3	0 to 1	
% of claims with ≥1 repeat referrals	5.5%	0.8%	.002

[25] In addition to creating comparable 18-month time periods, we calculated the observation period available for each claim by counting the number of days remaining in the allotted time window after the first referral. We also subtracted the number of days that the claim was in closed status after the first referral (when no referrals were possible). We used this claim-level observation time in Poisson count models to produce incidence rate ratios (IRR). The IRR for self-insured compared with State Fund claims was 0.235 ($p<.001$) for PD referrals and 0.132 for PI referrals ($p=.004$).

[26] In the 2010 report, 2.8% of self-insured claims had repeat PD referrals and 3.1% had repeat PI referrals under the pilot program. In the 2011 report, 5.1% of self-insured claims had repeat PD referrals and 4.9% had repeat PI referrals under the pilot program.

Exhibit 3.5 presents information about repeat AWA, PD and PI referrals for State Fund claims, comparing the pilot period to the baseline period. A substantially lower percentage of claims having repeat referrals was observed for all three referral types under the pilot compared with baseline.

From baseline to pilot, the percentage of claims with repeat referrals decreased by:

- 33.9% for AWA referrals (compared with 40.6% in the 2010 report and 27.3% in 2011)
- 34.7% for PD referrals (compared with 24.1% in the 2010 report and 24.6% in 2011)
- 42.7% for PI referrals (compared with 34.7% in the 2010 report and 31.0% in 2011)

These findings held up even when we controlled for observation time.[27]

Exhibit 3.5 Change in repeat referrals from baseline to pilot for State Fund claims

Referral type	State Fund Baseline	State Fund Pilot	Percent change	p-value
Ability to work assessment (AWA)	N=10,459	N=9,436		
Range of repeat referrals	0 to 4	0 to 4		
% of claims with ≥1 repeat referrals	18.0%	11.9%	↓33.9%	<.001
Plan development (PD)	N=3,297	N=2,139		
Range of repeat referrals	0 to 4	0 to 4		
% of claims with ≥1 repeat referrals	15.0%	9.8%	↓34.7%	<.001
Plan implementation (PI)	N=2,025	N=1,878		
Range of repeat referrals	0 to 3	0 to 3		
% of claims with ≥1 repeat referrals	9.6%	5.5%	↓42.7%	.001

[27] In addition to creating comparable 18-month time periods, we calculated the observation period available for each claim by counting the number of days remaining in the allotted time window after the first referral. We also subtracted the number of days that the claim was in closed status after the first referral (when no referrals were possible). We used this claim-level observation time in Poisson count models to produce incidence rate ratios. Using these models, the estimates for the percent decrease in claims with repeat referrals were as follows: AWA: 38.7% ($p<.001$), PD: 28.2% ($p<.001$), PI: 35.8% ($p<.001$).

Plans Submitted to L&I

The pilot program included a new 90-day limit for plan development activities by vocational rehabilitation counselors. For this section, we assessed the likelihood and timing of plans being submitted to L&I for review after plan development referrals were made.

Key findings:

- Under the pilot, 60% of State Fund claims with first-time plan development referrals had a plan submitted to L&I, compared with 68% for self-insured claims. Self-insured claims were 34% more likely on average to have a plan submitted to L&I at any point after referral for plan development, compared with the State Fund.
- At baseline, 38% of first-time State Fund plan development referrals had a plan submitted to L&I, compared with 60% post-pilot. Post-pilot claims were more than twice as likely on average to have a plan submitted to L&I at any point after referral for plan development, compared with baseline claims.
- The timing of plan submissions that we observed was consistent with the new 90-day submission requirement being the mechanism encouraging timelier plan submissions.

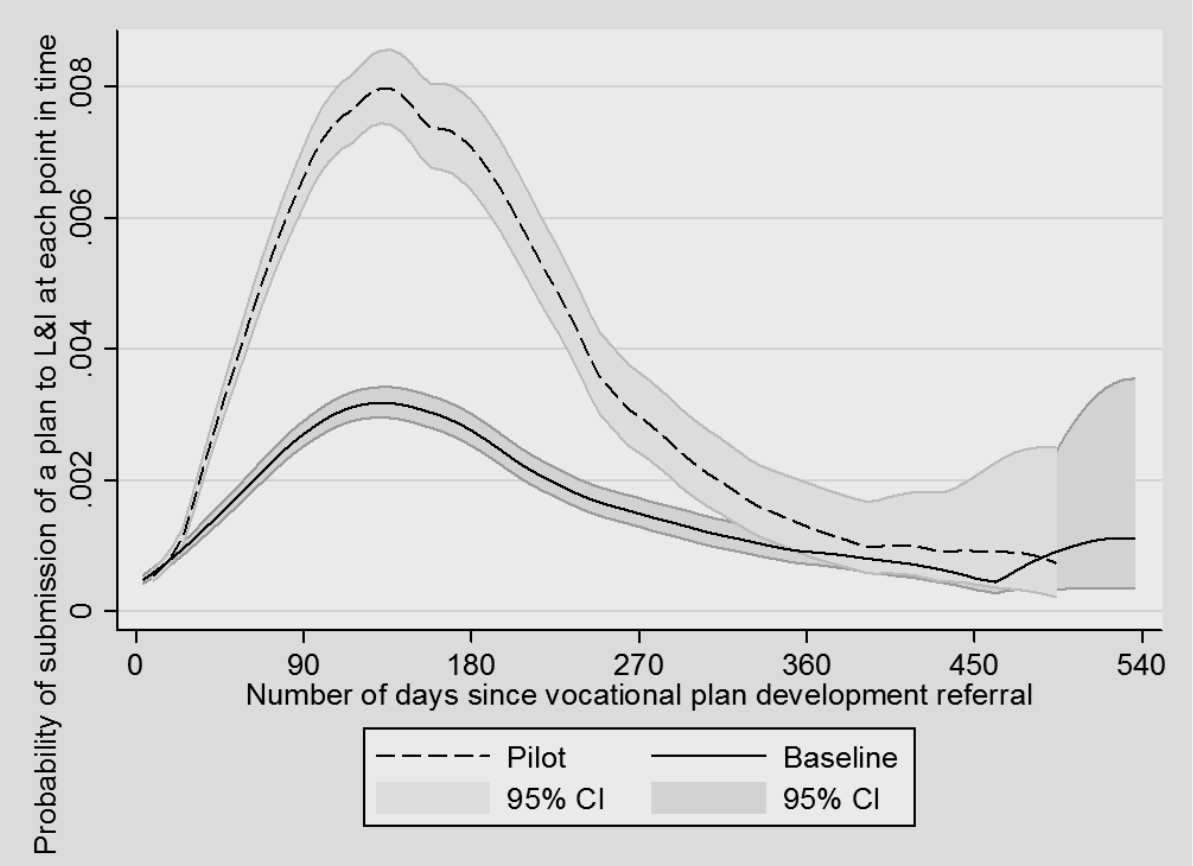
The samples constructed for the analyses in this section consist of those claims with a first-time plan development referral occurring within either the baseline or the pilot period. Time to plan submission was calculated by subtracting the first plan development referral date from the first subsequent plan submission date occurring within the same baseline or pilot time window (later plan submissions were treated as unobserved and censored). Controlling for employer size did not substantively affect these estimates or comparisons, and was not implemented in the final analyses presented here.

Under the pilot, 60.4% of the 2,138 claims with first-time State Fund plan development referrals had a plan submitted to L&I, compared with 68.0% of the 278 self-insured claims ($p=.02$). Because the available observation time was very short for those plans with a referral for plan development occurring late in the allotted time window, we also used a survival analysis approach. We found that self-insured claims were 33.9% more likely on average to have a plan submitted to L&I at any point after referral for plan development, compared with State Fund claims ($p=.001$).

We then compared the pilot period to the baseline period for State Fund claims. At baseline, 38.3% of the 3,272 claims with first-time State Fund plan development referrals had a plan submitted to L&I, compared with 60.4% of the 2,138 post-pilot claims ($p<.001$). Using a survival analysis approach, we found that post-pilot claims were 2.22 times more likely on average to have a plan submitted to L&I at any point after referral for plan development, compared with baseline claims ($p<.001$).

However, although we observed a significant improvement in plan submission under the pilot, this doesn't tell the whole story. Exhibit 3.6 depicts the probability of a plan having been submitted by the number of days that had passed since the plan development referral was made. The difference in probability of plan submission between pilot and baseline increased sharply beginning about 30 days after the plan development referral and peaking at about 130 days. The difference in probability of plan submission then decreased, and pilot and baseline probabilities appeared to converge after about 330 days. This pattern is consistent with the new 90-day submission requirement having been the mechanism encouraging timelier plan submissions.

Exhibit 3.6 Probability of plan submission after plan development referral, comparing pilot to baseline (State Fund only)



Note: The probabilities on the y-axis may appear low. They represent the instantaneous probability (hazard) of plan submission at each particular timepoint (each specific number of days) after vocational plan development referral. This exhibit is intended to illustrate how the probability of plan submission changes as time passes, rather than to quantify the overall probability of plan submission. The cumulative probability of plan submission through a given number of days, e.g., 90 days after plan development referral, would be much higher.

Plans Approved by Default

The pilot program included a new 15-day limit for action by L&I on a submitted plan. If no action is taken within 15 days, the plan is deemed approved by default. Of those plans approved or deemed approved during the 18-month post-pilot period, only 13 State Fund plans (0.2%) and 0 self-insured plans were deemed approved by default rather than having been actively approved.

Prior to the VIP, plans were not deemed approved by default. We needed to use a different measure in order to compare change from baseline to pilot in plan approval delays. We used the percentage of plans approved after more than 15 days from the plan submission date for this purpose. Only 1.7% of the 2,093 State Fund plans approved during the 18-month pilot period took more than 15 days to be approved, compared with 6.6% of the 2,376 plans approved during the baseline period ($p<.001$). Of the 285 self-insured plans approved during the pilot period, 1.2% took more than 15 days, not significantly different from State Fund plans.

Taken together, this information indicates that the time delay from plan submission to approval has been significantly reduced under the pilot, and that only a small number of approvals took longer than 15 days. In most of those cases L&I issued a temporary denial letter in order that the plan not be deemed approved by default, presumably to allow time for a plan-related problem to be resolved.

Key findings:

- Of plans approved during the post-pilot period, only 13 State Fund plans (0.2%) and 0 self-insured plans were deemed approved by default.
- There was a significant reduction in the percentage of State Fund plans that took more than 15 days to be approved from the baseline period (6.6%) to the pilot period (1.7%).
- Fewer than 2% of State Fund and self-insured plans took more than 15 days to be approved during the pilot period.

Time from Plan Development Referral to Retraining

The new timelines required by the pilot program, specifically the 90-day limit for plan development by vocational rehabilitation counselors and the 15-day limit for action by L&I on a submitted plan, would be expected to shorten the timeframe from referral for plan development to initiation of retraining activities for those workers undertaking retraining (Option 1 only). For this section, we assessed timeliness from the date a worker was first referred for plan development until the first approved start date for retraining activities (plan implementation). Factors outside the direct control of either L&I or the vocational rehabilitation counselor may also affect the length of time required. For example, many training programs have specific start dates that may require a waiting period after plan approval.

The samples constructed for the analyses in this section consist of those claims with a first-time plan development referral occurring within either the baseline or the pilot period. Time from plan development referral to retraining was calculated by subtracting the first plan development referral date from the first subsequent plan implementation date occurring within the same baseline or pilot time window (later plan implementations were treated as unobserved and censored). Option 2 plans were excluded. Controlling for employer size did not substantively affect these estimates or comparisons, and was not implemented in the final analyses presented here.

Key findings:

- Under the pilot, self-insured claims were 42% more likely on average than State Fund claims to have retraining begin at any point after referral for plan development.
- State Fund post-pilot claims were 42% more likely on average than baseline claims to have retraining begin at any point after referral for plan development.

Under the pilot, 48.2% of the 1,626 State Fund claims with a first-time plan development referral began retraining, compared with 55.2% of the 203 self-insured claims (difference not significant). Because the available observation time was very short for those plans with a referral for plan development occurring late in the allotted time window, we also used a survival analysis approach. Self-insured claims were 42.4% more likely on average than State Fund claims to have retraining begin at any point after referral for plan development ($p=.003$).

We then compared the pilot and baseline periods for State Fund claims. At baseline, 38.1% of the 3,166 claims with first-time plan development referrals began retraining, compared with 48.2% of the 1,626 post-pilot claims ($p<.001$). Using a survival analysis approach, we found that post-pilot claims were 41.8% more likely on average than baseline claims to have retraining begin at any point after referral for plan development ($p<.001$).

Completed Retraining Plans

Retraining plans exist in one of three states once begun: (1) ongoing, (2) completed and ended, or (3) ended prior to completion. The pilot program doubled the maximum allowable length of a retraining plan from 12 months to 24 months. There is interest in knowing the effect of longer retraining plans on plan completion rates.

For this analysis, it was necessary to construct samples for which all or nearly all plans had ended (whether completed or not). Survival analysis was not suitable because the pilot program doubled the maximum plan length, making direct comparison of time from start date to completion untenable. We therefore used the same post-pilot period that was used for employment outcomes: January 1, 2008 - June 30, 2009. We compared plan completion for plans approved during the baseline period with plan completion in this post-pilot period. Using these time periods, only 1 pre-pilot State Fund plan, 6 post-pilot State Fund plans, and 13 post-pilot self-insured plans had not ended and were excluded. (As a sensitivity analysis, we also included the ongoing plans by assuming the worst case scenario, that all ended prior to completion. There was negligible impact on the findings).

Under the pilot, 56.0% of the 1,371 State Fund retraining plans were completed, compared with 55.4% of the 186 self-insured plans (difference not statistically significant).

We then compared the pilot period to the baseline period for State Fund plans. At baseline, 58.7% of 1,992 plans were completed, compared with 56.0% of 1,371 post-pilot plans (difference not statistically significant).

At our request, L&I staff manually looked up the initial approved plan length for all plans approved in 2008. There was not a clear pattern linking longer plans to lower completion rates.

Key findings:

- Under the pilot, 56% of State Fund retraining plans were completed, compared with 55% of self-insured plans (difference not significant).
- 59% of baseline State Fund plans were completed, compared with 56% of post-pilot State Fund plans (difference not significant).
- Initial approved plan length did not appear linked to completion rates.
- Initial approved plan length is not currently preserved by L&I data systems, but would be a valuable addition for descriptive, evaluative, and research purposes.

L&I's current data systems replace the initial approved plan length with the actual time spent in the retraining plan as plans are ended, whether completed or not. The intended plan length would be valuable information for many descriptive, evaluative, and research purposes, including comparisons of various outcomes before and under the pilot program and between shorter and longer plans. We recommend that, if feasible, L&I begin to record and preserve initial approved plan length for every plan.

Time from Plan Completion to Claim Closure

For this section, we assessed the likelihood and timing of claim closure after a retraining plan was completed and the trainee was determined employable. We would not expect any of the specific requirements under the pilot program to directly impact this measure. However, the department has been attempting to improve system efficiency, and this is one element of the vocational rehabilitation process that might affect overall claim duration.

Key findings:

- Under the pilot, 74% of State Fund completed plans had the claim closed, compared with 49% of self-insured completed plans. Self-insured plans were 55% less likely on average to have the claim closed at any point after a completed plan, compared with State Fund plans.
- At baseline, 55% of State Fund completed plans had the claim closed, compared with 74% post-pilot. Post-pilot State Fund plans were 40% more likely on average to have the claim closed at any point after a completed plan, compared with baseline plans.

This was a plan-level analysis, and plans were included only if the retraining plan was completed and the trainee was determined employable (by definition, Option 2 plans were also excluded). Samples were constructed based on the completed plan end date occurring within either the baseline or the pilot period. Time to claim closure was calculated by subtracting the completed plan end date from the first subsequent claim closure date occurring within the same baseline or pilot time window (later claim closures were treated as unobserved and censored). Controlling for employer size did not substantively affect these estimates or comparisons, and was not implemented in the final analyses presented here.

Under the pilot, 73.7% of the 757 State Fund completed plans had the claim closed, compared with 49.0% of the 96 self-insured completed plans ($p<.001$). Because the available observation time was very short for those plans that ended late in the allotted time window, we also used a survival analysis approach. We found that self-insured plans were 55.2% less likely on average to have the claim closed at any point after a completed plan, compared with State Fund plans ($p<.001$).

We then compared the pilot period to the baseline period for State Fund plans. At baseline, 55.2% of the 862 completed plans had the claim closed, compared with 73.7% of the 757 post-pilot completed plans ($p<.001$). Using a survival analysis approach, we found that post-pilot completed plans were 40% more likely on average to have the claim closed at any point after a completed plan, compared with baseline plans ($p<.001$).

Characteristics and Outcomes of Vocational Plans

Training Strategy

This section covers both the type of retraining plan and plan length. The VIP allowed for retraining programs lasting up to two years, rather than the previous limit of 1 year. In addition, the VIP was intended to provide better support to workers involved in on-the-job training (OJT). L&I records whether each plan was considered (1) formal retraining, (2) OJT, or (3) assistance with a self employment plan. We classified each distinct plan[28] with regard to training strategy. Self-employment plans were rare (only 3 instances since the VIP began), and we excluded those from the descriptive information below. Although the original approved plan length was not preserved in L&I administrative data, L&I staff extracted those data by hand for plans approved in 2008 for our use.

There were 6,509 post-pilot plans approved between January 1, 2008 and December 31, 2011 (representing 6,145 claims and 5,945 workers). For the 5,792 State Fund plans, 96.8% involved formal retraining. For the 717 self-insured plans, about the same percent (96.4%) involved formal training.

We compared the 18-month baseline and pilot periods with regard to the percentage of approved State Fund plans involving OJT. (Assignment to baseline or pilot was based on plan approval date.) A significantly lower percentage of State Fund plans involved OJT after the pilot; 2.7% compared with 9.8% at baseline ($p<.001$). Self-insured plans did not have training strategy recorded prior to the pilot program.

Key findings:

- More than 96% of both State Fund and self-insured plans involved formal training under the pilot.
- The percentage of approved State Fund plans involving OJT decreased significantly from 10% at baseline to 3% under the pilot.
- State Fund plans were more likely to involve OJT rather than formal training for those who:
  - Had a preferred language other than English
  - Had less education
  - Had an occupational disease
  - Resided in a rural and/or distressed county
  - Had a small employer
- OJT was strongly associated with better employment outcomes.
- There was no evidence that longer plans were associated with better employment outcomes, with the possible exception of mean wages.

[28] Distinct plans were defined as having different plan approval dates; where plans had the same approval date, the training strategy for the first instance was used. There could be multiple plans per claim and multiple claims per worker.

We then compared worker characteristics for post-pilot plans involving OJT versus those involving formal training, for State Fund plans (Exhibit 3.7) and self-insured plans (Exhibit 3.8) separately. State Fund plans for those who had a preferred language other than English, less education, who had an occupational disease, who had a small employer, or who were living in rural and/or distressed counties were significantly more likely to involve OJT rather than formal training. There were no significant differences for self-insured plans, but there were only 26 self-insured plans involving OJT rather than formal training.

Exhibit 3.7 Worker characteristics by type of training for post-pilot State Fund plans

Characteristic	All plans (N=5,792)	Formal training (N=5,609)	OJT (N=183)	p-value
	Mean	Mean	Mean	
Age (as of plan decision date)	45.5	45.5	46.4	NS
Adjusted monthly pre-injury wage	$3,474	$3,476	$3,415	NS
	Percent	Percent	Percent	
Female	23.1	23.2	19.7	NS
Married	49.9	49.8	52.5	NS
1 or more dependents	36.8	36.7	42.1	NS
Preferred language not English	9.5	9.4	14.2	.03
Education (N=3,664)*				<.001
Grade 0-11	26.3	25.9	41.4	
High school graduate	48.3	48.4	46.5	
Any post-secondary education	25.4	25.8	12.1	
Physical capacity (N=3,664)*				NS
Sedentary	19.4	19.4	19.2	
Light	55.7	55.8	51.5	
Medium/heavy/very heavy	24.9	24.8	29.3	
Occupational disease	14.6	14.4	20.2	.03
Prior treatment for same or similar injury	21.3	21.4	18.5	NS
Coexisting conditions that might delay recovery	9.2	9.2	7.9	NS
Rural residence county	32.7	32.1	50.0	<.001
Distressed residence county	13.5	13.3	21.7	.002
Large employer (≥50 FTE)	39.0	39.2	30.1	.01

*L&I did not record this measure until April of 2009.

Exhibit 3.8 Worker characteristics by type of training for post-pilot self-insured plans

Characteristic	All plans (N=717)	Formal training (N=691)	OJT (N=26)	p-value
	Mean	Mean	Mean	
Age (as of plan decision date)	50.2	50.2	50.1	NS
Adjusted monthly pre-injury wage	$3,789	$3,798	$3,536	NS
	Percent	Percent	Percent	
Female	45.1	45.0	46.2	NS
Married	51.1	50.9	56.0	NS
1 or more dependents	20.5	20.4	23.1	NS
Education (N=402)*				N/A
Grade 0-11	13.7	**	**	
High school graduate	45.0	**	**	
Any post-secondary education	41.3	**	**	
Physical capacity (N=402)*				N/A
Sedentary	32.1	**	**	
Light	60.5	**	**	
Medium/heavy/very heavy	7.5	**	**	
Rural residence county	26.2	25.9	33.3	NS
Distressed residence county	14.1	14.0	16.7	NS

*L&I did not record this measure until April of 2009.
**Frequencies too small for comparison.

Employment Outcomes

We compared employment outcomes for workers who had completed OJT plans to those who had completed formal retraining plans.[29] We also compared employment outcomes for workers who had completed plans longer than 1 year to those who had completed shorter plans.[30] Exhibit 3.9 presents the results of these models. Although there were few completed OJT plans, OJT was strongly associated with better employment outcomes using all four RTW measures.

Exhibit 3.9 Training strategy employment outcome models (ESD data)

	Timely RTW (any wages in quarter that referral ended)	**Sustained RTW** (any wage level)	**Sustained RTW** (at or above pre-injury wage)	**Ever RTW** (first occurrence of any wages)
	Odds ratio	Incidence Rate Ratio	Incidence Rate Ratio	Hazard Ratio
OJT	6.99*	1.89*	3.23*	1.97*
Plans > 1 year	0.41*	0.86	0.66	0.88

*Statistically significant at $p \leq .05$.

Notes: Roughly speaking, a number above 1 means a higher likelihood of the RTW measure for OJT or longer plans relative to formal retraining or shorter plans. These models have been adjusted for a number of relevant factors as described in the Methods chapter.

In contrast, there was no evidence that longer plans were associated with better RTW outcomes. In fact, timely RTW was significantly less likely for plans lasting 1-2 years compared with plans of 1 year or less. However, based on the results of Survey B, approved plan length was not significantly associated with differences in the percentage of workers who were satisfied with the vocational rehabilitation system, or who felt vocational services were appropriate for them.

To further investigate, we looked at RTW patterns for four plan length subgroups. Exhibit 3.10 presents the number of completed plans approved in 2008 in each of the four subgroups.

Exhibit 3.10 Distribution of approved plan length (for 2008 plans completed by 12/31/2011)

Approved plan length in months	N	Percent
0-6	50	8.7
>6-12	82	14.2
>12-18	69	11.9
>18-24	377	65.2
Total	578	100.0

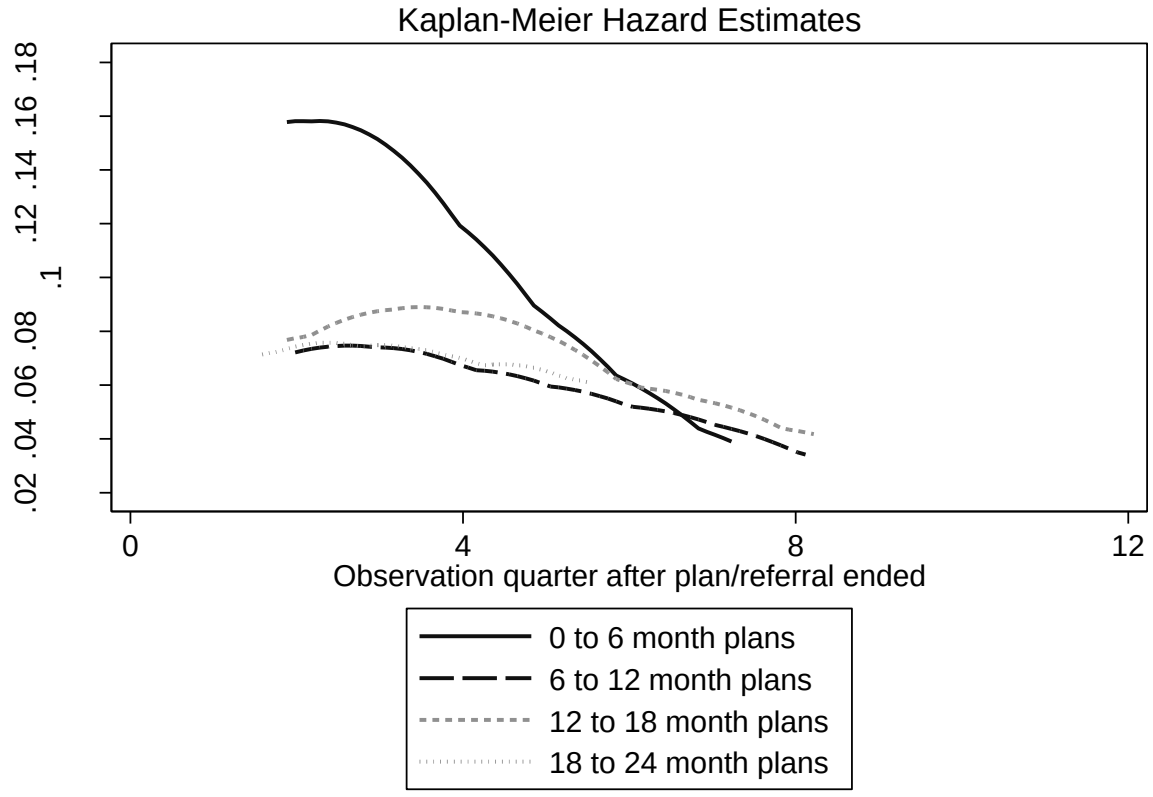
[29] There were 39 workers with OJT plans and 1,073 workers with formal retraining plans included in these models.

[30] There were 411 workers with plans >1 year and 123 workers with shorter plans included in these models.

Exhibit 3.11 shows the estimated probability of the first occurrence of any ESD wages at various points in time for each of 4 plan length subgroups. It is clear from this figure that it was the shortest plans (0 to 6 months) that were driving the observed difference in timely return to work between longer and shorter plans. The RTW patterns for the other 3 plan length groups appear very similar.

As stated in Chapter 1, one expected outcome of the increased retraining duration and cost limits was that workers would be able to obtain higher wage jobs. To assess the potential for success in this area, we compared average adjusted quarterly wages for the year after first RTW for those who completed retraining plans lasting longer than one year to those completing shorter plans (just among the 163 workers who did return to work and for whom we had at least a year of ESD data available). Although the difference was not statistically significant, adjusted quarterly wages were an estimated $900 higher for longer plans (95% CI: -$508, $2,307). Until more data accumulates, we cannot say whether the lack of statistical significance was due to high cost variation relative to the low number of workers having enough follow-up time to be included in this analysis thus far, or whether the observed difference was due to chance.

Exhibit 3.11 Probability of first occurrence of any ESD wages over time by plan length category (for 2008 plans completed by 12/31/2011)



Labor Market Demand

ESSB 5920 stated that the pilot program was intended to allow opportunities for participation in meaningful retraining in high demand occupations. The Employment Security Department hosts a list of occupations and their associated demand rating. Local Workforce Development Councils are responsible for the development and updating of the demand list. Occupations for which there are sufficient data are grouped into the following categories based on local labor market conditions: (1) demand, (2) balanced, or (3) not in demand. For each particular occupation, the demand rating can vary by geographic location and over time.

Key findings:

- 55% of State Fund plans had high demand goal occupations under the pilot, compared with 79% of self-insured plans.
- The percentage of plans with high demand goal occupations is gradually rising over time (both State Fund and self-insured).
- State Fund plans were more likely to have a high demand goal occupation if workers:
  - Were older
  - Had lower pre-injury wages
  - Were female
  - Had no dependents
  - Had less physical capacity
  - Resided in a rural and/or distressed county
  - Had a large employer
- Self-insured plans were more likely to have a high demand goal occupation if workers:
  - Had lower pre-injury wages
  - Were female
  - Had less physical capacity
  - Resided in a distressed county
- There was no evidence that high demand goal occupations resulted in better employment outcomes.

Labor market demand is not the only important or necessary criterion for vocational rehabilitation counselors to consider when identifying goal occupations; however, under the pilot, demand was to be explicitly considered. Beginning in April of 2009, L&I began to record the demand rating of the goal occupation for each approved plan (as well as recording demand for some already open plans). In this section we describe the extent to which plans approved under the pilot program had high demand goal occupations. Neither demand ratings nor O*NET occupational codes were recorded by L&I prior to the pilot program. Thus we were unable to assess change in the percentage of approved plans with high demand goal occupations from the baseline to the pilot period. However, we present descriptive information here about post-pilot practices.

We classified each distinct plan[31] with regard to demand status. We then compared plans with high demand goal occupations to those with any other designation. There were 5,700 post-pilot plans approved between January 1, 2008 and December

[31] Distinct plans were defined as having different plan approval dates; where plans had the same approval date, the first instance with a non-missing demand classification was used. There could be multiple plans per claim and multiple claims per worker. Note that unknown demand is not the same as missing information. Demand rating information was missing for plans approved and closed prior to the system being programmed to record this field. A rating of unknown was entered in the demand field when a demand classification was unavailable for a particular goal occupation. Plans with an entry of unknown were considered "not high demand" for the purpose of these comparisons.

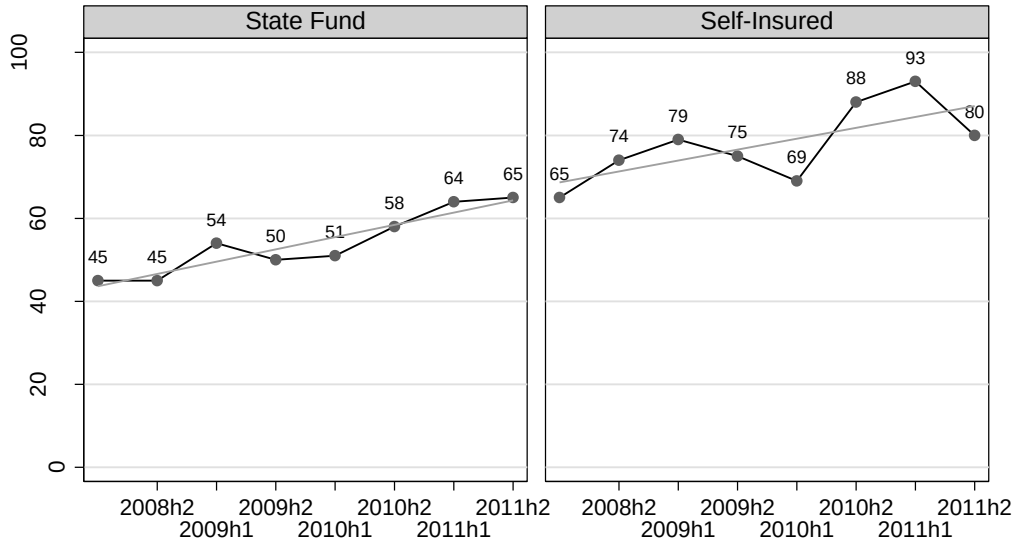
31, 2011 for which demand status was available (representing 5,431 claims and 5,250 workers). Of the 5,067 State Fund plans, 55.1% had high demand goal occupations. A significantly higher percentage, 78.7%, of the 633 self-insured plans had high demand goal occupations (p<.001). Exhibit 3.12 provides more detail for each demand category. We did find that having a large employer and residing in a rural or distressed county were each significantly associated with whether the goal occupation was high demand or not. However, even after controlling for those three factors, the odds of a self-insured plan having a high demand goal occupation were more than twice as high as for a State Fund plan (odds ratio=2.1, p<.001).

Exhibit 3.12 Demand ratings for post-pilot State Fund and self-insured plans

Demand Ratings	State Fund (N=5,067)	Self-insured (N=633)
	Percent	Percent
Demand	55.1	78.7
Balanced	18.2	9.6
Not in demand	18.1	11.2
Unknown (not missing)	8.6	0.5

The percentage of plans with high demand goal occupations is gradually rising over time (for both State Fund and self-insured; see Exhibit 3.13).

Exhibit 3.13 Percent of plans over time with high demand goal occupations, for post-pilot State Fund and self-insured plans



Approval period, in half-years from Jan 2008 through Dec 2011

Next we compared worker characteristics for post-pilot plans involving high demand goal occupations (versus balanced, not in demand, or unknown), for State Fund plans (Exhibit 3.14) and self-insured plans (Exhibit 3.15) separately.

State Fund plans were significantly more likely to have a high demand goal occupation if workers:

- Were older (though the difference was small)
- Had lower pre-injury wages
- Were female
- Had no dependents
- Had less physical capacity
- Resided in a rural or distressed county
- Had a large employer

Self-insured plans were significantly more likely to have a high demand goal occupation if workers:

- Had lower pre-injury wages
- Were female
- Had less physical capacity
- Resided in a distressed county

Employment Outcomes

We compared employment outcomes for workers who had completed high demand plans to those who had completed other plans.[32] Exhibit 3.16 presents the results of these models. There was no evidence that high demand goal occupations resulted in significantly better employment outcomes, using any of the four RTW measures.

[32] There were 543 workers with high demand plans and 503 workers with other plans included in these models.

Exhibit 3.14 Worker characteristics by demand rating for post-pilot State Fund plans

Characteristic	All plans (N=5,067)	Not high demand occupation (N=2,276)	High demand occupation (N=2,791)	p-value
	Mean	Mean	Mean	
Age (as of plan decision date)	45.4	45.0	45.8	.004
Adjusted monthly pre-injury wage	$3,504	$3,792	$3,269	<.001
	Percent	Percent	Percent	
Female	23.5	12.8	32.3	<.001
Married	50.2	51.2	49.3	NS
1 or more dependents	37.2	39.7	35.3	.001
Preferred language not English	9.5	9.0	9.9	NS
Education (N=3,601)*				NS
Grade 0-11	26.4	27.2	25.9	
High school graduate	48.3	48.9	47.8	
Any post-secondary education	25.3	23.8	26.3	
Physical capacity (N=3,601)*				<.001
Sedentary	19.2	15.5	21.8	
Light	55.7	54.9	56.3	
Medium/heavy/very heavy	25.1	29.6	21.9	
Occupational disease	14.8	14.0	15.5	NS
Prior treatment for same or similar injury	21.8	22.9	20.9	NS
Coexisting conditions that might delay recovery	9.0	9.6	8.5	NS
Rural residence county	32.4	28.3	35.6	<.001
Distressed residence county	13.5	10.9	15.4	<.001
Large employer (≥50 FTE)	39.4	33.5	44.2	<.001

*L&I did not record this measure until April of 2009.

Exhibit 3.15 Worker characteristics by demand rating for post-pilot self-insured plans

Characteristic	All plans (N=633)	Not high demand occupation (N=135)	High demand occupation (N=498)	p-value
	Mean	Mean	Mean	
Age (as of plan decision date)	50.0	48.8	50.4	NS
Adjusted monthly pre-injury wage	$3,759	$4,356	$3,599	<.001
	Percent	Percent	Percent	
Female	45.2	25.2	50.6	<.001
Married	50.5	45.9	51.7	NS
1 or more dependents	20.1	18.5	20.5	NS
Education (N=402)*				NS
Grade 0-11	13.7	20.8	12.0	
High school graduate	45.0	40.3	46.2	
Any post-secondary education	41.3	39.0	41.9	
Physical capacity (N=402)*				.009
Sedentary	32.1	19.5	35.1	
Light	60.5	67.5	58.8	
Medium/heavy/very heavy	7.5	13.0	6.2	
Rural residence county	25.6	21.0	26.9	NS
Distressed residence county	13.7	8.1	15.3	.04

*L&I did not record this measure until April of 2009.

Exhibit 3.16 Labor market demand employment outcome models (ESD data)

	Timely RTW (any wages in quarter that referral ended)	**Sustained RTW** (any wage level)	**Sustained RTW** (at or above pre-injury wage)	**Ever RTW** (first occurrence of any wages)
	Odds ratio	Incidence Rate Ratio	Incidence Rate Ratio	Hazard Ratio
High demand	1.14	1.02	0.76	1.02

*Statistically significant at p≤.05.

Notes: Roughly speaking, a number above 1 means a higher likelihood of the RTW measure for completed high demand plans relative to other completed plans. These models have been adjusted for a number of relevant factors as described in the Methods chapter.

Goal Occupations

In this section we provide information about the goal occupations for State Fund and self-insured plans approved under the pilot program. O*NET is a publicly available database that contains standardized occupational titles and descriptions. Beginning in April of 2009, L&I began to record O*NET occupational codes for each approved plan (as well as recording O*NET occupational codes for some already open plans). O*NET occupational codes were not assigned to plans by L&I prior to the pilot program, therefore we present descriptive information here only about post-pilot practices.

Key findings:

- The 46 most frequent goal occupations accounted for 80% of vocational plans.
- Despite the rising percentage of plans with high demand goal occupations under the pilot, many of the most frequent goal occupations often did not have high demand ratings.

We classified each distinct plan[33] with regard to goal occupation. There were 5,038 State Fund and 624 self-insured post-pilot plans approved between January 1, 2008 and December 31, 2011 for which an O*NET code was available (representing 5,397 claims and 5,218 workers).

The 46 most frequent goal occupations accounted for 80% of vocational plans. For each of these 46 O*NET codes, Exhibit 3.17 lists the occupational title, the number of plans having that particular occupational goal, and a summary of the demand rating for that occupation (percent demand). Percent demand was constructed by calculating the proportion of plans that was rated as high demand separately for each O*NET code, and multiplying by 100. The percent demand for each occupation was rarely 100% or 0% (as might be expected) because the demand rating varies by geographic location and over time, depending on local labor markets.

Given the new focus on job demand ratings under the pilot, we assessed the frequency of particular occupational goals in the context of how often they were rated as high demand. For example, 876 plans had the occupational goal of "Office Clerks, General" (by far the most prevalent goal). This goal occupation was rated high demand 85% of the time. In contrast, the 2nd most prevalent occupational goal was "Electrical and Electronic Equipment Assemblers." This occupation was the goal of 284 plans, yet it was rated high demand only 42% of the time. This particular goal occupation has moved up from 7th to 2nd place in relative frequency over the past year. There are many factors to consider when selecting an occupational goal for each worker in retraining, and capacity, abilities, preferences, and training opportunities must be weighed on a case-by-case basis. As we have shown, there is not a clear connection between labor market demand and employment outcomes.

[33] Distinct plans were defined as having different plan approval dates; where plans had the same approval date, the first instance with a non-missing O*NET code was used. There could be multiple plans per claim and multiple claims per worker.

Exhibit 3.17 Occupation and percent demand for post-pilot plans

O*NET code	O*NET title	# plans	% demand
43906100	Office Clerks, General	876	85
51202200	Electrical and Electronic Equipment Assemblers	284	42
15104100	Computer Support Specialists	251	75
43303100	Bookkeeping, Accounting, and Auditing Clerks	219	77
21109300	Social and Human Service Assistants	203	92
43417100	Receptionists and Information Clerks	203	81
31909200	Medical Assistants	173	94
43601300	Medical Secretaries	165	87
11902100	Construction Managers	142	8
43405100	Customer Service Representatives	126	91
43601100	Executive Secretaries and Executive Administrative Assistants	118	55
17301102	Civil Drafters	114	35
43302102	Billing, Cost, and Rate Clerks	107	84
17301300	Mechanical Drafters	98	15
17301101	Architectural Drafters	95	35
23201100	Paralegals and Legal Assistants	92	47
29207100	Medical Records and Health Information Technicians	80	90
27102400	Graphic Designers	70	33
41201100	Cashiers	64	92
53303200	Heavy and Tractor-Trailer Truck Drivers	60	67
29201200	Medical and Clinical Laboratory Technicians	56	82
17301201	Electronic Drafters	54	17
51412106	Welders, Cutters, and Welder Fitters	54	46
49305300	Outdoor Power Equipment and Other Small Engine Mechanics	53	2
51401100	Computer-Controlled Machine Tool Operators, Metal and Plastic	53	11
49906200	Medical Equipment Repairers	47	28
43503200	Dispatchers, Except Police, Fire, and Ambulance	46	13
29205200	Pharmacy Technicians	45	64
47401100	Construction and Building Inspectors	44	2
13105100	Cost Estimators	42	10
25904100	Teacher Assistants	42	100
41101100	First-Line Supervisors of Retail Sales Workers	39	46
17302200	Civil Engineering Technicians	38	21
17302301	Electronics Engineering Technicians	34	15
17301100	Architectural and Civil Drafters	34	32
43408100	Hotel, Motel, and Resort Desk Clerks	31	52
15107100	Network and Computer Systems Administrators	29	48
15115100	Computer User Support Specialists	29	83
17301900	Drafters, All Other	28	14
29901100	Occupational Health and Safety Specialists	28	21
43101100	First-Line Supervisors of Office and Administrative Support Workers	27	59
51209200	Team Assemblers	26	27
33903200	Security Guards	26	69
51404100	Machinists	23	22
51908100	Dental Laboratory Technicians	23	13
47207300	Operating Engineers and Other Construction Equipment Operators	22	9

Return-to-Work Occupations and Use of Acquired Skills

Our source of information for this section was Survey B, conducted 3-6 months after claim closure. Workers who had returned to work were asked whether they had used the skills or knowledge acquired during their vocational training in their work and, when applicable, were also asked the reasons they had not used acquired skills. Workers who had not (yet) returned to work were asked whether their vocational training was helpful or useful in other ways.

Workers who had completed their retraining plan overwhelmingly reported acquiring useful skills during the retraining process. More than 85% of workers who had completed their retraining plan stated that the training was useful to them in some way, even if they had not yet returned to work. 71% of workers who completed their retraining plan and who had returned to work after claim closure reported using the skills acquired during retraining in their return-to-work job. Of the workers with completed plans who **had** returned to work but reported **not** using skills acquired during their vocational training, 51% stated that there were no jobs available for the retraining plan's goal occupation, while 18% said the training was inadequate.

Key findings:

- More than 85% of all workers who had completed their retraining plan stated that the training was useful.
- 71% of workers who completed retraining **and** returned to work used the skills acquired during retraining.
- Of those who **had** returned to work but did **not** use acquired skills:
  - 51% stated that there were no jobs available for the plan goal
  - 18% said the training was inadequate

Return-to-work occupation is reported at two levels of detail in Exhibits 3.18 and 3.19 for 78 of the 80 workers who reported working at all since claim closure (2 did not answer this question).

Exhibit 3.18 Return-to-work occupational categories and use of acquired skills

Summary occupational categories	Option 1				Option 2	Total
	Used acquired skills in RTW job	Training useful in other ways	Training not useful	No voc training		
Business, Science, Social Services, Education, Arts, Entertainment	5	2	1	1	3	12
Health Care	8	1	0	0	0	9
Food Prep and Service	0	1	0	2	0	3
Building/Grounds, Maintenance, Protective	3	2	1	1	3	10
Personal Care and Service	0	0	0	0	3	3
Sales, Office, Administrative Support	11	1	0	0	1	13
Farming, Fishing, Forestry	0	0	0	0	1	1
Construction, Extraction	3	1	0	0	1	5
Installation, Maintenance, Repair	2	0	3	0	2	7
Production	3	1	0	0	3	7
Transportation	3	4	0	0	1	8
Total	**38**	**13**	**5**	**4**	**18**	**78**

Exhibit 3.19 Return-to-work occupations and use of acquired skills

Standard occupational classifications	Option 1				Option 2	Total
	Used acquired skills in RTW job	Training useful in other ways	Training not useful	No voc training		
Aerospace Engineering and Operations Technicians	1	0	0	0	1	2
Assemblers and Fabricators, All Other	1	0	0	0	0	1
Automotive Body and Related Repairers	1	0	1	0	0	2
Automotive Glass Installers and Repairers	0	0	1	0	0	1
Automotive Service Technicians and Mechanics	0	0	0	0	1	1
Bookkeeping, Accounting, and Auditing Clerks	1	0	0	0	0	1
Building Cleaning Workers, All Other	0	1	0	0	0	1
Bus Drivers, Transit	0	1	0	0	0	1
Bus and Truck Mechanics and Diesel Engine Specialists	0	0	1	0	0	1
Child Care Workers	0	0	0	0	1	1
Child, Family, and School Social Workers	0	0	0	0	1	1
Cleaning, Washing, and Metal Pickling Equipment Operators and Tenders	0	0	0	0	1	1
Computer Hardware Engineers	0	0	0	1	0	1
Computer Specialists, All Other Miscellaneous	0	0	1	0	0	1
Construction Laborers	0	1	0	0	1	2
Construction Managers	0	0	0	0	1	1
Construction and Building Inspectors	1	0	0	0	0	1
Cooks, Restaurant	0	1	0	2	0	3
Cooling and Freezing Equipment Operators and Tenders	0	0	0	0	1	1
Crane and Tower Operators	1	0	0	0	0	1
Customer Service Representatives	1	0	0	0	0	1
Electrical Engineers	1	0	0	0	0	1
Electricians	1	0	0	0	0	1
Electronics Engineers, except Computer	1	0	0	0	0	1
Emergency Medical Technicians and Paramedics	1	0	0	0	0	1
Farm Equipment Mechanics	0	0	0	0	1	1
First-Line Supervisors/Managers of Farming, Fishery, and Forestry Workers	0	0	0	0	1	1
First-Line Supervisors/Managers of Office and Administrative Support Workers	0	1	0	0	0	1
Grounds Maintenance Workers, All Other	1	0	1	0	0	2
Helpers--Roofers	1	0	0	0	0	1
Insurance Sales Agents	1	0	0	0	0	1

Standard occupational classifications	Option 1				Option 2	Total
	Used acquired skills in RTW job	Training useful in other ways	Training not useful	No voc training		
Janitors and Cleaners, except Maids and Housekeeping	1	0	0	0	0	1
Landscaping and Groundskeeping Workers	1	1	0	0	0	2
Library Assistants, Clerical	1	0	0	0	0	1
Machinists	1	0	0	0	0	1
Maids and Housekeeping Cleaners	0	0	0	1	1	2
Marine Engineers and Naval Architects	0	1	0	0	0	1
Medical Assistants	2	1	0	0	0	3
Medical Secretaries	1	0	0	0	0	1
Medical and Clinical Laboratory Technicians	1	0	0	0	0	1
Merchandise Displayers and Window Trimmers	0	1	0	0	0	1
Occupational Health and Safety Specialists	1	0	0	0	0	1
Occupational Therapists	1	0	0	0	0	1
Office Clerks, General	2	0	0	0	0	2
Outdoor Power Equipment and Other Small Engine Mechanics	1	0	0	0	0	1
Paper Goods Machine Setters, Operators, and Tenders	1	0	0	0	0	1
Parts Salespersons	2	0	0	0	0	2
Personal & Home Care Aides	0	0	0	0	2	2
Pesticide Handlers, Sprayers, and Applicators, Vegetation	0	0	0	0	1	1
Pharmacy Technicians	1	0	0	0	0	1
Physical Therapist Assistants	1	0	0	0	0	1
Private Detectives and Investigators	0	0	0	0	1	1
Receptionists and Information Clerks	1	0	0	0	0	1
Retail Salespersons	1	0	0	0	1	2
Teacher Assistants	1	0	0	0	0	1
Truck Drivers, Heavy and Tractor-Trailer	2	0	0	0	1	3
Truck Drivers, Light or Delivery Services	0	3	0	0	0	3
Vocational Education Teachers, Postsecondary	1	0	0	0	0	1
Welders, Cutters, Solderers, and Brazers	0	1	0	0	1	2
Total	**38**	**13**	**5**	**4**	**18**	**78**

Option 2

The pilot program made a new alternative available to workers, called Option 2. Option 2 provides a mechanism for workers to choose not to participate in the retraining plan approved by L&I. Workers have 15 days after plan approval to decide whether to participate in the approved plan or choose Option 2. When workers choose Option 2:

- The claim is closed (it may be reopened if a worker's condition worsens and need for medical treatment is documented).
- Time-loss benefits end and a vocational award in the amount of 6 months of time-loss benefits is paid (either over time or in a lump sum).
- A specified amount of vocational funds are set aside, which the worker can access for tuition/training fees and certain related expenses for up to five years ($12,000 as of January 1, 2008, with changes indexed to Washington's community college tuition rates).
- The worker can seek training at any licensed, accredited, or L&I approved program or course. The retraining goal does not need to be the same as the one approved by L&I.

Key findings:

- Option 2 was chosen by 31% of workers with self-insured claims and 28% of workers with State Fund claims.
- Workers with State Fund claims were more likely to have chosen Option 2 if they:
  - Were male, not married, had lower pre-injury wages and/or had less education
  - Had an occupational injury rather than an occupational disease
  - Had no prior treatment for the same or a similar injury
  - Had a small employer
- Workers with self-insured claims were more likely to have chosen Option 2 if they were older and/or had no dependents.
- It did not appear that having been determined eligible for plan development more than once (an indication of problems with previous plans) was associated with choosing Option 2.
- Survey respondents who thought that their plan would have a negative effect on their ability to return to work were more likely to choose Option 2.
- About 20% of Option 2 workers used their retraining funds, with little increase over time. There was a large discrepancy between the percentage who said they planned to use training funds when surveyed 3-6 months after claim closure (64%) and the percentage that actually used training funds within 3 years of claim closure (21%).
- State Fund, younger workers, English-speaking workers, and workers with at least some college education were more likely to use their retraining funds.
- There were no significant differences in average employment outcomes between Option 1 and Option 2, except that Option 2 workers were less likely to RTW immediately.
- There were preliminary indications that Option 2 workers who use their retraining funds may have the best employment outcomes, however this could be due to self-selection.

Who Chose Option 2?

We compared the characteristics of workers choosing Option 2 with those choosing Option 1. Each worker is allowed to choose Option 2 only once. We therefore considered all plans and claims for each individual worker and classified workers as choosing Option 2 if they had ever done so by December 31, 2011.

There were 5,312 State Fund and 660 self-insured workers with post-pilot plans approved between January 1, 2008 and December 31, 2011. Option 2 was chosen more often by 31.2% of workers with self-insured claims compared with 27.9% of those with State Fund claims (difference not statistically significant).

Comparisons of worker characteristics[34] by option choice based on administrative data are presented in Exhibit 3.20 (State Fund) and Exhibit 3.21 (self-insured). Workers with State Fund claims were significantly more likely to have chosen Option 2 if they:

- Had lower pre-injury wages
- Were male
- Were not married
- Had less education
- Had an occupational injury rather than an occupational disease
- Had no prior treatment for the same or a similar injury
- Had a small employer

Notably, it did not appear that having been determined eligible for plan development more than once (an indication of problems with previous plans) was associated with choosing Option 2. This was surprising, since Option 2 has been described as a mechanism to allow workers to exit the system who previously had no viable means to do so. The fiscal note for ESSB 5920 incorporated the assumption that workers who had previously participated in incomplete retraining plans would choose Option 2 more often (about half the time), when in fact there appears to be little or no difference.

Workers with self-insured claims were significantly more likely to have chosen Option 2 if they were older (4.7 years older on average) or did not have dependents. And just as reported for the State Fund group above, it did not appear that having been determined eligible for plan development more than once (an indication of problems with previous plans) was associated with choosing Option 2.

[34] In order to present information at the worker level, we defaulted to the maximum (e.g., pre-injury wages) or to any occurrence of the characteristic (e.g., occupational disease) when workers had multiple plans or claims with differing information.

Exhibit 3.20 Worker characteristics by option choice (for post-pilot State Fund plans)

Characteristic	All workers (N=5,312)	Option 1 only (N=3,828)	Ever Option 2 (N=1,484)	p-value
	Mean	Mean	Mean	
Age (as of 12/31/2011)	47.4	47.3	47.7	NS
Adjusted monthly pre-injury wage	$3,472	$3,572	$3,215	<.001
	Percent	Percent	Percent	
Female	23.2	24.3	20.4	.002
Married	50.0	51.1	47.4	.02
1 or more dependents	37.3	37.2	37.5	NS
Preferred language not English	9.7	9.5	10.0	NS
Education (N=3,296)*				.001
Grade 0-11	27.1	25.7	30.8	
High school graduate	47.7	47.7	47.7	
Any post-secondary education	25.2	26.6	21.5	
Physical capacity (N=3,296)*				NS
Sedentary	19.4	19.4	19.3	
Light	55.1	54.7	56.3	
Medium/heavy/very heavy	25.5	25.9	24.4	
Occupational disease	14.7	15.3	13.1	.048
Prior treatment for same or similar injury	21.6	22.5	19.4	.02
Coexisting conditions that might delay recovery	9.2	9.1	9.5	NS
Rural residence county	32.7	32.7	32.6	NS
Distressed residence county	13.9	13.7	14.3	NS
Large employer (≥50 FTE)	39.1	39.9	36.9	.047
Determined eligible for plan development more than once	29.1	29.3	28.4	NS

*L&I did not record this measure until April of 2009.

Exhibit 3.21 Worker characteristics by option choice (for post-pilot self-insured plans)

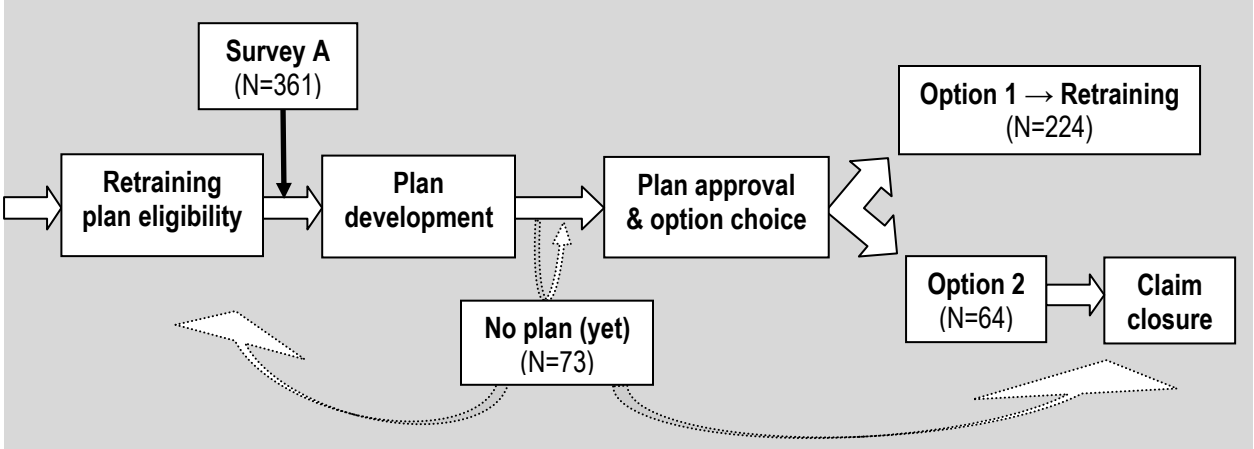
Characteristic	All workers (N=660)	Option 1 only (N=454)	Ever Option 2 (N=206)	p-value
	Mean	Mean	Mean	
Age (as of 12/31/2011)	52.4	50.9	55.7	<.001
Adjusted monthly pre-injury wage	$3,784	$3,727	$3,784	NS
	Percent	Percent	Percent	
Female	45.2	46.9	41.3	NS
Married	52.2	50.6	55.7	NS
1 or more dependents	19.7	21.8	15.1	.04
Education (N=373)*				NS
Grade 0-11	13.1	12.9	13.6	
High school graduate	45.6	43.9	45.6	
Any post-secondary education	41.3	43.1	41.3	
Physical capacity (N=373)*				NS
Sedentary	32.2	31.8	33.1	
Light	60.1	59.2	61.9	
Medium/heavy/very heavy	7.8	9.0	5.1	
Rural residence county	26.9	26.2	28.3	NS
Distressed residence county	14.2	13.0	16.9	NS
Determined eligible for plan development more than once	6.7	7.3	5.3	NS

*L&I did not record this measure until April of 2009.

Who Chose Option 2? Who Didn't Have a Plan Approved? (Survey A)

We interviewed 361 workers during the fall of 2009, shortly after they were determined eligible and referred for plan development (Survey A). For those injured workers who responded to Survey A, we were able to assess whether there were differences between those who chose Option 1 and those who chose Option 2 regarding a number of additional characteristics and opinions. Survey A was conducted after determination of eligibility for plan development, but prior to plan development activities, retraining plan approval, and subsequent option choice (see Exhibit 3.22).

Exhibit 3.22 Timing of Survey A with respect to the vocational rehabilitation process



Because of the timing of this survey, we were also able to assess differences between (1) those who had a plan developed and approved and (2) those who had not by December 31, 2010 (at least a year after plan development eligibility was determined). The group who did not have a plan developed, at least not in a timely way, consisted of 73 injured workers (identified below as "No plan").[35] Although a separate topic from option choice, it is of interest to understand more about injured workers who either never obtain an approved plan or are delayed in the process. The "no plan" group was composed of injured workers in a variety of situations. For some, the outcome heralded the end of the worker's participation in the vocational rehabilitation process; vocational services were determined not appropriate for 32% (for a variety of reasons), and 8% of injured workers were determined able to work or had returned to work. For others, there were avoidable or unavoidable delays and the person may eventually begin retraining: medical instability (18%), administrative problems or staffing changes with the vocational referral or the vocational counselor (14%), or the proposed retraining plan was denied (7%). There were 22% with an unknown status or unknown reasons for the delay. Due to the small numbers in each subgroup, we report findings for the entire group of 73 for this analysis, regardless of the reason for "no plan." Due to the small number of respondents in the self-insured category, State Fund and self-insured responses were combined for this analysis.[36]

Of the injured workers eligible for Survey A who subsequently had a plan approved and chose an option, there was no significant difference between Survey A respondents and the overall sample pool regarding which option was chosen. However, Survey A respondents were significantly less likely than the overall sample pool to have no plan (20.2% compared with 31.7%, $p<.001$).[37]

[35] We examined this again as of December 31, 2011, and there were still 70 workers in this group.

[36] There were 40 respondents in the self-insured category. 16 chose Option 1, 9 chose Option 2, and 15 were in the "no plan" group.

[37] Poststratification based on whether the claim was State Fund or self-insured and whether the worker had been determined eligible for plan development more than once (the only available characteristics found to significantly differ between the respondents and the overall sample) corrected for very little of this discrepancy, so unmeasured

Nevertheless, we can use the survey responses to try to understand some of the factors that may predict no plan, keeping in mind that these patterns may differ for those who were not interviewed and that there may also be important unmeasured characteristics. All results in this section have been weighted so that they can be considered to reflect the opinions of all workers[38] in the vocational rehabilitation system who were determined eligible for plan development during the fall of 2009, specifically the 20 weeks from July 20, 2009 through December 4, 2009. (See the Methods chapter for more detail on response rates and post-stratification methodology. Appendix A contains a report on responses to all questions in this survey. Appendix C contains all survey questions.)

There were no significant differences between those choosing Option 1 and Option 2 regarding any of the characteristics we assessed (See Exhibit 3.23), with the sole exception that respondents who thought that their plan would have a negative effect on their ability to return to work were more likely to choose Option 2. (It should be noted that, relative to the analyses based solely on administrative data above, Survey A respondents comprised a smaller sample and there was less ability to detect small differences; these findings do not negate the differences reported in Exhibits 3.20 and 3.21.)

In contrast, there were a number of striking differences between those with no plan compared with those who did have a plan approved and subsequently chose an option (Exhibit 3.23). Those with no plan were more likely to:

- Have a self-insured claim
- Be older at the time of the survey (4.8 years older on average)
- Have had more time pass since their injury
- Have been determined eligible for a plan more than once prior to the survey
- Have worked for their employer longer before their injury
- Have worked in their occupation longer before their injury
- Report poor self-rated health and/or poor self-rated non-work functioning
- Think that the workers' compensation system is ineffective
- Be dissatisfied with the vocational rehabilitation system
- Think that the retraining plan would have a negative effect on their return to work
- Be uncertain they would return to work within 6 months of completing the retraining plan

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characteristics may well be contributing to the observed difference in outcome. See Chapter 2 for details of poststratification.

[38] With the exception of workers who were ineligible for the survey: under age 18, address outside Washington State, L&I employees, employment through a prison program, or unable to complete a telephone interview in English or Spanish.

Exhibit 3.23 Comparison of Survey A respondents choosing Option 1, Option 2, or obtaining no plan

Characteristic	Data Source	Overall (N=361)	No Plan (N=73)	Plan (N=288)	p-value	Option 1 (N=224)	Option 2 (N=64)	p-value
Self-insured (vs. State Fund)	Admin	15.3	26.1	12.2	.008	12.9	22.8	NS
Age at survey (mean years)	Survey	46.9	50.7	45.9	<.001	45.8	47.2	NS
Mean years from injury to survey	Admin	3.2	3.9	3.0	<.001	3.1	3.0	NS
Determined eligible for a plan more than once (before survey)	Admin	24.9	34.0	22.3	.05	22.7	31.7	NS
Mean years worked for employer before injury	Survey	6.2	8.9	5.4	.009	5.5	6.1	NS
Mean years in occupation before injury	Survey	14.9	17.3	14.2	.05	14.3	14.7	NS
Poor self-rated health	Survey	28.7	42.4	24.7	.004	26.3	21.9	NS
Poor self-rated non-work functioning	Survey	33.1	54.5	27.3	<.001	29.1	22.5	NS
Thinks WC system is ineffective	Survey	31.0	49.0	26.2	<.001	25.3	30.6	NS
Dissatisfied with vocational rehabilitation system	Survey	21.9	39.1	17.2	<.001	17.9	18.4	NS
Thinks plan will have a negative effect on return to work	Survey	14.6	36.7	8.7	<.001	6.9	17.4	.04
Uncertain about return to work within 6 months of plan completion	Survey	33.9	63.9	25.8	<.001	23.9	34.8	NS

Notes: All results presented in Exhibit 3.23 have been adjusted to the population using post-stratification weights as described in Chapter 2. Estimates of means and percentages in the Plan column do not necessarily fall between those in the Option 1 and Option 2 columns (as the reader might expect) due to poststratification based on different denominators. The following characteristics had no significant association with either obtaining an approved plan or option choice and were excluded from this table: pre-injury wages, gender, marital status, dependents, occupational disease, prior treatment for same or similar injury, coexisting conditions that might delay recovery, rural or distressed residence county, large employer, interview language, whether born in the U.S., educational level, apprenticeship before injury, satisfaction with job where injured, union member at time of injury, economic risk.

Use of Option 2 Retraining Funds

Option 2 workers have their retraining funds available to them for 5 years. We used two approaches to assess the use of Option 2 retraining funds. In Survey B we asked Option 2 workers about their use and planned use of retraining funds (N=115). Exhibit 3.24 shows that 20.5% of workers reported they were already using their retraining funds when they were interviewed 3 to 6 months after claim closure. Overall, 63.8% planned to use their retraining funds at some point, fewer than 10% did not plan to ever use them, and 26.5% were uncertain.

Exhibit 3.24 Use and planned use of retraining funds (based on Survey B)

Response category	Percent
Already using Option 2 retraining funds	20.5%
Plans to use funds within 6 months	15.4%
Plans to use funds in 6 to 12 months	14.3%
Plans to use funds in 1 to 2 years	10.0%
Plans to use funds in more than 2 years	3.6%
Unsure if or when will use funds	26.5%
Does not plan to use retraining funds	9.7%

We used administrative data to determine which Option 2 workers had expended any of their retraining funds as of December 31, 2011. We did not have data on the actual dates of use, so we progressively restricted samples by the amount of time between claim closure and December 31, 2011, in order to determine whether longer time windows to observe fund use after claim closure were associated with increases in the percent of those having used retraining funds. As shown in Exhibit 3.25, there appears to be very little increase in retraining fund use after the first 6 months, with use remaining about 20% even for those claims closed for at least 3 years. Although most Option 2 workers responding to Survey B intended to use their retraining funds at some point, it appears that workers who did not begin to use their funds within the first 6 months after claim closure were very unlikely to ever use them. There has not been enough time since the VIP began to assess whether there may be an increase in fund use right before the funds expire. It appears that workers may be overly optimistic about their actual use of retraining funds (and perhaps also the benefit they expect to derive from Option 2 as a result).

Exhibit 3.25 Use of retraining funds (based on administrative data)

Sample		No funds expended	Funds partially expended	Funds 100% expended
	N	Percent	Percent	Percent
All option 2 workers with option 2 funds reserved	1,461	83.5	15.3	1.2
Claims closed on or before 12/31/11	1,376	82.6	16.1	1.3
Claims closed at least 6 months prior to 12/31/11	1,139	81.0	17.7	1.4
Claims closed at least 1 year prior to 12/31/11	902	80.9	17.6	1.4
Claims closed at least 2 years prior to 12/31/11	556	80.4	18.0	1.6
Claims closed at least 3 years prior to 12/31/11	240	79.2	18.3	2.5

In Exhibit 3.26 we present worker characteristics by whether or not any retraining funds had been used as of December 31, 2011 (only those workers having at least 6 months to use retraining funds after claim closure were included). We used logistic regression models to further assess which characteristics were significantly associated with retraining fund use.[39] Younger workers were more likely to use retraining funds; each additional year of age was associated with a 4% decrement in the odds of using retraining funds ($p<.0005$). Among State Fund claims, the odds of Option 2 workers whose preferred language was not English using their retraining funds were 84% lower on average than for otherwise similar English-speaking workers ($p<.0005$). Just among those claims having physical capacity and education recorded, the odds of Option 2 workers with at least some college education using their retraining funds were 4 times as high on average than for otherwise similar workers who had not graduated high school ($p<.0005$). (Physical capacity ratings were not significantly associated with use of retraining funds.)

In summary, younger workers, English-speaking workers, and workers with at least some college education were more likely to use their retraining funds. It is noteworthy that the workers least likely to use retraining funds were more likely to have characteristics that may make them less competitive in the labor market without (or perhaps even with) retraining.

The odds of Option 2 workers with self-insured claims using their retraining funds were 56% lower on average than for similar workers with State Fund claims ($p=.01$), and 88% lower ($p=.005$) when controlling for physical capacity and education. It is worth noting that while State Fund workers must apply to L&I for the use of their retraining funds, self-insured workers must apply to the self-insured claims representative of the employer responsible for the claim. Although self-insured employers are expected to report the use of retraining funds to L&I, L&I has no oversight or information for self-insured claims about possible barriers to retraining fund use, the frequency of denials, or delays in approval. The lower observed use of retraining funds by workers with self-insured claims may have been due to several factors, the relative contribution of which we are unable to identify at this time: (1) possible under-reporting of retraining fund expenditures by self-insured employers to L&I, (2) a known data collection issue within L&I data systems, so that some information that was reported by self-insured employers was not completely recorded, and/or (3) actual lower use of retraining funds by injured workers who had self-insured employers.

[39] Logistic regression models controlled for: self-insured vs State Fund, age, gender, marital status, having any dependents, adjusted pre-injury ESD wages, time since injury, plan approval month, rural residence county, unemployment rate, employer size at injury, and industry sector at injury. In addition, State Fund-only models also included an indicator of preference for a language other than English and occupational disease vs. injury. Option 2 workers whose claims had closed at least 6 months prior to 12/31/11 were included.

Exhibit 3.26 Worker characteristics by retraining fund usage (for Option 2 workers whose claims had closed at least 6 months prior to 12/31/11)

Characteristic	All Option 2 workers (N=1,139)	No funds used (N=922)	Any funds used (N=217)	p-value
	Mean	Mean	Mean	
Age (as of 1/1/2008)	46.3	47.2	42.6	<.00005
Adjusted quarterly pre-injury wages (ESD)	$6,543	$6,536	$6,575	NS
Mean unemployment rate	8.7	8.7	8.6	NS
	Percent	Percent	Percent	
Self-insured (vs. State Fund)	12.3	13.9	5.5	.001
Female	23.8	24.0	23.0	NS
Married	48.6	49.4	45.6	NS
1 or more dependents	35.2	34.0	40.6	NS
Preferred language not English (N=999)*	9.7	11.6	2.4	<.0005
High school graduate or higher education (N=613)**	69.5	67.9	76.3	NS
Medium/heavy physical capacity (N=613)**	22.2	21.2	26.3	NS
Occupational disease (N=999)*	13.4	12.5	17.1	NS
Rural residence county	31.2	31.0	32.1	NS
Distressed residence county	14.7	15.2	12.8	NS
Large employer (≥50 FTE)	45.3	45.9	42.9	NS

*State Fund claims only.
**L&I did not record this measure until April of 2009.

Option 2 Employment Outcomes

In this section, we describe employment outcomes for injured workers who chose Option 2. In some cases we have provided separate summaries based on whether or not any (and/or all) retraining funds had been used by December 31, 2011. All wage measures were based on earnings reported to the Employment Security Department (ESD) and adjusted to January 2008 dollars. Further detail about the ESD wage data and measures can be found in the Employment Outcome Models section of Chapter 2.

The following series of graphs (Exhibit 3.27) presents the percentage of workers attaining each of the 5 wage measures by quarter, beginning with the quarter Option 2 was chosen and the relevant plan referral ended. Those who had and had not used any retraining funds by December 31, 2011 were graphed separately, so that horizontal visual comparisons between these two groups can be made for each of the 5 wage measures. Workers who had not returned to work and/or had no wages in a particular quarter were included, in order to give a full picture of the employment status of all workers choosing Option 2. The number of workers available for the

denominator of each bar is listed to the left; the number of available workers drops as more observation time is required. For example, the first bar in the first graph shows that 7% of the 1,220 workers that chose Option 2 but did not use any retraining funds by the end of 2011 had any wages in the quarter that their plan referral ended. The second line of the same graph shows that 10% of the 1,118 workers who had at least one quarter of observation time available between the quarter their plan referral ended and the end of 2011 had any wages in the first full quarter after their plan referral ended. We would expect the plan referral end quarter (Q0) to be lower for all of these measures, since the referral could have ended at any point during the quarter and on average there would be less time available for a worker to have been employed than in any succeeding quarter. In addition, Option 2 workers are not considered able to work when their plan referral ends, and they are provided a sum equivalent to 6 months of time loss compensation, both of which would be expected to affect return-to-work outcomes.

These graphs don't control for occupation, industry, unemployment rate, or other potentially important factors, but there is a clear pattern indicating that higher percentages of workers who used their retraining funds met each wage measure, differentially increasing over time.

Exhibit 3.27 Percent of Option 2 workers attaining each of 5 wage measures in each quarter after option choice and plan referral end (whether or not RTW), by use of retraining funds

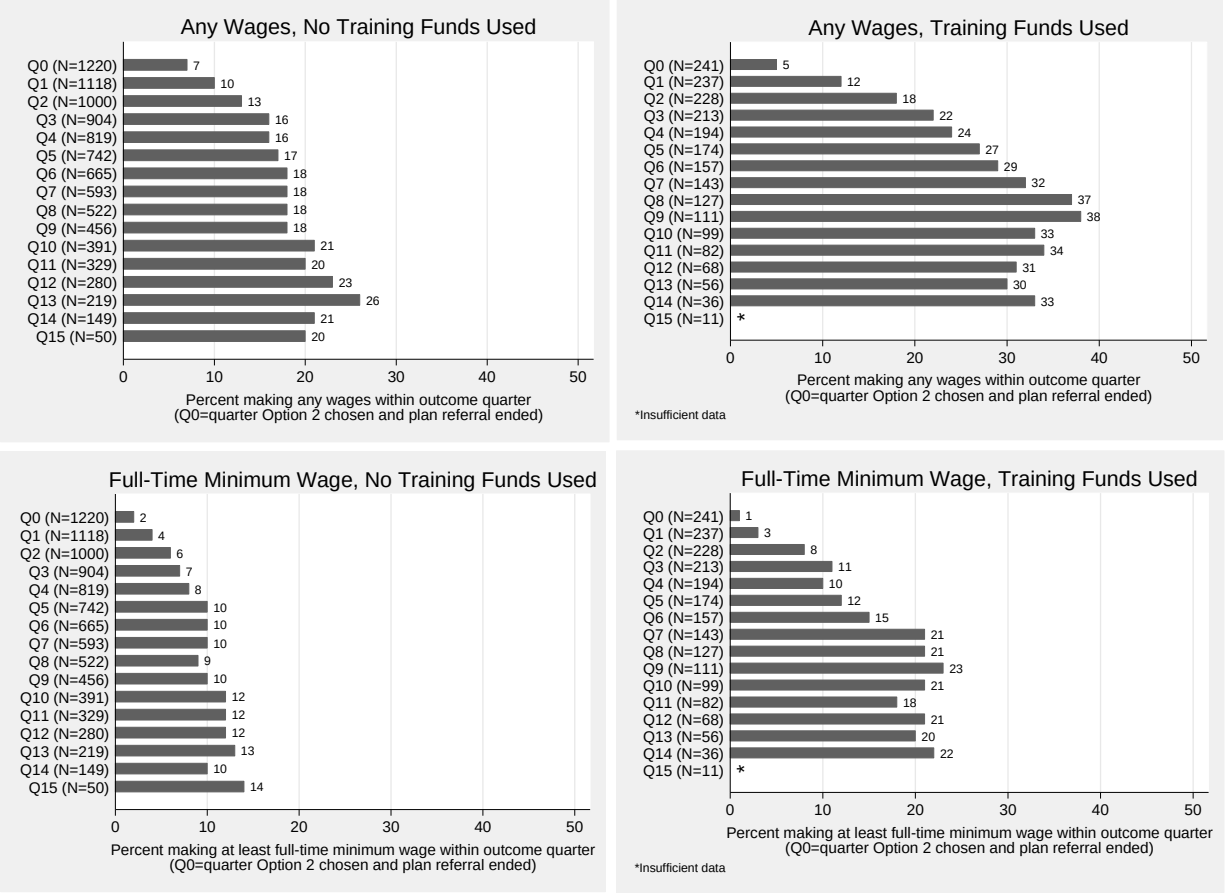
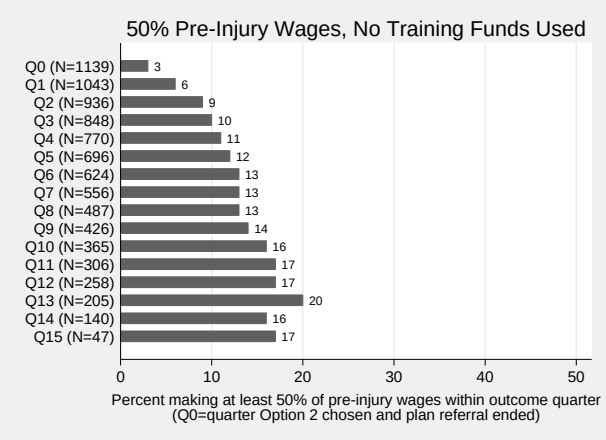
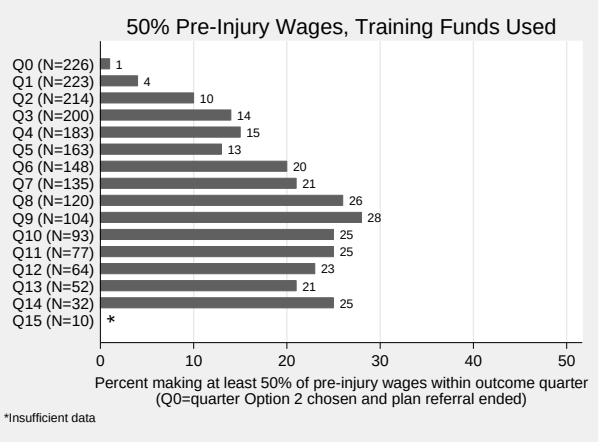
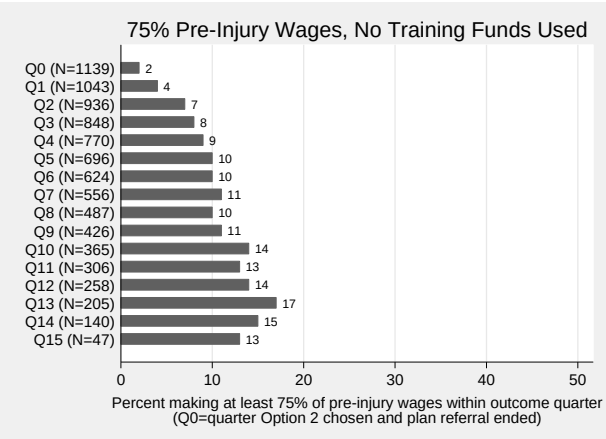
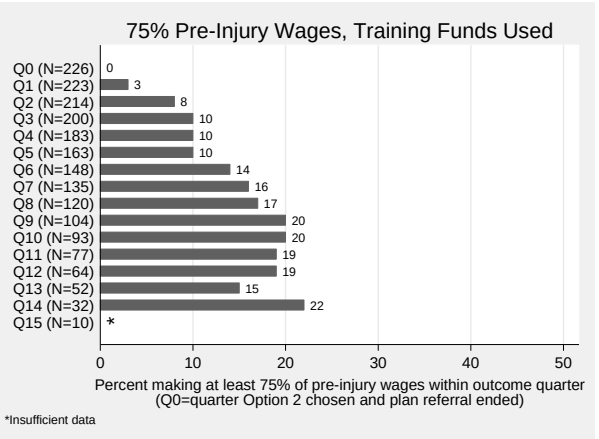


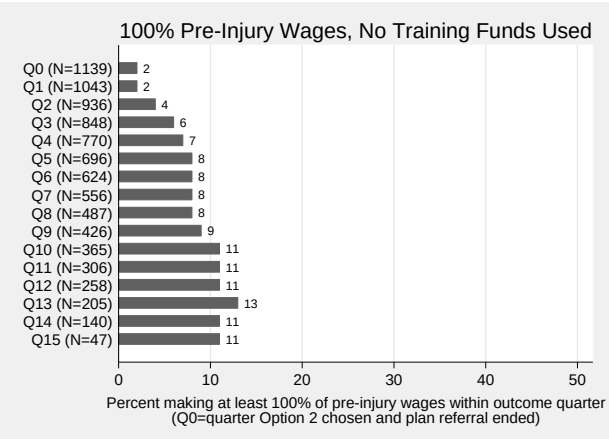
Exhibit 3.27, continued

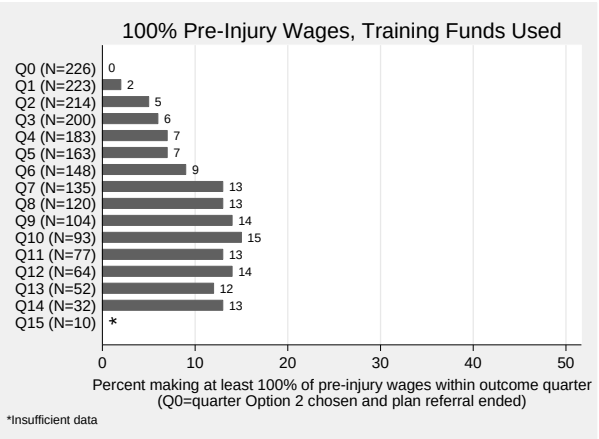












We compared employment outcomes for workers who chose Option 2 to those who chose Option 1 (regardless of plan referral outcomes).[40] We then ran the same models for the subset of workers for whom physical capacity ratings and education were available (which L&I began recording in April 2009).[41] Exhibit 3.28 presents the results of these models. There were no significant differences in average employment outcomes between Option 1 and Option 2, with the exception that Option 2 workers were less likely to return to work immediately (possibly because Option 2 workers had not yet undergone retraining for re-employment, and had just received 6 months of time-loss compensation, as described earlier).

Exhibit 3.28 Option choice employment outcome models (ESD data)

	Timely RTW (any wages in quarter that referral ended)	**Sustained RTW** (any wage level)	**Sustained RTW** (at or above pre-injury wage)	**Ever RTW** (first occurrence of any wages)
	Odds ratio	Incidence Rate Ratio	Incidence Rate Ratio	Hazard Ratio
Option 2	0.70*	1.05	1.25	0.97
Option 2 [controlling for physical capacity and education]	0.58*	0.90	0.94	0.93

*Statistically significant at $p \leq .05$.

Notes: Roughly speaking, a number above 1 means a higher likelihood of the RTW measure for Option 2 workers relative to Option 1 workers. These models have been adjusted for a number of relevant factors as described in the Methods chapter.

Given the differences in employment outcomes by retraining fund use that we observed in Exhibit 3.27, we looked more closely at several subgroups based on plan completion for Option 1 and retraining fund use for Option 2. As shown in Exhibit 3.29, very few workers had used all their retraining funds by December 31, 2011.

Exhibit 3.29 Option choice subgroups (plan completion and use of retraining funds)

Subgroup	N	Percent
Option 1: Completed plans	1,209	32.4
Option 1: Incomplete plans	1,059	28.4
Option 2: All retraining funds used	18	0.5
Option 2: Some retraining funds used	223	6.0
Option 2: No retraining funds used	1,220	32.7
Total	3,729	100.0

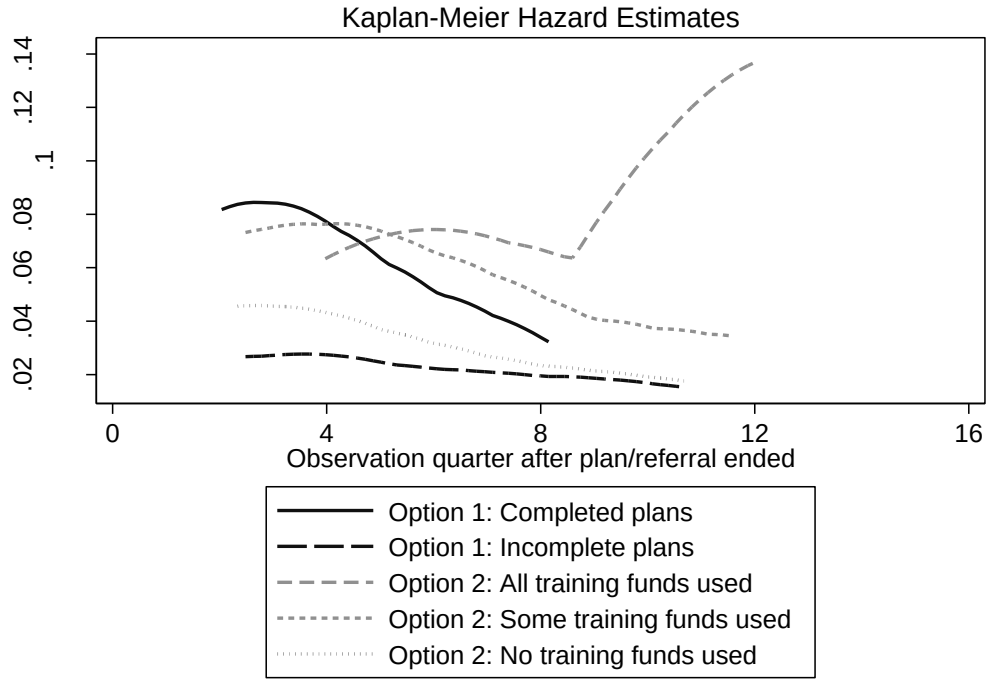
[40] There were 1,320 Option 2 workers and 2,086 Option 1 workers included in these models.

[41] There were 836 Option 2 workers and 880 Option 1 workers included in these models.

Exhibit 3.30 presents the estimated probability of the first occurrence of any ESD wages for each outcome quarter separately for each of the subgroups presented in Exhibit 3.29. Option 1 workers with incomplete plans consistently had the lowest probability of return to work. Although there were very few workers who had used all of their retraining funds, that subgroup displayed a strikingly different pattern. Instead of a steadily decreasing probability of first return to work over time, there appeared to be a "bounce" beginning just over 2 years after Option 2 choice, which may correspond to completion of their independent retraining (this is speculative). This observation warrants further study as more data accumulate.

We estimated mean RTW wages for each of these five subgroups as a very preliminary look at comparing mean wage outcomes after retraining plans were completed via either option.[42] Although there have been far too few Option 2 workers who have used all their retraining funds to be able to make any definitive judgment, only that subgroup appeared to have higher mean wages than Option 1 workers who had completed retraining plans (though the difference was not significant). Mean wages for the Option 2 subgroups who had returned to work and who had used (1) none or (2) only some of their retraining funds were both significantly lower than for those with completed Option 1 plans. (It is possible that those using only some of their retraining funds were working part-time related to still being in training; it is more appropriate to compare mean wages when all retraining, or at least all the retraining that will occur, has been completed.)

Exhibit 3.30 Probability of first occurrence of any ESD wages over time by option subgroup



[42] This model included 577 workers: 208 Option 1-completed plans, 98 Option 1-incomplete plans, 6 Option 2-all retraining funds used, 55 Option 2-some retraining funds used, and 210 Option 2-no retraining funds used.

Comparison of the VIP with Baseline: Referral and Employment Outcomes

Now we turn to a comparison of overall differences in referral and employment outcomes, comparing the VIP with baseline. We conducted four analyses: (1) comparing retraining plan referral outcomes, (2) comparing employment outcomes for just those workers who completed retraining plans (this focuses on changes in plan characteristics/quality), (3) comparing employment outcomes for all workers undertaking plans regardless of plan outcome, but excluding Option 2 (this includes effects on employment outcomes related to plan completion rates), and (4) comparing employment outcomes for all workers regardless of plan outcome or option choice (an overall assessment of the VIP).

Key findings:

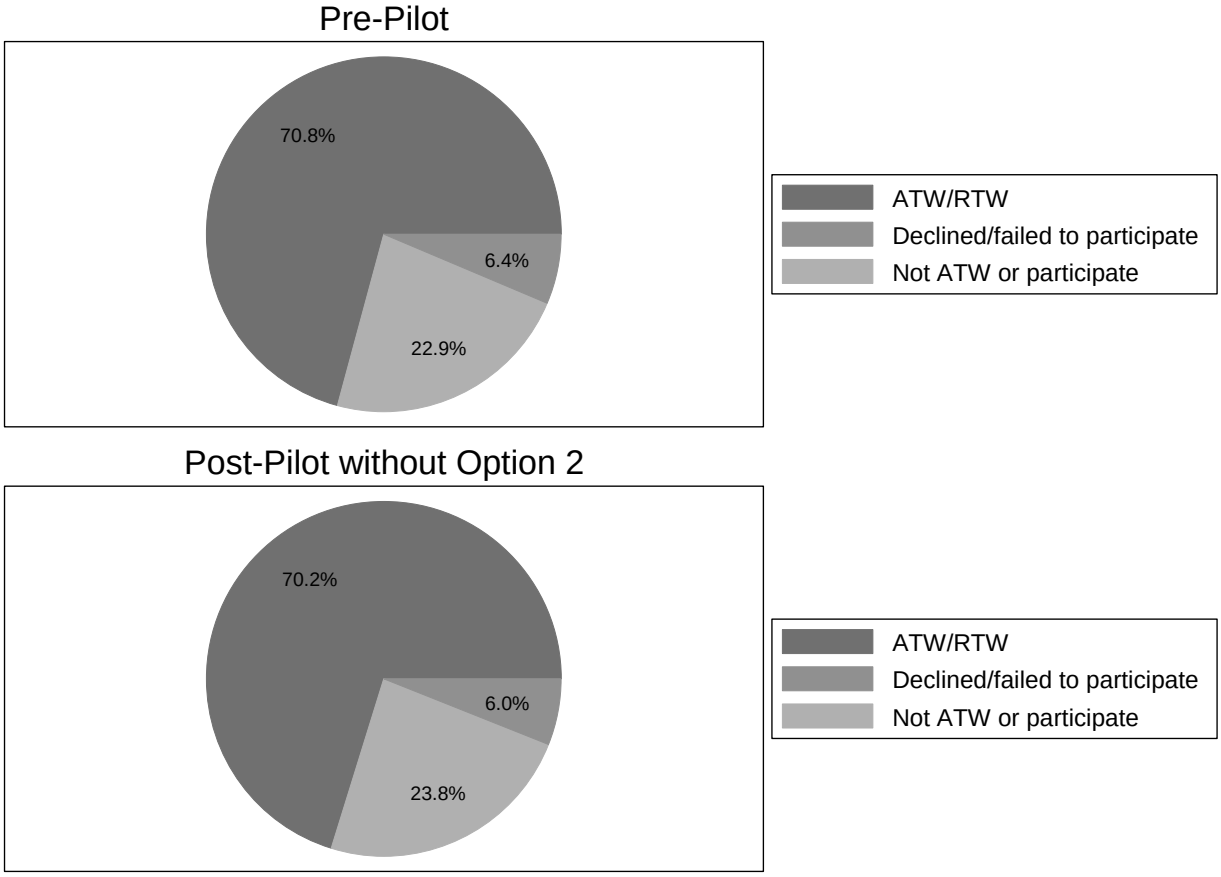
- Retraining plan referral outcomes for all workers pre-pilot were very similar to referral outcomes for Option 1 workers under the VIP.
- Because most Option 2 workers are not using their retraining funds, a lower percentage of workers approved for retraining are being retrained under the VIP compared with baseline.
- Employment outcomes overall appeared to be worse under the VIP, likely due to a combination of factors that cannot be disentangled due to the near simultaneous impact of all features of the VIP as well as the economic recession.

As with previous pre-post comparisons, we constructed samples based on 18-month windows. Only State Fund workers were included because the necessary information for self-insured claims was unavailable pre-pilot. In this case, the baseline window ran from January 1, 2006 through June 30, 2007, with outcomes followed until December 31, 2009, and the post-pilot (VIP) window was January 1, 2008 through June 30, 2009, with outcomes followed until December 31, 2011, an equivalent length of time. We compared outcomes for the first plan undertaken by those workers with a first-time retraining plan approval in either the baseline or post-pilot window.

As shown in Exhibit 3.31, the mix of retraining plan referral outcomes for all workers pre-pilot were very similar to the mix of referral outcomes for Option 1 workers post-pilot.[43] There was a large reduction in the overall percentage of workers being retrained via either option under the VIP. Although we can't say whether workers opting out of retraining would benefit from retraining, it is of interest to know how many workers are actually being retrained. In the baseline period, 62.9% completed a retraining plan. In the post-pilot period, 44.0% completed a training plan and 5.6% started using training funds for a total of 49.6%, a 21% decrement ($p<.0005$). This doesn't take into account that some Option 2 workers who are using training funds may not complete retraining, so this is likely an overestimate of the percent retrained under the VIP. On the other hand, it also doesn't take into account that workers have up to 5 years to draw their funds. However, the expenditure of training funds for those included in this analysis was measured at least 2.5 years after Option 2 choice, and there doesn't appear to be much increase in training fund use after the first 6 months.

[43] These graphs included 1,667 baseline workers and 1,195 Option 1 VIP workers.

Exhibit 3.31 Pre-post VIP retraining plan referral outcomes



The following series of graphs (Exhibit 3.32) presents the percentage of State Fund workers attaining each of the 5 wage measures by quarter after retraining plan completion (Option 2 workers and workers with incomplete plans were excluded). The baseline and VIP groups are graphed separately, so that horizontal visual comparisons between these two groups can be made for each of the 5 wage measures. Workers who had not returned to work and/or had no wages in a particular quarter were included, in order to give a full picture of the employment status of all workers who completed retraining. The number of workers available for the denominator of each bar is listed to the left; the number of available workers drops as more observation time is required. For example, the first bar in the first graph shows that 21% of the 1,049 workers that completed retraining plans in the pre-pilot time window had any wages in the quarter that they completed their retraining plan. The second line of the same graph shows that 38% of the 1,049 workers who had at least one quarter of observation time available between the quarter their plan was completed and the end of 2009 had any wages in the first full quarter after their plan was completed. We would expect the plan completion quarter (Q0) to be lower for all of these measures, since the plan could have ended at any point during the quarter and on average there would be less time available for a worker to have been employed than in any succeeding quarter.

These graphs don’t control for unemployment rate, occupation, industry, or other potentially important factors, but there was a clear pattern indicating that higher percentages of workers met each wage measure in the baseline period relative to the VIP. It is important to note that these analyses are purely descriptive. They do not control for the effects of changing job market conditions, and the severe recession occurring during this same time period would likely have accounted for significant but unknown decrements in the likelihood of: (1) finding work, and (2) earning post-retraining wages comparable to or surpassing pre-injury wages.

Exhibit 3.32 Percent of workers attaining each of 5 wage measures in each quarter after retraining plan completion (whether or not RTW), comparing VIP with baseline

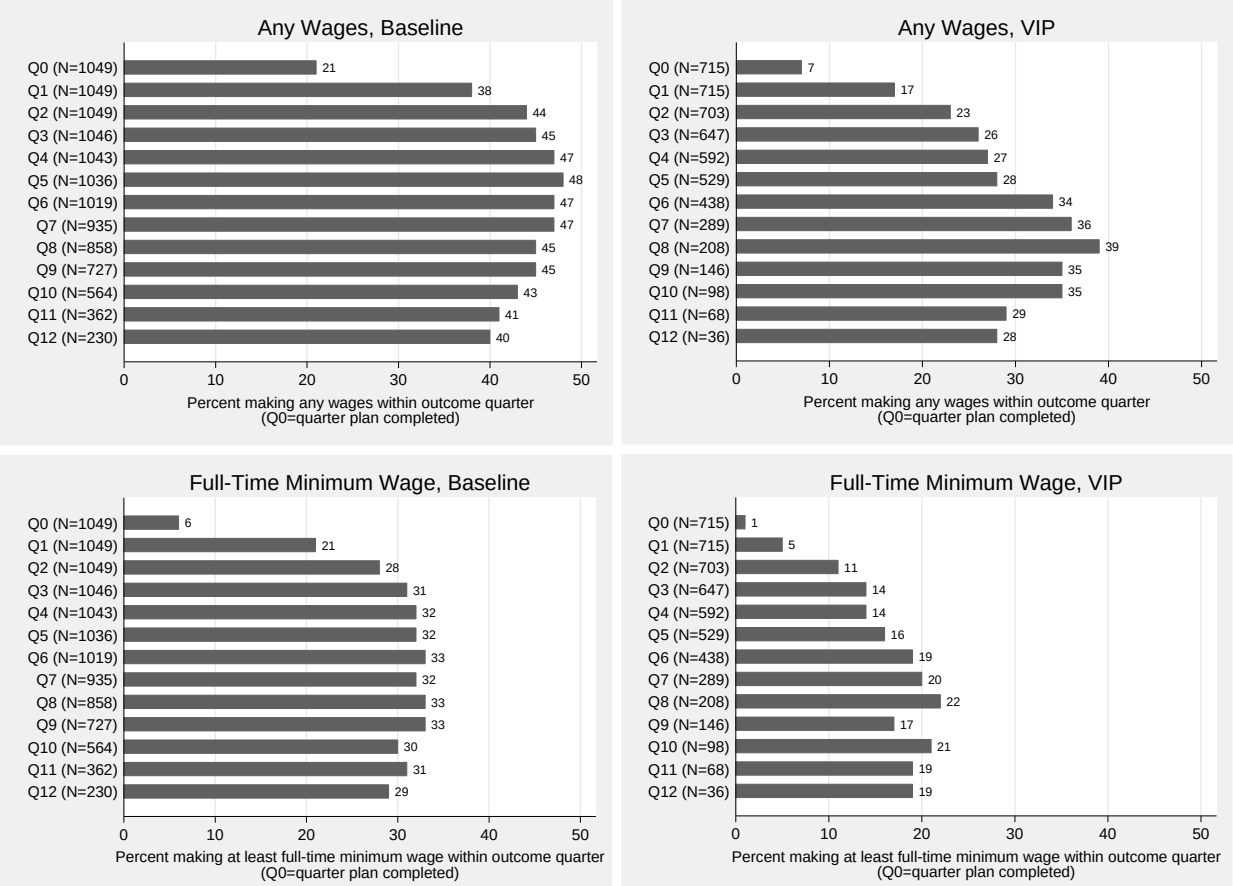
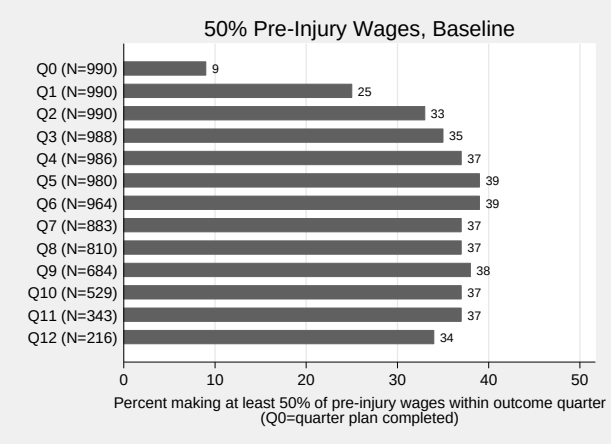
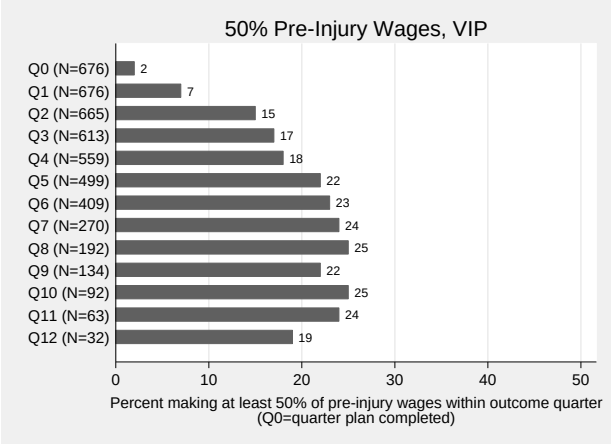
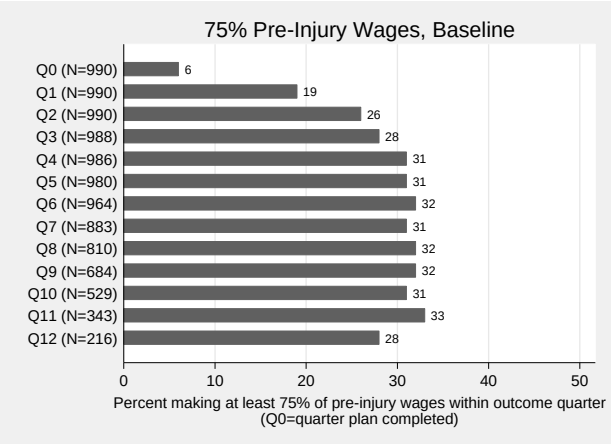
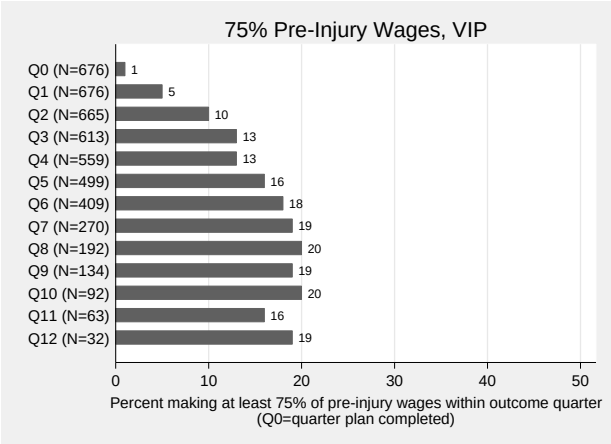


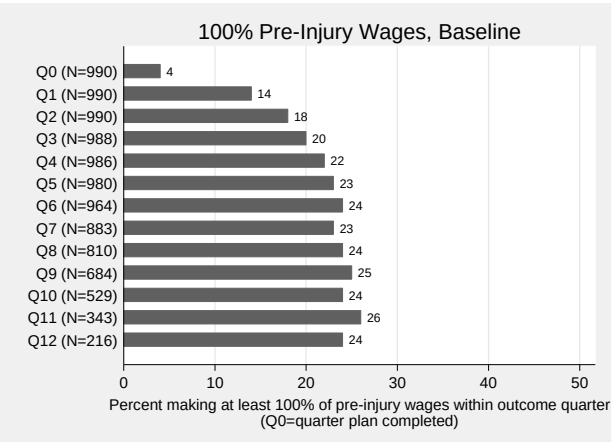
Exhibit 3.32, continued

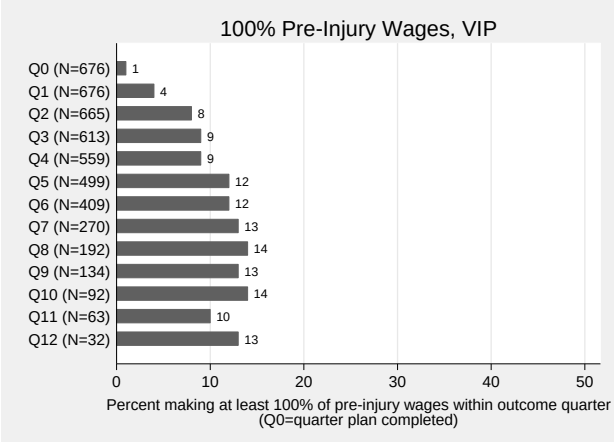












We compared employment outcomes for VIP to baseline workers using three samples: (1) just those workers who completed retraining plans (this focuses on changes in plan characteristics/quality),[44] (2) all workers undertaking plans regardless of plan outcome, but excluding Option 2 (this includes effects on employment outcomes related to plan completion rates),[45] and (3) all workers regardless of plan outcome or option choice (this provides an overall assessment of the VIP).[46]

Exhibit 3.33 presents the results of these models. For VIP workers who had completed retraining plans, there were no significant differences in employment outcomes compared with baseline, with the exception of sustained RTW at full pre-injury wage, perhaps the hardest measure to meet in the face of the economic recession. On the other hand, the models that included incomplete plans did show significant decrements for all employment outcomes after the VIP.

We controlled for unemployment rate in these models, however, the recession was severe and unemployment rate may not have captured its full impact on injured workers. We implemented numerous analytic approaches without much impact on the findings. (We cover this issue in more detail in Chapter 4). As described earlier in this report, there has been little change in plan completion rates under the VIP. In addition, the minor changes in retraining plan referral outcomes, the relatively low use of Option 2 training funds, and the reduction in the percentage of OJT plans did not appear to account for the entire decrement.

In summary, employment outcomes appear to be significantly worse for workers as a whole under the VIP. This is most likely due to a combination of factors that cannot be disentangled due to the near simultaneous impact of all features of the VIP as well as the economic recession.

Exhibit 3.33 Pre-post VIP employment outcome models (ESD data)

	Timely RTW (any wages in quarter that referral ended)	**Sustained RTW** (any wage level)	**Sustained RTW** (at or above pre-injury wage)	**Ever RTW** (first occurrence of any wages)
	Odds ratio	Incidence Rate Ratio	Incidence Rate Ratio	Hazard Ratio
VIP (completed plans)	0.88	0.82	0.56*	0.94
VIP (all plans, not Opt2)	0.59*	0.59*	0.41*	0.67*
VIP (all plans and Opt2)	0.43*	0.64*	0.54*	0.65*

*Statistically significant at p≤.05.

Notes: Roughly speaking, a number below 1 means a lower likelihood of the RTW measure for VIP workers relative to workers at baseline. These models have been adjusted for a number of relevant factors as described in the Methods chapter.

[44] There were 971 baseline workers and 660 VIP workers included in these models.

[45] There were 1,534 baseline workers and 1,101 VIP workers included in these models.

[46] There were 1,534 baseline workers and 1,491 VIP workers included in these models.

Workers' Opinions

We interviewed 361 workers during the fall of 2009, shortly after they were determined eligible and referred for plan development (Survey A). We interviewed a different set of 360 workers between the fall of 2009 and the fall of 2010, about 3 to 6 months after claim closure (Survey B). We report here workers' opinions regarding the effectiveness of the workers' compensation system and satisfaction with the vocational rehabilitation system, and compare opinions held prior to vocational plan development with opinions and outcomes after claim closure. We also report worker satisfaction for those choosing Option 2 compared with those choosing Option 1, as well as the suggestions for improvement offered by workers.

Key findings:

- Among workers determined eligible for plan development in the fall of 2009:
  - 69% assessed the workers' compensation system as at least somewhat effective
  - 69% were at least somewhat satisfied with the vocational rehabilitation system
  - Workers with self-insured claims were less likely to be satisfied with the vocational rehabilitation system (58% compared with 71% for State Fund).
- The following characteristics were significantly associated with negative responses to both questions (and the observed differences were quite large):
  - More time having passed since the injury
  - Having been determined eligible for plan development more than once
  - Interviewed in English rather than Spanish
  - Poor health and/or poor ability to function outside of work
- Workers reporting more economic problems were more likely to rate the workers' compensation system as ineffective. Older workers and those who had completed a formal apprenticeship were more dissatisfied with the vocational rehabilitation system.
- In general, workers going into retraining plan development were more satisfied with the vocational rehabilitation system overall than they were after vocational rehabilitation services had ended, and were likely to overestimate their likelihood of RTW.
- Option 2 workers were significantly less satisfied with their VRC, less likely to think their claim manager had a positive effect on their ability to return to work, and less likely to think that the vocational services they had received were appropriate.
- There was little difference between Option 1 and Option 2 workers regarding whether they would make a different option choice if they were given another opportunity.
- 57% of Option 2 workers stated that their retraining plan would have been a poor fit for them, either physically, emotionally, logistically, or in terms of their own interests.
- The 3 most frequently suggested improvements to the vocational rehabilitation system were: (1) that there 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, (2) that various players listen to, respect, and/or understand the worker, and (3) that L&I provide more support with job placement, work re-entry skills, and RTW in general.

Worker Satisfaction

We begin by presenting the response frequencies for two questions about effectiveness and satisfaction from Survey A, and then we discuss other characteristics and survey responses that were associated with the responses to these two questions. All results in this section have been weighted so that they can be considered to reflect the opinions of most workers[47] in the vocational rehabilitation system. (See the Methods chapter for more detail on response rates and post-stratification methodology. Appendix A contains a report on responses to all questions in Survey A. Appendix B contains a report on responses to all questions in Survey B. Appendix C contains all survey questions.)

1) Thinking about the big picture, how well would you say the Washington State workers' compensation system meets the needs of injured workers? Would you say the workers' compensation system is {`very effective' to `very ineffective'}?

Very effective	19.7%
Somewhat effective	46.2%
Somewhat ineffective	20.0%
Very ineffective	9.4%
Don't know	4.6%

2) How would you rate your overall experience with the vocational rehabilitation system so far? Would you say you were {`very satisfied' to `very dissatisfied'}?

Very satisfied	29.9%
Somewhat satisfied	34.8%
Neither satisfied nor dissatisfied	8.7%
Somewhat dissatisfied	10.5%
Very dissatisfied	10.0%
Don't know	6.2%

In summary, of the subset who responded to each question (excluding those who responded "Don't know"):

- 69% assessed the workers' compensation system as at least somewhat effective (about the same for workers with State Fund or self-insured claims)
- 69% were at least somewhat satisfied with the vocational rehabilitation system (71% for workers with State Fund claims versus 58% for those with self-insured claims, p=.04)

[47] With the exception of workers who were ineligible for the survey: under age 18, address outside Washington State, L&I employees, employment through a prison program, or unable to complete a telephone interview in English or Spanish.

This indicates that, overall, most workers about to embark upon vocational plan development were fairly satisfied with the workers' compensation system in general and the vocational rehabilitation system more specifically. However, workers with self-insured claims were less likely to be satisfied with the vocational rehabilitation system. We then focused in on the significant percentage of workers who responded to either question with a negative assessment. Each measure presented in Exhibit 3.34 included the subset of workers who answered that particular question (excluding those who responded "Don't know"), and was divided into those who gave a negative response to the question versus those who were either neutral or gave a positive response.

There were a number of striking differences between those with negative assessments compared with those who gave neutral or positive assessments, as shown in Exhibit 3.34. The following characteristics were significantly associated with negative responses to both questions (and the observed differences were quite large):

- More time having passed since the injury
- Having been determined eligible for plan development more than once
- Interviewed in English rather than Spanish (however there were only 15 Spanish interviews)
- Poor health
- Poor ability to function outside of work

Workers reporting more economic problems were more likely to rate the workers' compensation system as ineffective (p=.002), but were not less satisfied with the vocational rehabilitation system. Two characteristics were significantly associated with dissatisfaction with the vocational rehabilitation system, but not with opinions about overall effectiveness of the workers' compensation system:

- Those dissatisfied with the vocational rehabilitation system were 3.5 years older on average compared with those who weren't (p=.002).
- 28% of those who had completed a formal apprenticeship prior to injury were dissatisfied with the vocational rehabilitation system, compared with 19% of those who hadn't completed a formal apprenticeship (p=.04).

We then compared satisfaction with the vocational rehabilitation system before beginning retraining plan development (Survey A) with after claim closure (Survey B). In general, workers going into retraining plan development were more satisfied with the vocational rehabilitation system overall than they were after vocational rehabilitation services had ended (Exhibit 3.35). In addition, 55% of workers going into plan development were certain or somewhat certain they would return to work within 6 months of claim closure; however, only 21% of workers actually returned to work within 3-6 months of claim closure (Exhibit 3.36).

Exhibit 3.34 Relationships between worker characteristics and worker opinions

Characteristic	Data source	Workers' compensation system is ineffective		Dissatisfied with vocational rehabilitation system	
		mean	p-value	mean	p-value
Age at survey	Survey		NS		.002
Negative assessment		47.5		49.8	
Positive assessment		47.2		46.3	
Years from injury to survey	Admin		<.001		<.001
Negative assessment		3.8		4.0	
Positive assessment		2.9		3.0	
		percent	p-value	percent	p-value
Interview language	Survey		.004		.008
English		32.1		22.8	
Spanish		6.2		0.0	
Determined eligible for plan development more than once	Admin		<.001		<.001
Yes		46.2		40.0	
No		26.0		15.9	
Apprenticeship before injury	Survey		NS		.04
Yes		34.2		27.7	
No		29.6		19.4	
Economic risk	Survey		.002		NS
Low		18.9		15.7	
Moderate		28.3		22.7	
High		38.1		23.4	
Self-rated health	Survey		<.001		<.001
Poor		49.5		34.8	
Fair or better		24.0		17.1	
Self-rated non-work functioning	Survey		<.001		<.001
Poor		45.5		33.8	
Fair or better		24.5		16.0	

Note: The following characteristics had no significant association with either measure and were excluded from this table: State Fund vs. self-insured claim, pre-injury wages, gender, marital status, dependents, educational level, occupational disease, prior treatment for same or similar injury (State Fund only), coexisting conditions that might delay recovery (State Fund only), rural or distressed residence county, large employer (State Fund only), satisfaction with job where injured, union member at time of injury.

Exhibit 3.35a Satisfaction with the vocational rehabilitation system before retraining (Survey A)

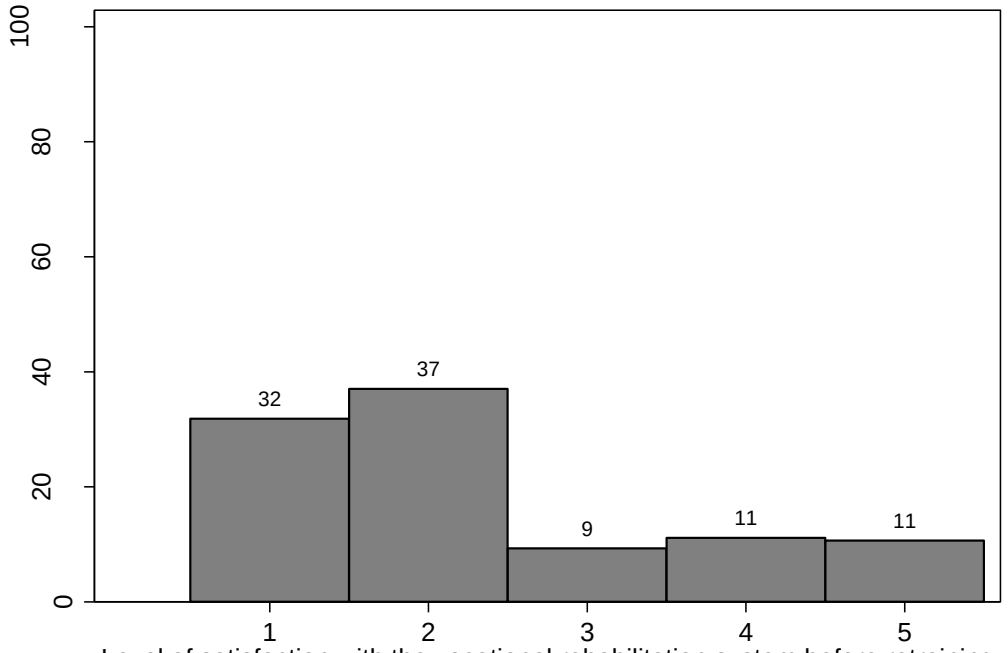


Exhibit 3.35b Satisfaction with the vocational rehabilitation system after claim closure (Survey B)

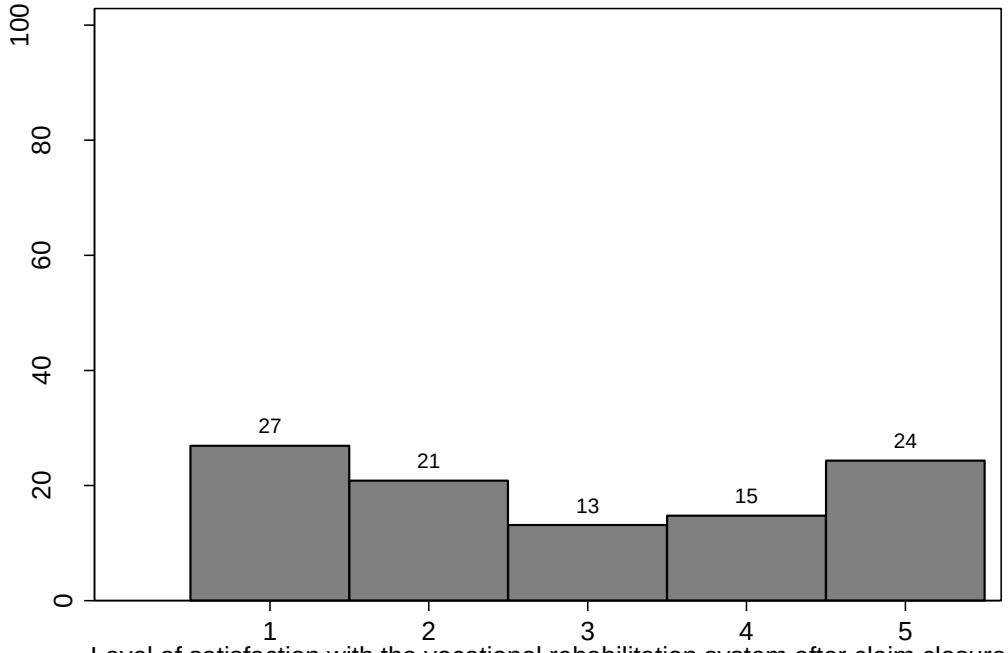


Exhibit 3.36a Certainty regarding future ability to return to work once retraining is completed (Survey A)

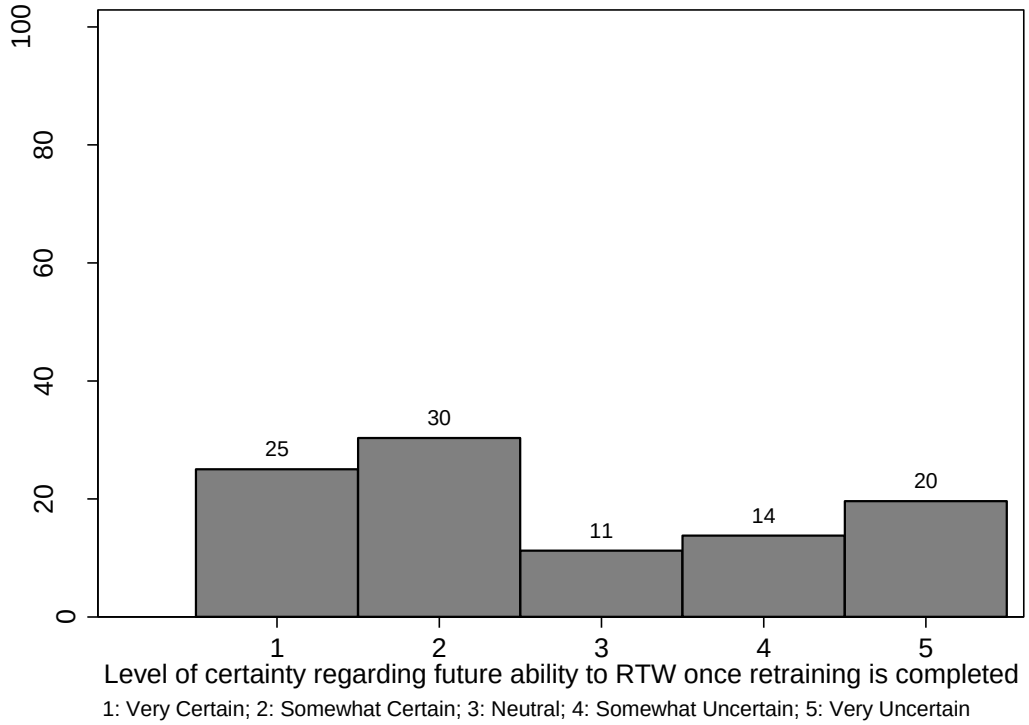
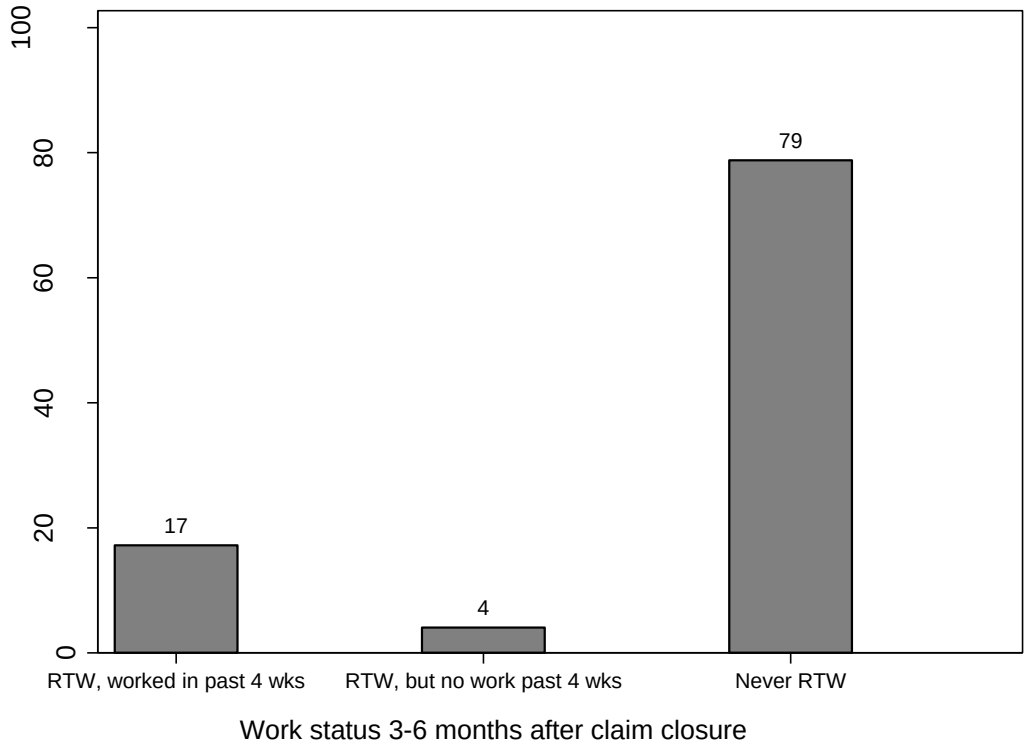


Exhibit 3.36b Work status 3 to 6 months after claim closure (Survey B)

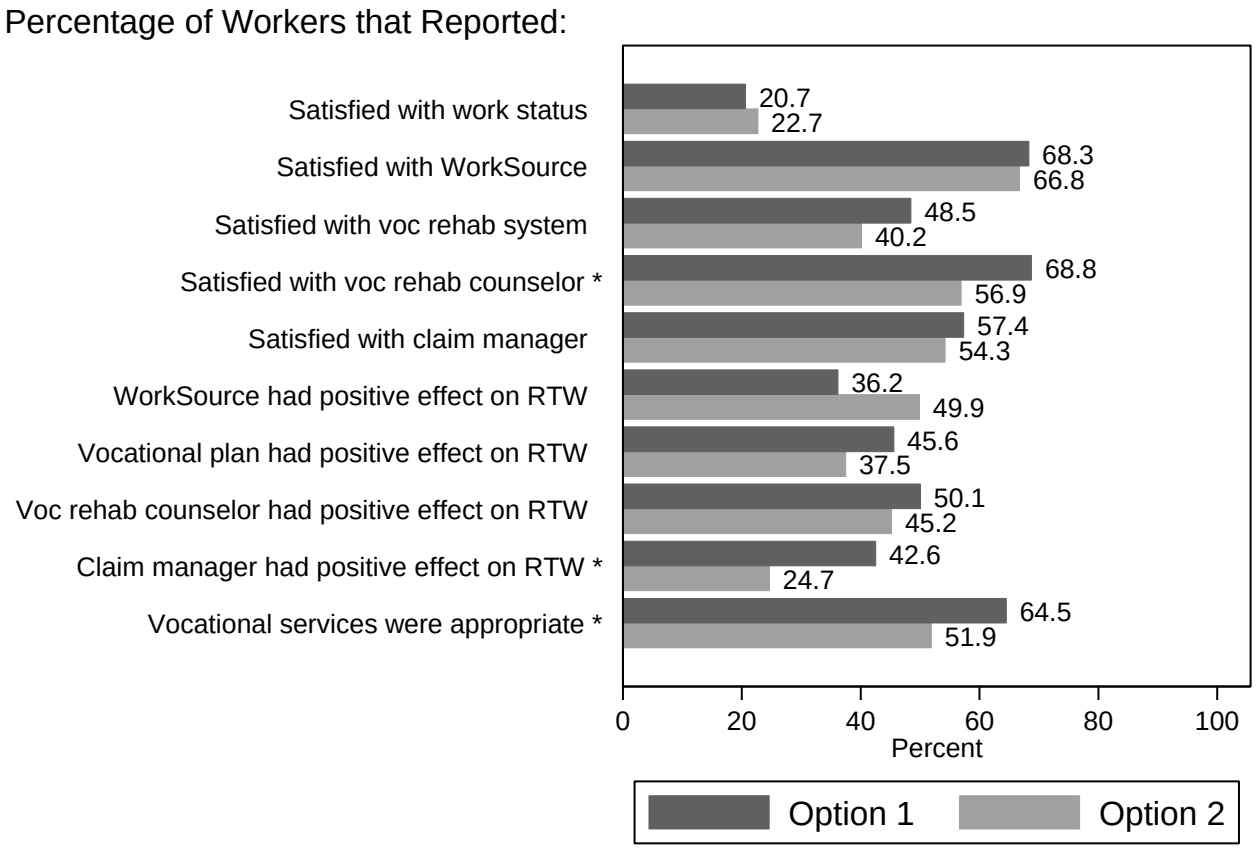


Option 2

Exhibit 3.37 presents a summary of workers' satisfaction ratings and opinions about various aspects of the vocational rehabilitation process as reported 3 to 6 months after claim closure (a more detailed breakdown of responses can be found in Appendix B).

- Option 2 workers were significantly less satisfied with their vocational rehabilitation counselor (VRC), less likely to think their claim manager had a positive effect on their ability to return to work, and less likely to think that the vocational services they had received were appropriate.
- There was no significant difference between Option 1 and Option 2 workers with regard to whether they would make a different option choice if they were given that opportunity.

Exhibit 3.37 Worker satisfaction with various aspects of the vocational rehabilitation system by option choice (Survey B)



*Option 1/Option 2 difference was statistically significant at P<.05

Workers' Suggestions and Potential Areas for Improvement

The final question of Survey B asked workers this open-ended question: **"**Based on your experience with the vocational rehabilitation system, if you could make one improvement, what would it be?" 63.2% of the respondents made a specific suggestion, 16.5% responded that no improvement was needed, 9.8% responded that the whole system or multiple aspects of the system required improvement, and 10.5% did not offer a response. Workers' suggestions were grouped into non-exclusive themes.

- The most frequent suggested improvement to the vocational rehabilitation system was that there 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. This theme was cited by 18% of those with completed retraining plans, 25% of those with incomplete plans, and 36% of Option 2 workers.
- The second most frequent suggested improvement was that various players listen to, respect, and/or understand the worker (e.g., their interests, goals, and limitations). This theme was cited by 10% of those with completed plans, 17% of those with incomplete plans, and 27% of Option 2 workers.
- In third place, 9.2% of all workers who made a specific suggestion for improvement suggested that L&I provide more support with job placement, work re-entry skills, and return-to-work in general.

It appeared that the approved retraining plan often did not meet the workers' perceived needs/abilities and that many workers didn't feel they had enough input into the choice of training goal or that their needs weren't understood or respected. This theme emerged in several ways.

- Among those choosing Option 1 who had incomplete plans, the most frequently reported primary reason for non-completion was that the worker was unsuccessful in training or training was too hard (38%). The second most frequent reason was that the worker could not physically continue training (26%).
- The most frequent primary reason given for choosing Option 2 was being physically or emotionally incapable of Option 1 (27%). Pooling the top 3 reasons given, 57% of Option 2 workers stated that their retraining plan would have been a poor fit for them, either physically, emotionally, logistically, or in terms of their own interests. 27% gave financial reasons, and 21% wanted more control or independence.
- Of workers who reported they would choose a different option if given the opportunity, the training plan being inadequate or unsatisfactory was cited as a top 3 reason by 65% of those with completed plans, 23% of those with incomplete plans, and 35% of those with Option 2. Being physically, emotionally, or academically incapable of the training plan was cited as a top 3 reason by 38% of those with completed plans, 59% of those with incomplete plans, and 24% of those with Option 2. Fully a third of those with incomplete plans said they would choose Option 2 if given the opportunity to do things over.

List of Key Findings

L&I Vocational Service Specialists at WorkSource

- There have been relatively few referrals to the six L&I WorkSource locations so far. The planned rollout was slowed due to the state hiring freeze, staff turnover, and recruitment challenges.
- State Fund claims were more likely to have involved a WorkSource referral if workers:
  - Were younger
  - Had lower pre-injury wages
  - Had a more recent injury
  - Resided in a rural county
- Workers referred to WorkSource for Early Intervention referrals had better employment outcomes for 2 of the 4 RTW measures.

Repeat Referrals

- Self-insured claims had fewer repeat plan development and plan implementation referrals under the pilot than did State Fund claims.
- From baseline to pilot, the percentage of State Fund claims with repeat referrals decreased by:
  - 34% for AWA referrals (compared with 41% in the 2010 and 27% in the 2011 report)
  - 35% for PD referrals (compared with 24% in the 2010 and 25% in the 2011 report)
  - 43% for PI referrals (compared with 35% in the 2010 and 31% in the 2011 report)

Plans Submitted to L&I

- Under the pilot, 60% of State Fund claims with first-time plan development referrals had a plan submitted to L&I, compared with 68% for self-insured claims. Self-insured claims were 34% more likely on average to have a plan submitted to L&I at any point after referral for plan development, compared with the State Fund.
- At baseline, 38% of first-time State Fund plan development referrals had a plan submitted to L&I, compared with 60% post-pilot. Post-pilot claims were more than twice as likely on average to have a plan submitted to L&I at any point after referral for plan development, compared with baseline claims.
- The timing of plan submissions that we observed was consistent with the new 90-day submission requirement being the mechanism encouraging timelier plan submissions.

Plans Approved by Default

- Of plans approved during the post-pilot period, only 13 State Fund plans (0.2%) and 0 self-insured plans were deemed approved by default.
- There was a significant reduction in the percentage of State Fund plans that took more than 15 days to be approved from the baseline period (6.6%) to the pilot period (1.7%).
- Fewer than 2% of State Fund and self-insured plans took more than 15 days to be approved during the pilot period.

Time from Plan Development Referral to Retraining

- Under the pilot, self-insured claims were 42% more likely on average than State Fund claims to have retraining begin at any point after referral for plan development.
- State Fund post-pilot claims were 42% more likely on average than baseline claims to have retraining begin at any point after referral for plan development.

Completed Retraining Plans

- Under the pilot, 56% of State Fund retraining plans were completed, compared with 55% of self-insured plans (difference not significant).
- 59% of baseline State Fund plans were completed, compared with 56% of post-pilot State Fund plans (difference not significant).
- Initial approved plan length did not appear linked to completion rates.
- Initial approved plan length is not currently preserved by L&I data systems, but would be a valuable addition for descriptive, evaluative, and research purposes.

Time from Plan Completion to Claim Closure

- Under the pilot, 74% of State Fund completed plans had the claim closed, compared with 49% of self-insured completed plans. Self-insured plans were 55% less likely on average to have the claim closed at any point after a completed plan, compared with State Fund plans.
- At baseline, 55% of State Fund completed plans had the claim closed, compared with 74% post-pilot. Post-pilot State Fund plans were 40% more likely on average to have the claim closed at any point after a completed plan, compared with baseline plans.

Training Strategy

- More than 96% of both State Fund and self-insured plans involved formal training under the pilot.

- The percentage of approved State Fund plans involving OJT decreased significantly from 10% at baseline to 3% under the pilot.
- State Fund plans were more likely to involve OJT rather than formal training for those who:
  - Had a preferred language other than English
  - Had less education
  - Had an occupational disease
  - Resided in a rural and/or distressed county
  - Had a small employer
- OJT was strongly associated with better employment outcomes.
- There was no evidence that longer plans were associated with better employment outcomes, with the possible exception of mean wages.

Labor Market Demand

- 55% of State Fund plans had high demand goal occupations under the pilot, compared with 79% of self-insured plans.
- The percentage of plans with high demand goal occupations is gradually rising over time (both State Fund and self-insured).
- State Fund plans were more likely to have a high demand goal occupation if workers:
  - Were older
  - Had lower pre-injury wages
  - Were female
  - Had no dependents
  - Had less physical capacity
  - Resided in a rural and/or distressed county
  - Had a large employer
- Self-insured plans were more likely to have a high demand goal occupation if workers:
  - Had lower pre-injury wages
  - Were female
  - Had less physical capacity
  - Resided in a distressed county
- There was no evidence that high demand goal occupations resulted in better employment outcomes.

Goal Occupations

- The 46 most frequent goal occupations accounted for 80% of vocational plans.
- Despite the rising percentage of plans with high demand goal occupations under the pilot, many of the most frequent goal occupations often did not have high demand ratings.

Return-to-Work Occupations and Use of Acquired Skills

- More than 85% of all workers who had completed their retraining plan stated that the training was useful.
- 71% of workers who completed retraining **and** returned to work used the skills acquired during retraining.
- Of those who **had** returned to work but did **not** use acquired skills:
  - 51% stated that there were no jobs available for the plan goal
  - 18% said the training was inadequate

Option 2

- Option 2 was chosen by 31% of workers with self-insured claims and 28% of workers with State Fund claims.
- Workers with State Fund claims were more likely to have chosen Option 2 if they:
  - Were male, not married, had lower pre-injury wages and/or had less education
  - Had an occupational injury rather than an occupational disease
  - Had no prior treatment for the same or a similar injury
  - Had a small employer
- Workers with self-insured claims were more likely to have chosen Option 2 if they were older and/or had no dependents.
- It did not appear that having been determined eligible for plan development more than once (an indication of problems with previous plans) was associated with choosing Option 2.
- Survey respondents who thought that their plan would have a negative effect on their ability to return to work were more likely to choose Option 2.
- About 20% of Option 2 workers used their retraining funds, with little increase over time. There was a large discrepancy between the percentage who said they planned to use training funds when surveyed 3-6 months after claim closure (64%) and the percentage that actually used training funds within 3 years of claim closure (21%).
- State Fund, younger workers, English-speaking workers, and workers with at least some college education were more likely to use their retraining funds.

- There were no significant differences in average employment outcomes between Option 1 and Option 2, except that Option 2 workers were less likely to RTW immediately.
- There were preliminary indications that Option 2 workers who use their retraining funds may have the best employment outcomes, however this could be due to self-selection.

Comparison of the VIP with Baseline: Referral and Employment Outcomes

- Retraining plan referral outcomes for all workers pre-pilot were very similar to referral outcomes for Option 1 workers under the VIP.
- Because most Option 2 workers are not using their retraining funds, a lower percentage of workers approved for retraining are being retrained under the VIP compared with baseline.
- Employment outcomes overall appeared to be worse under the VIP, likely due to a combination of factors that cannot be disentangled due to the near simultaneous impact of all features of the VIP as well as the economic recession.

Workers' Opinions

- Among workers determined eligible for plan development in the fall of 2009:
  - 69% assessed the workers' compensation system as at least somewhat effective
  - 69% were at least somewhat satisfied with the vocational rehabilitation system
  - Workers with self-insured claims were less likely to be satisfied with the vocational rehabilitation system (58% compared with 71% for State Fund).
- The following characteristics were significantly associated with negative responses to both questions (and the observed differences were quite large):
  - More time having passed since the injury
  - Having been determined eligible for plan development more than once
  - Interviewed in English rather than Spanish
  - Poor health and/or poor ability to function outside of work
- Workers reporting more economic problems were more likely to rate the workers' compensation system as ineffective. Older workers and those who had completed a formal apprenticeship were more dissatisfied with the vocational rehabilitation system.
- In general, workers going into retraining plan development were more satisfied with the vocational rehabilitation system overall than they were after vocational rehabilitation services had ended, and were likely to overestimate their likelihood of RTW.
- Option 2 workers were significantly less satisfied with their VRC, less likely to think their claim manager had a positive effect on their ability to return to work, and less likely to think that the vocational services they had received were appropriate.

- There was little difference between Option 1 and Option 2 workers regarding whether they would make a different option choice if they were given another opportunity.
- 57% of Option 2 workers stated that their retraining plan would have been a poor fit for them, either physically, emotionally, logistically, or in terms of their own interests.
- The 3 most frequently suggested improvements to the vocational rehabilitation system were: (1) that there 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, (2) that various players listen to, respect, and/or understand the worker, and (3) that L&I provide more support with job placement, work re-entry skills, and RTW in general.

CHAPTER 4. DISCUSSION AND RECOMMENDATIONS

We conclude by discussing our findings and presenting our assessments of L&I performance and of whether the pilot Vocational Improvement Project (VIP) has contributed to improvements in Washington State's vocational rehabilitation program for injured workers. We also provide a discussion of study limitations, our overall conclusions, and our recommendations as to the future of the VIP, as well as issues we believe merit further study.

Summary of Changes under the VIP

The most noteworthy findings and related conclusions for each major aspect of the VIP evaluation are summarized below. Exhibit 4.1 (on page 92) provides a one-page diagrammatic summary of key evaluation findings.

WorkSource: Although the WorkSource pilot locations had a slower-than-expected roll-out, and consequently there have been relatively few referrals so far, there is preliminary evidence that workers are satisfied with services received at WorkSource and that RTW outcomes for those referred to WorkSource may be better than for those referred to the private sector.

Efficiency: We found evidence for a number of improvements in efficiency under the pilot program (compared with baseline). In fact, all three repeat referral measures and every time-dependent process measure we assessed were significantly more efficient under the VIP compared with baseline. However, contrary to expectations, the percentage of plans completed did not improve under the VIP.

Training strategy: Although there were few on-the-job training (OJT) plans relative to formal retraining, especially under the VIP, workers going through an OJT plan had markedly better RTW outcomes. There was no evidence that longer plans were associated with better employment outcomes, with the possible exception of higher mean wages for longer plans (there has not been enough follow-up time as yet for adequate mean wage comparisons). Based on the data available to date, we can't say whether outcomes would have been different if longer plans had not been available or more OJT plans had been implemented under the VIP. There is likely some benefit to having a wider variety of training options available in order to enable the best fit between plans and workers' needs. However, unless sufficient attention is paid to the best-fit concept, longer formal retraining plans may actually confer potential disadvantages to some workers if they were placed into an academic program that wasn't a good fit for them.

Labor market demand: Under the VIP, there has been gradual improvement over time in the percent of plans having goal occupations with a high labor market demand rating. However, it does not appear that labor market demand ratings are associated with better employment outcomes.

Use of acquired skills: When interviewed 3-6 months after claim closure, more than 85% of all workers who had completed their retraining plan stated that the training was useful. 71% of workers who had completed retraining **and** returned to work used the skills acquired during retraining.

Option choice: Option 2 was chosen by 28% of workers with State Fund claims and 31% of workers with self-insured claims. There were few notable differences between those choosing Option 2 over the Option 1 approved retraining plan. It did not appear that having been determined eligible for plan development more than once (an indication of problems with previous plans) was associated with choosing Option 2. This was surprising, since Option 2 had been described as a mechanism to allow workers to exit the system who previously had no viable means to do so. However, Option 2 was more often chosen by survey respondents who, prior to plan development, thought that the retraining plan that would be developed would have a negative effect on their ability to return to work. After plan development, 57% of Option 2 workers stated that their retraining plan would have been a poor fit for them, either physically, emotionally, logistically, or in terms of their own interests. 27% gave financial reasons for choosing Option 2, and 21% gave reasons related to wanting more control or independence. Workers choosing Option 2 were significantly less satisfied with their vocational rehabilitation counselor (VRC), less likely to think their claim manager had a positive effect on their ability to return to work, and less likely to think that the vocational services they had received were appropriate. There was little difference between Option 1 and Option 2 workers with regard to whether they would make the same option choice if they had the opportunity to revisit their decision.

There were no significant differences in average employment outcomes between Option 1 (measured after retraining) and Option 2 (measured after option choice), with the exception that Option 2 workers were less likely to RTW immediately (possibly because Option 2 workers had not yet undergone retraining for re-employment, and had just received 6 months of time-loss compensation). Retirement, whether voluntary or involuntary, may have affected employment outcomes but did not appear to influence option choice. Option 2 workers were more likely to be receiving Social Security or other retirement/pension benefits 3-6 months after claim closure, yet only 1 worker reported choosing Option 2 because they were able to retire or had another income source.

Option 2 may benefit workers with the physical capacity and motivation to identify and complete retraining on their own. However, many chose Option 2 because they felt unable to meet retraining demands or thought the approved retraining plan wasn't a good fit for them. Option 2 may in fact represent the best alternative for that group of workers, but it is also possible that some could have benefited from being offered a different retraining plan; we did not have adequate data to make that assessment. Retraining may benefit workers who complete it, but those choosing Option 1 who didn't successfully complete the retraining plan appeared to have the worst employment outcomes.

Use of Option 2 retraining funds: There was a large discrepancy between the percentage of Option 2 workers who said they planned to use retraining funds when surveyed 3-6 months after claim closure (64%) and the percentage that actually used retraining funds within 3 years of claim closure (21%). State Fund, younger workers, English-speaking workers, and workers with at least some college education were more likely to use their retraining funds. Preliminary evidence suggests that Option 2 workers have relatively good RTW outcomes once they complete independent retraining, however this observation was tentative and was based on only 18 workers.

Comparison of the VIP with baseline: Retraining plan referral outcomes for all workers pre-pilot were very similar to referral outcomes for Option 1 workers under the VIP. Because most Option 2 workers are not using their retraining funds, a significantly lower percentage of workers approved for retraining are being retrained under the VIP compared with baseline (conservatively estimated as at least a 21% overall decrease). For VIP workers who had completed retraining plans, there were no significant differences in employment outcomes compared with baseline, with the exception of sustained RTW at full pre-injury wage, perhaps the hardest measure to meet in the face of the economic recession. Employment outcomes overall appeared to be worse under the VIP, likely due to a combination of factors that cannot be disentangled due to the near simultaneous impact of all features of the VIP as well as the economic recession. Those choosing Option 1 who didn't complete their retraining plan appeared to have the worst outcomes; this was also the group accounting for most of the poorer RTW outcomes for the VIP relative to the pre-pilot period. We could not identify any specific feature of the VIP that might account for the poorer observed employment outcomes. Mediating factors such as retraining plan referral outcomes, Option 2 training fund use, and OJT (vs. formal retraining) did not account for the entire decrement in RTW outcomes. Because the various aspects of the VIP were implemented simultaneously, we were unable to distinguish differential effects on outcomes.

Workers' opinions: Prior to retraining plan development, most workers (69%) had positive opinions about the workers' compensation system in general and the vocational rehabilitation system more specifically. Negative opinions were strongly associated with having been referred for plan development more than once and with more time passing since the injury (among other factors). It appeared that retraining plan development and/or the approved retraining plan often did not meet the workers' perceived needs/abilities and that many workers didn't feel they had enough input into the choice of training goal or that their needs weren't understood or respected. This theme emerged in several different ways:

- In general, workers heading into retraining plan development were likely to overestimate their likelihood of future RTW after retraining and were more satisfied with the vocational rehabilitation system at that time than they were after vocational rehabilitation services had ended.

- Among those choosing Option 1 who did not complete their retraining plan, the most frequently reported primary reason for non-completion was that the worker was unsuccessful in training or training was too hard (38%). The second most frequent reason was that the worker could not physically continue training (26%).
- The most frequent primary reason given for choosing Option 2 was being physically or emotionally incapable of Option 1 (27%). Pooling the top 3 reasons given, 57% of Option 2 workers stated that their retraining plan would have been a poor fit for them, either physically, emotionally, logistically, or in terms of their own interests.
- Among the 22% of workers who reported they would choose a different option if given a chance to do things over, the training plan being inadequate or unsatisfactory was cited among the top 3 reasons by 65% of those with completed plans, 23% of those with incomplete plans, and 35% of those with Option 2. Being physically, emotionally, or academically incapable of the training plan was cited among the top 3 reasons by 38% of those with completed plans, 59% of those with incomplete plans, and 24% of those with Option 2. Fully a third of those with incomplete plans said they would choose Option 2 if given the chance to do things over.
- Nearly half of those with incomplete plans (46%) or Option 2 (49%) who did not receive legal advice on their option choice thought legal advice would have been helpful.
- Finally, and perhaps most telling, the two most frequently suggested improvements to the vocational rehabilitation system were: (1) that there 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 (suggested by 25% overall, and more than 36% of Option 2 workers), and (2) that various players listen to, respect, and/or understand the worker (e.g., their interests, goals, and limitations) (suggested by 17% overall, and more than 27% of Option 2 workers).

Because these surveys were conducted only after the VIP had begun, we can make no comparisons with pre-pilot worker opinions. However, taken together, these findings suggest that there is at least great room for improvement in worker satisfaction with the plan development and plan implementation process. The good news is that if these opinions do reflect opportunities to improve the fit of retraining plans to workers' needs and abilities, there should also be corresponding opportunities to improve overall employment outcomes.

Exhibit 4.1 Summary of key evaluation findings

*Although we controlled for unemployment rate, it is unclear how much of the reduction in RTW was due to the economic recession rather than the VIP.

Notes: An upward (vs. downward) arrow indicates a statistically significant benefit or improvement. In some cases the arrows represent a summary of related findings, not all of which may have the same direction of effect or statistical significance. A tilde (~) indicates mixed findings or no statistically significant difference.

Study Limitations

There were a number of challenges to this evaluation, which need to be acknowledged in order to properly interpret the findings and understand the compromises involved in the study design. This study was not designed or contracted until the VIP program was well underway and the new changes had already been implemented, making it impossible to conduct baseline surveys for comparison purposes. Most VIP-related changes were implemented simultaneously, making it difficult or impossible to separate the effects of various changes. The budget was limited, which constrained the number of surveys and analyses that could be completed. Claim maturation time in the vocational rehabilitation system is typically very long, which limited the ability to observe employment outcomes (especially sustained employment) within the timeframe allotted for this study. This was compounded by the built-in processing delays for quarterly ESD data. Some findings (or lack thereof) reflect the compressed timeframe, and might change or attain statistical significance if assessed after the passage of more time (e.g., higher mean wage outcomes for longer plans).

There were specific additional challenges with regard to evaluating Option 2. It was unclear at what point Option 2 employment outcomes could be reasonably compared with those for Option 1. Option 2 workers receive 6 months of time-loss compensation when their claim is closed, are not considered able to work immediately after claim closure, and may delay use of their retraining funds for up to 5 years (therefore very few had used their full retraining fund benefit during this study's timeframe, and most had not yet used any retraining funds). We chose to survey both Option 1 and Option 2 workers 3-6 months after claim closure, to avoid problems with differential follow-up (L&I does not track contact information for either Option 1 or Option 2 workers after claim closure). With regard to both the Option 1/Option 2 post-pilot comparison and the "all plan" pre-post comparison of employment outcomes, both pre-pilot workers and post-pilot Option 1 workers had their chance to finish training and RTW, but most Option 2 workers hadn't yet started their training (assuming they ever would). Only 18 had completed retraining and were perhaps comparably ready to re-enter the labor market or RTW. To mitigate these difficulties, we presented several descriptive views of employment outcomes at various times after claim closure for both groups, and excluded Option 2 workers from some pre-post comparisons.

Lastly, the most serious challenge facing this evaluation was the lack of a suitable concurrent comparison group that would enable adequate control for self or system-based selection into various new features of the VIP as well as for the near-simultaneous impact of the severe economic recession. Ideally, we would have been able to construct a comparison group similar with respect to all important characteristics except for VIP exposure. The economic recession hit very shortly after the VIP began, which interfered with our plan to use a pre-VIP baseline period as the comparison group, and there was no staggered roll-out of most features, nor randomization of any kind (for example, randomizing implementation to different regions at different times). We do not suggest that such randomization might have been feasible or should have been done, only that its absence hindered this evaluation.

It was very difficult to adequately control for changing economic conditions with a pre-post design in the absence of an adequate comparison group. We did control for unemployment rate in these models (with an unemployment rate assigned to each worker by quarter of labor market entry and last known residence county), however, the recession was severe and the unemployment rate may not have captured its full impact on injured workers. We tried many variations of the unemployment rate, including creating an inverse 6 month lag for the unemployment rate, squaring the unemployment rate (which weights higher unemployment rates more heavily), and using other versions of the unemployment rate available from the BLS such as those that include part-time or underemployed workers in the calculated rate. None resulted in markedly different findings. Difference-in-difference models using workers found "able to work" during Ability to Work Assessments (those workers that did not RTW with the same employer and were expected to be in the general labor market) as a non-equivalent comparison group provided some evidence that labor market conditions did have some residual effect on injured workers over and above that of the unemployment rate. In addition, it appeared that the recession strongly affected RTW for injured workers about 6 months earlier (approximately July of 2008) than it strongly affected the unemployment rate (approximately January of 2009). The wage measure that involved meeting the highest threshold of 100% of pre-injury wages after post-injury RTW appeared to be the most sensitive to the recession, as could be expected. In sum, we implemented numerous approaches to attempt to control for the severe economic recession, but none appeared to strengthen the employment outcome models. It seems unlikely that the economic recession in and of itself was wholly responsible for the decline in employment outcomes observed under the VIP, given the robustness of these findings to all approaches.

Recommendations

Taking into consideration our findings along with the study limitations, we provide the following recommendations as well as comments regarding potential areas for improvement and areas needing further study.

The original Description of Services Requested (DSR) listed a number of expected outcomes of the VIP legislation. Below we comment briefly on whether each expected change has occurred.

- Shifting the cost of vocational rehabilitation and time-loss away from repeated attempts at counseling and plan development to retraining workers to return to the workforce – that is, the pilot should reduce "repeat referrals." **This expected outcome did occur.**
- Reducing the amount of time it takes to develop a viable retraining plan. **This expected outcome did occur.**
- Providing better support for workers who better fit non-academic training, such as OJTs. **This expected outcome does not appear to have occurred. In fact, the percentage of plans involving OJT decreased by two-thirds under the VIP, despite evidence that OJT plans lead to favorable RTW outcomes.**
- Improving the percentage of workers who successfully complete their retraining plan. **There has been no measurable change in this area.**
- Returning workers to higher wage jobs compared to the workers trained prior to the benefit change. **We have no evidence that this occurred, however the nearly concurrent severe economic recession interfered with the ability to observe any progress in this regard.**
- Allowing workers the flexibility to pursue training or alternatives on their own. **This expected outcome did occur, and appears to have worked well for some workers. However, survey responses suggest that some workers may not receive adequate information and support to enable making the optimal choice for their circumstances.**

In the DSR, L&I expressed interest in specific recommendations regarding: (1) whether one or more of the VIP features should be adjusted for increased efficiencies or improved outcomes, and (2) which, if any, should be adopted on a permanent basis, post-pilot. As explained earlier, it was difficult or impossible to determine the effects of each change individually because the VIP changes were implemented simultaneously and there was no available concurrent comparison group. However, we saw no evidence that any particular aspect of the VIP was overwhelmingly negative, and we did observe many indications of positive change. For example:

- There were early indications of benefit related to the WorkSource feature of the pilot (referrals to L&I staff based at WorkSource locations), and workers expressed an interest in and satisfaction with the services that WorkSource offers.
- There were significant reductions in inefficient and costly repeat plan development and plan implementation referrals.

- Due to the new timelines and accountability features of the VIP, there were significant reductions in potentially costly delays at several key points in the process.
- Workers were offered the option to decline the approved retraining plan and pursue funded retraining of their own choice, on their own initiative, and at a time of their preference up to 5 years in the future. Alternatively, they could choose not to undergo retraining at all. More than 25% did choose Option 2. Based on preliminary estimates, the workers in this group that made use of the Option 2 retraining funds, while small in number, appeared to have the best employment outcomes of any group analyzed.
- In general, employment outcomes were not worse for the subset of workers that completed retraining under the VIP compared with pre-pilot workers, even though the pilot was implemented in the midst of a severe economic recession.

Therefore, we recommend that the VIP in its entirety be continued on a permanent basis. We also recommend that the subcommittee remain intact in order to continue to monitor progress and make further adjustments as needed.

Opportunities for Further Study and Improvement

Over the course of this evaluation we have identified several potential opportunities for further improvement, which we offer for consideration by the subcommittee and/or the department. Each of these areas has some empirical or theoretical support, but also involves some degree of speculation due to lack of pertinent data or the inability to separate the effects of various aspects of the VIP from each other and from pre-existing/ongoing program features.

1. **Consider additional efforts to ensure that workers have reasonable input into retraining plan development, that they are offered adequate retraining choices and plans well-suited to their circumstances, and that they receive adequate communication and support from their vocational counselor.** The most frequently suggested improvement to the vocational rehabilitation system by workers interviewed for Survey B was that there 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 (suggested by 25% overall, and more than 36% of Option 2 workers)**.** The reasons workers gave for incomplete retraining plans also suggested that, in at least some cases, workers felt that they were not ready for retraining when they were referred or felt that the retraining plan was not a good fit for them. Although we have no evidence bearing on whether these issues have improved or worsened under the VIP, these patterns are sufficient to raise concern. Even if these responses reflect misperceptions by workers rather than inadequacies with VRC services or retraining plan fit, such perceptions could be expected to interfere with willingness to accept the approved Option 1 retraining plan (perhaps inducing workers to choose Option 2 even if they would rather have stayed within the system for retraining) or to interfere with successful plan completion.[48] Although we can't say whether the retraining plan offered to each worker was optimal in every case or not, certainly it is quite possible that improvement in these areas could lead to better observed outcomes, without changing any details of the VIP.

2. **Facilitate on-the-job training (OJT) plans when appropriate.** OJT plans had very favorable employment outcomes relative to formal retraining. This is likely in part due to workers being offered a job by the training employer once they have demonstrated capability for the work. Research suggests that supportive work environments are key to successful RTW.[49] OJT arrangements may be especially conducive to a successful RTW transition, since both the employer and worker have invested energy into the worker's success. However, although one goal of the VIP was to facilitate OJT plans, the percentage of OJT plans dropped markedly under the VIP. It has been suggested that the 90-day plan development timeline may be too short for development of an OJT plan. Although VRCs have the opportunity to request an extension, they may not be highly motivated to do so. We

[48] 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):349-66.

[49] Young AE. Return to work following disabling occupational injury--facilitators of employment continuation. Scand J Work Environ Health. 2010;36(6):473-83.

recommend a renewed focus on ways to increase the use of OJT plans when appropriate for the worker's situation. The optimal limit for plan development completion (currently 90 days) may need to be re-assessed as well (discussed in the section on further study).

3. **Offer access to Option 2 or a reconfigured retraining plan as a contingency if workers attempt the approved Option 1 retraining plan but then realize it was not a good fit.** Workers should not be penalized if they, in conjunction with their VRC and L&I, made overly optimistic assessments of their ability to complete a particular retraining plan. ESSB 5920 states that not attaining passing grades is considered a vocational plan interruption that is under the control of the worker and therefore subject to benefit suspension. According to Survey B, 38% of workers who did not complete their retraining plan identified the primary reason as the training being too difficult. Improvements commonly suggested by workers included asking L&I to make changes that would ease college re-entry, and allowing for more flexibility for older age and other individual circumstances. In 2008, 18-24 month (probably academic-based) retraining plans accounted for 65% of approved retraining plans. Workers with incomplete retraining plans appeared to have the worst employment outcomes, even in comparison with Option 2 workers who did not use their retraining funds. In combination with the stricter accountability requirements, access to either a reconfigured retraining plan or a graceful exit via Option 2 might be a more effective and humane way of assisting workers who were unable to meet the demands imposed by their approved retraining plan. Improving access to OJT plans may also be beneficial in this respect. There can be conflict between the goal of equal treatment based on clear accountability standards and the goal of fairness based on meeting differing needs, and optimizing worker outcomes will require a balance of the two.[50,51]

4. **Promote use of Option 2 retraining funds.** It appears that Option 2 workers who use their retraining funds have better employment outcomes than those who do not. This observation may be due to selection bias; however, if there is any value to vocational retraining, it is likely that encouraging such training would have positive benefit. L&I does provide information about retraining fund use prior to claim closure, and there is information on L&I's website. However, there was a large discrepancy between the percentage of Option 2 workers who reported planning to use retraining funds and the percentage who actually used them. The relatively minor investment required to send reminders may be well worth the cost, considering the potential costs to other state and federal programs if return-to-work never occurs (and potentially to L&I itself if claims are re-opened). ESSB 5920 required that L&I maintain a register of workers who have been retrained or have selected either Option 1 or Option 2 for at least the duration of the pilot program (both State Fund and self-insured). We propose that this register be continued for Option 2 workers at minimum, and used to

[50] 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):1404-11.

[51] Cooper TL. Big questions in administrative ethics: a need for focused, collaborative effort. Public Administration Review. 2004;64(4):395-407.

send annual reminders to State Fund and self-insured workers who have not yet begun to access their retraining funds, until their funds expire. These annual reminders could also be used to update addresses in the register (via use of USPS address correction services), so that longer-term interviews could be carried out to answer some of the important remaining questions described in the section on further study.

5. **Track requests for and use of Option 2 retraining funds.** L&I reported that legitimate Option 2 retraining fund requests by State Fund workers are rarely if ever denied, however they were unable to provide data to address this point. We also observed that self-insured workers were significantly less likely to use their retraining funds than State Fund workers. This observation may have been due to several factors, the relative contribution of which we are unable to tease out at this time: (1) possible under-reporting of retraining fund expenditures by self-insured employers to L&I, (2) a known data collection issue within L&I data systems, so that some information that was reported by self-insured employers was not completely recorded, and/or (3) lower use of retraining funds by injured workers who had self-insured employers. This will require further research, as described in the next section. Although we stress that we have no evidence of any bad intentions or misconduct, and cannot even say whether there was actually lower use of retraining funds in the self-insured sector, it is conceivable that workers may be reluctant to request funds from their previous employers for a variety of reasons, and/or that some self-insured employers might be reluctant to approve retraining fund requests due to immediate and direct economic impact. To alleviate any potential for negative perceptions along these lines, we would recommend that Option 2 retraining funds be administered by L&I for both State Fund and self-insured employers, or at minimum, that self-insured employers be required to report retraining fund requests and denials (not just expenditures) to L&I with some degree of accountability (e.g., an audit trail).

6. **Consider further use of and integration with WorkSource.** There was generally high satisfaction with WorkSource services and many workers reported that WorkSource helped them return to work. In addition, the third most frequently suggested improvement to the vocational rehabilitation system (suggested by 9.2% of workers who made specific suggestions) was that L&I provide more support with job placement, job search skills, work re-entry skills, and RTW in general. Workers who have been retrained are still likely to be at significant disadvantage in the labor market, given such potential barriers as having been unemployed for an extensive period of time, inexperience in their new occupation, and their history of work-related injury and probable ongoing disability.[52,53] Previous vocational rehabilitation research has suggested that this labor market disadvantage could potentially be

[52] Kaye HS. Stuck at the bottom rung: occupational characteristics of workers with disabilities. J Occup Rehabil. 2009;19(2):115-28.

[53] Organisation for Economic Co-operation ad Development (OECD). Sickness, Disability and Work: Breaking the Barriers: A Synthesis of Findings across OECD Countries. Paris: OECD Publishing; 2010.

addressed in part by allocating resources to career-long job support.[54] It may be that L&I could both improve satisfaction with its own services and improve employment outcomes by providing more direct and ongoing integration with WorkSource for all workers in the vocational rehabilitation system.

7. **Incorporate initial approved plan length as a preserved data element.** This is a relatively minor data-related recommendation, but the lack of this information arose as a hindrance at several points during this evaluation and required much additional work on the part of L&I staff. Initial approved plan length is not currently preserved by L&I data systems, but would be a valuable addition for descriptive, evaluative, and research purposes. Its availability would carry indirect potential to improve system performance.

We have also identified a number of unanswered questions that merit further study:

1. Although the VIP was designed to improve outcomes for injured workers, retraining plan completion rates and employment outcomes remain poor. Further investigation into the causes and potential solutions for these problems should receive high priority.

2. Taking retraining via both options into account, a lower overall percentage of the workers approved for retraining are being retrained under the VIP compared with baseline. Is this decrease a negative consequence of the VIP, in part due to suboptimal Option 1 plan fit (which might contribute to both incomplete Option 1 plans and/or overuse of Option 2)? Or does it simply reflect that retraining may not always be the optimal path for injured workers?

3. There is a need for longer-term study of the use of Option 2 retraining funds and subsequent RTW outcomes. It is important to understand why so many workers are not using their funds, whether they see not using the funds as a problem, and what might assist them in taking full advantage of their retraining funds. It would be very useful to compare employment outcomes for Option 1 workers at the point their retraining plans are completed with Option 2 workers at the point their independent retraining is completed.

4. Do workers fully understand the potential outcomes and consequences of both Option 1 and Option 2? Are there avenues to providing additional assistance to workers in making optimal choices via informational/educational support and additional counseling? Are VRCs consistent in providing full and adequate information about each of the choices to workers?

5. Can innovative ways be found to address the common perceptions among injured workers that they do not have enough input into training plans, that they are offered inadequate retraining choices, and that they receive inadequate communication/support from the VRCs? More generally this raises the question of whether there has been sufficient communication,

[54] MacEachen E, Kosny A, Ferrier S, Lippel K, Neilson C, Franche RL et al. The 'ability' paradigm in vocational rehabilitation: challenges in an Ontario injured worker retraining program. J Occup Rehabil. 2012;22(1):105-17.

coordination, and expectations established between L&I and the VRC community. It also raises the question of whether there needs to be more investigation into developing incentives for VRCs that would foster desirable outcomes with respect to RTW and worker satisfaction, as well as whether any existing policies function as misaligned incentives. In this regard, there may be much to learn from the experience of other jurisdictions in addition to L&I's own historical experience.

6. There is a need to investigate whether the 90-day limit for plan development is both reasonable and optimal, and whether it may be unduly motivating VRCs to either avoid OJT plans or to route too many people into academic/longer plans. A compressed timeframe that discourages interaction with workers might result in poorer plan fit. OJT plans appear to work very well for at least certain workers; that training strategy should not be discouraged. It would also be undesirable to encourage longer (and more expensive) plans for those workers who don't want them or can't benefit from them. Identifying the optimal time limit would require systematic input from VRCs and other informed parties (surveys, focus groups). VRCs are permitted to request extensions when there is good cause; it would be useful to learn whether VRCs find the process of requesting and justifying these extensions as onerous or something to be avoided. The new and stricter plan development timelines may be leading to unanticipated negative consequences. This has been observed in several qualitative studies in other countries; strict timelines have been associated with increasingly passive vocational service providers, as well as an increased burden on both injured workers and service providers.[55,56]

7. Existing labor market demand ratings do not appear to identify high demand jobs in a way that positively affects employment outcomes. Is there any alternative way of identifying occupational goals that might facilitate RTW after plan completion at wages comparable to pre-injury wages?

8. For various reasons, some workers did not have a retraining plan approved even as much as a year after referral for plan development. These workers differed significantly from those who did have a plan approved and subsequently chose an option. Obtaining a better understanding of the particular needs of workers in this category will likely be critical in order for L&I to be able to appropriately address the needs of all injured workers. Previous research suggests that both ability and health require ongoing attention during vocational rehabilitation.[57] There may be a need for initiatives to address the needs of workers with the most challenging health situations and those who get "stuck" or continue to cycle repeatedly through the system.

[55] 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):1404-11.

[56] MacEachen E, Kosny A, Ferrier S, Lippel K, Neilson C, Franche RL et al. The ideal of consumer choice: challenges with implementation in an Ontario injured worker vocational retraining program. [Unpublished manuscript.]

[57] MacEachen E, Kosny A, Ferrier S, Lippel K, Neilson C, Franche RL et al. The 'ability' paradigm in vocational rehabilitation: challenges in an Ontario injured worker retraining program. J Occup Rehabil. 2012;22(1):105-17.

Conclusions

Although we have compared the pilot Vocational Improvement Project (VIP) with a baseline period and taken great care to make our samples for each analysis as comparable as possible, we cannot say with certainty whether the changes we observed were due only to the VIP. The VIP is a highly complex program with many facets and there was no available concurrent comparison group. L&I has implemented process changes and improvements in an ongoing way, not all of which were related to the VIP. Such internal process changes, as well as changes over time in external social conditions and the severe economic recession, would also have contributed to some of the changes we observed.

However, this report provides evidence that there have indeed been a number of improvements in efficiency under the VIP. There is also substantial room for further improvement, particularly in the areas of facilitating OJT plans, addressing workers' perceptions of inadequate input, choice, and support regarding retraining plans, offering contingency plans when a workers' ability to complete a retraining plan was mis-assessed, promoting and tracking the use of Option 2 retraining funds, making full use of WorkSource resources, and developing better ways to meet the needs of injured workers so that more than a small proportion eventually return to work in employment within their physical capabilities and approaching pre-injury wages.

In conclusion, we recommend that the VIP in its entirety be continued on a permanent basis. We also recommend that the subcommittee remain intact in order to continue to monitor progress and make further adjustments as needed.

APPENDIX A

Survey A Report

The primary purpose of this survey was to provide information about baseline differences between workers who choose Option 1 versus Option 2. The purpose of this appendix is to share descriptive information from the survey about the population of workers determined eligible for plan development under the pilot program.

Key Points:

- Most were satisfied with their job before they were injured, and most worked full-time.
- A high degree of economic stress was reported:
  - 70% worried almost all the time about their ability to cover expenses or pay bills.
  - 41% reported recent contact from a credit agency about unpaid bills.
  - 21% report that their housing was recently at risk due to unpaid bills.
- Self-reported health status and functional ability were quite low.
- Overall, workers reported a somewhat surprising level of satisfaction and confidence:
  - 69% assessed the workers' compensation system as at least somewhat effective.
  - 69% were at least somewhat satisfied with the vocational rehabilitation system.
  - 76% felt their upcoming vocational plan would assist them in returning to work.
  - 55% were at least somewhat confident they would be able to return to work within 6 months of completing their vocational plan.
- There were only a few large or significant differences between the State Fund and self-insured subgroups (keep in mind that we surveyed relatively few in the self-insured group).

  The self-insured group:
  - was less likely to have had more than one plan development referral (8% to 28%).
  - was about 7 years older on average.
  - was much more likely to have been in a union (77% to 18%).
  - worked for their employer longer before their injury (12 years compared with 5).
  - reported a higher hourly wage at the time of injury and lower current economic risk.
  - was less optimistic about their chances of returning to work or the effectiveness of the vocational plan they were about to undertake.

Note: All results presented in Exhibits A.1 and A.2 have been adjusted to the population using post-stratification weights. Wages were adjusted to January of 2008.

Key to Abbreviations	
DK	Don't know
R	Refused to answer
N/A	Not applicable
NS	Not statistically significant

Exhibit A.1 Respondent characteristics (from administrative data)

Respondent Characteristic	Full Sample	State Fund	Self-insured	p-value
Age at injury (mean years) {range: 20-63}	43.7	42.7	49.6	<.001
Adjusted monthly wages before injury	$3,486	$3,422	$3,842	N/A*
Years from injury to survey (mean years) {range: 8 months-13 years}	3.2	3.2	3.2	NS
Female	25.1%	23.3%	35.0%	.03
Married	54.3%	53.9%	56.4%	NS
One or more dependents	32.9%	36.2%	15.0%	<.001
Preferred language not English	N/A	3.8%	N/A	N/A
Occupational disease	N/A	14.4%	N/A	N/A
Prior treatment for same or similar injury	N/A	22.9%	N/A	N/A
Coexisting conditions that might delay recovery	N/A	7.7%	N/A	N/A
Rural residence county	36.4%	36.1%	38.5%	NS
Distressed residence county	18.4%	17.1%	25.7%	NS
Large employer (≥50 FTE)	43.4%	33.2%	100%	<.001
Determined eligible for a plan more than once	24.9%	28.0%	7.6%	<.001

*This characteristic is not directly comparable across State Fund claims and self-insured claims due to differences in reporting requirements (see Data Definitions section).

Exhibit A.2 Survey A responses

Survey Question	Full Sample	State Fund	Self-insured	p-value
A1. Age at survey (mean) {range: 21-67} [DK=2]	46.9	45.8	52.9	<.001
A2. Preferred or primary language				NS
English	93.0%	93.1%	92.5%	
Spanish	5.6%	5.7%	5.0%	
Other	1.4%	1.3%	2.5%	
A3. Born in U.S	89.3%	90.5%	82.5%	.03
A4. Race/ethnicity [R=1]				.005
White	82.0%	81.5%	85.0%	
Latino/Hispanic	8.4%	9.1%	5.0%	
Black/African American	1.8%	1.7%	2.5%	
Asian	2.4%	1.5%	7.5%	
American Indian/Alaska Native	4.7%	5.5%	0%	
Native Hawaiian/Pacific Islander	0.2%	0.3%	0%	
Other	0.4%	0.4%	0%	
A5. Education				NS
Grade 0-8	3.0%	3.1%	2.5%	
Grade 9-11	18.2%	19.2%	12.5%	
High school diploma or GED	41.7%	42.5%	37.5%	
College: 1-3 years	33.7%	32.6%	40.0%	
College: 4 years	3.2%	2.4%	7.5%	
Post-graduate education	0.2%	0.3%	0%	
A6. Formal apprenticeship before injury [DK=7]	28.8%	27.3%	37.5%	NS
A7. Union member when injured [DK=4]	27.2%	18.2%	76.9%	<.001
A8. Job satisfaction before injury [DK=3]				<.001
Very satisfied	64.6%	65.9%	57.5%	
Somewhat satisfied	23.3%	23.0%	25.0%	
Neither satisfied nor dissatisfied	3.7%	4.4%	0%	
Somewhat dissatisfied	4.8%	3.0%	15.0%	
Very dissatisfied	3.5%	3.7%	2.5%	
A9. Years worked for employer before injury (mean) {range: <1 month-39 years} [DK=6]	6.2	5.1	12.1	<.001

Survey Question	Full Sample	State Fund	Self-insured	p-value
A10. Industry (used surveys if claims data missing)				<.001
Agriculture, Forestry, Fishing, Hunting	3.8%	3.1%	7.5%	
Construction, Utilities	36.4%	40.2%	15.0%	
Manufacturing	12.5%	10.7%	22.6%	
Retail/Wholesale Trade	13.2%	11.6%	22.5%	
Transportation, Warehousing	4.8%	5.0%	4.8%	
Info, Finance, Real Estate, Prof, Tech	3.9%	4.1%	2.5%	
Services: Admin, Support, Waste, Other	11.0%	11.1%	10.0%	
Education, Health Care, Social Services	10.6%	9.9%	15.0%	
Arts, Entertainment, Hospitality	3.8%	4.5%	0%	
A11. Occupation (used surveys if claims data missing)				<.001
Business, Science, Arts, Entertainment	3.9%	4.7%	0%	
Health Care	5.9%	5.6%	7.5%	
Food Prep and Service	3.7%	3.5%	5.0%	
Bldg/Grounds, Maintenance, Protective	5.1%	4.2%	10.0%	
Personal Care and Service	3.6%	3.8%	2.5%	
Sales, Office, Admin Support	6.9%	5.0%	17.5%	
Farming, Fishing, Forestry	2.0%	2.4%	0%	
Construction, Extraction	34.7%	37.8%	17.5%	
Installation, Maintenance, Repair	8.3%	8.9%	5.0%	
Production	12.5%	11.2%	20.1%	
Transportation	13.3%	13.0%	15.0%	
A12. Years in occupation before injury (mean) {range: <1 month-48 years} [DK=6]	14.9	14.6	16.4	NS
A13. Hours/week worked before injury (mean, all jobs) {range: 7-90} [DK=9]	43.6	43.9	42.1	NS
Summary:				NS
0-39 hours per week	10.4%	10.0%	12.5%	
40 hours per week	55.9%	56.0%	55.0%	
41-54 hours per week	19.9%	19.9%	20.0%	
55-90 hours per week	13.9%	14.1%	12.5%	
A14a. Adjusted hourly wages before injury (mean $/hour, across all jobs, rough estimate) [DK=31]	$20.53	$20.14	$22.65	.02

Survey Question	Full Sample	State Fund	Self-insured	p-value
A14b. Adjusted monthly wages before injury (mean $/month, all jobs combined, rough estimate) [DK=31]	$3,775	$3,720	$4,081	NS
A15. How often do you worry that your total income will not be enough to meet your expenses and bills?				.03
Almost all the time	69.8%	72.2%	56.4%	
Often	12.5%	11.6%	17.9%	
Once in a while	9.2%	9.0%	10.3%	
Hardly ever	5.0%	4.6%	7.7%	
Never	3.5%	2.7%	7.7%	
A16. In the past 3 months, have you been contacted by a collection agency because of unpaid bills? Yes	40.7%	42.1%	32.5%	NS
A17. In the past 3 months, have you been at risk of losing your housing because of unpaid or underpaid rent or mortgage payments? Yes [N/A=5]	20.7%	22.1%	12.5%	NS
Economic risk: Summary of: A15, A16, A17				.007
Low (infrequent worry about bills, no collection agency contact, housing not at risk)	15.7%	13.6%	27.5%	
Moderate (often worries about bills OR collection agency contact OR housing at risk)	42.0%	43.3%	35.0%	
High (often worries about bills AND either collection agency contact OR housing at risk)	42.3%	43.1%	37.5%	
A18. Health status [DK=10]				NS
Excellent	1.1%	0.9%	2.5%	
Very good	5.8%	5.5%	7.5%	
Good	22.0%	21.4%	25.0%	
Fair	42.4%	42.9%	40.0%	
Poor	28.7%	29.3%	25.0%	
A19. Ability to function outside work [DK=14, R=1]				NS
Excellent	0.5%	0.6%	0%	
Very good	5.5%	5.6%	5.0%	
Good	17.5%	17.5%	17.5%	
Fair	43.4%	44.3%	32.5%	
Poor	33.1%	31.0%	45.1%	

Survey Question	Full Sample	State Fund	Self-insured	p-value
A20. How well would you say the Washington State workers' compensation system meets the needs of injured workers? [DK=16]				NS
Very effective	20.5%	20.1%	23.1%	
Somewhat effective	48.4%	48.2%	50.0%	
Somewhat ineffective	21.1%	20.5%	24.3%	
Very ineffective	9.9%	11.2%	2.6%	
Summary: Very or somewhat ineffective	31.8%	26.9%	31.0%	NS
A21. How would you rate your overall experience with the vocational rehabilitation system so far? [DK=21]				NS
Very satisfied	31.6%	33.4%	21.7%	
Somewhat satisfied	37.0%	37.1%	36.4%	
Neither satisfied nor dissatisfied	9.5%	8.5%	14.7%	
Somewhat dissatisfied	11.2%	11.2%	10.9%	
Very dissatisfied	10.7%	9.7%	16.3%	
Summary: Very or somewhat dissatisfied	21.9%	21.0%	27.2%	NS
A22. How much of an effect do you think your vocational plan will have on your ability to return to work? [DK=32, N/A=13]				<.001
Very positive effect	38.7%	41.4%	23.8%	
Somewhat positive effect	36.9%	38.7%	26.8%	
No effect	9.9%	7.1%	25.5%	
Somewhat negative effect	4.1%	4.4%	3.0%	
Very negative effect	10.4%	8.5%	20.9%	
Summary: Very or somewhat negative effect	14.6%	12.9%	23.8%	.03
A23. How certain are you that you will return to work within 6 months after completing your vocational plan? [DK=24, N/A=7]				.004
Very certain	24.8%	27.3%	11.2%	
Somewhat certain	30.1%	30.5%	28.0%	
Neither certain nor uncertain	11.2%	10.6%	15.0%	
Somewhat uncertain	13.8%	14.3%	11.2%	
Very uncertain	20.1%	17.4%	34.6%	
Summary: Very or somewhat uncertain	33.9%	31.7%	45.8%	.03

APPENDIX B

Survey B Report

The primary purpose of this survey was to provide information about use of acquired skills, employment outcomes, and satisfaction, and particularly to compare outcomes between workers who choose Option 1 versus Option 2.

Key Points:

- Of all 360 workers interviewed, 79% had never returned to work, 4% (N=15) had returned to work but had not worked in the past 4 weeks, and 17% (N=65) had worked in the past 4 weeks.
- 17% of Option 2 workers and 23% of Option 1 workers had returned to work after claim closure (difference not significant).
- Among those who had returned to work, 15% of Option 2 workers and 13% of Option 1 workers reported doing the same type of work as they did pre-injury (difference not significant).
- Among those who had returned to work, 76% of Option 2 workers and 67% of Option 1 workers reported earning less than before they were injured (difference not significant). Although there was no significant difference by option choice, it is striking that more than half of the workers who **had** worked within 4 weeks of the interview reported they were currently making "a lot less" than before the injury (51% for both options).
- Among those who had **not** returned to work, 54% of Option 2 workers and 43% of Option 1 workers reported that the reason was work-related health or disability issues (difference not significant). No available job was the second most frequent reason (given by 40% of Option 1 and 33% of Option 2 workers).
- There were self-reported differences in health/function:
    - 54% of Option 1 workers compared with only 37% of Option 2 workers reported good or better health at the time of plan development (p=.005).
    - 44% of Option 1 workers compared with only 28% of Option 2 workers reported good or better non-work functioning at the time of plan development (p=.01).
- Option 2 workers were significantly less likely than Option 1 workers to think that their claim manager had a positive effect on their ability to return to work.
- About a fifth of workers choosing either option would make a different option choice if given the chance to choose anew.

- About a quarter of workers choosing either option obtained legal advice regarding option choice, and more than 4/5^{ths} of those thought the advice was helpful. Of those NOT obtaining legal advice, more than 40% thought legal advice would have been helpful.
- It appears that the retraining plan often does not meet workers' perceived needs/abilities and that many workers don't feel they have enough input into the choice of training goal or that their needs aren't understood or respected. This theme emerged in several different ways.
    - The most frequent suggested improvement to the voc system was that there be more training choices, more worker input in the training goal, and/or a better fit of the training goal with the workers' experience and abilities. This theme was cited by 22% of Option 1 workers and 36% of Option 2 workers.
    - The second most frequent suggested improvement was that various players listen to, respect, and/or understand the worker (eg, their interests, goals, and limitations). This theme was cited by 14% of Option 1 workers and 28% of Option 2 workers.
    - The most frequent primary reason given for choosing Option 2 was being physically or emotionally incapable of Option 1 (27%). Pooling the top 3 reasons given, 57% of Option 2 workers stated that their retraining plan would have been a poor fit for them, either physically, emotionally, academically, logistically, or in terms of their own interests. 27% gave financial reasons for choosing Option 2. Only 21% gave reasons related to wanting more control or independence.
    - Of just those workers who reported they would choose a different option if given a chance to do things over, the training plan being inadequate or unsatisfactory was cited as a top 3 reason by 35% of those choosing either option. Being physically, emotionally, or academically incapable of the training plan was cited as a top 3 reason by 53% of Option 1 workers and and 24% of Option 2 workers (p=.03).

Note: All results presented in Exhibit B.1 have been adjusted to the population using post-stratification weights. Wages were adjusted to January of 2008.

Key to Abbreviations	
N	Denominator
DK	Don't know
R	Refused to answer
N/A	Not applicable

Exhibit B.1 Survey B responses

Survey Questions {unless otherwise noted: N=360; DK=0; R=0}	Full Sample	Option 1	Option 2	p-value
B1. Age at survey (mean) {range: 22-73} [DK=5; R=1]	49.7	49.6	50.0	NS
B2. Preferred or primary language				
English	94.4%	95.2%	92.1%	NS
Spanish	3.6%	2.7%	6.4%	
Other	1.9%	2.1%	1.4%	
B3. Born in U.S	91.2%	91.8%	89.2%	NS
B4. Race/ethnicity [R=1]				NS
White	82.2%	81.9%	83.1%	
Latino/Hispanic	6.1%	4.6%	10.8%	
Black/African American	2.5%	3.0%	0.7%	
Asian	2.7%	3.4%	0.4%	
American Indian/Alaska Native	4.2%	4.3%	3.9%	
Native Hawaiian/Pacific Islander	0.8%	0.8%	1.1%	
Other	1.4%	1.9%	0%	
B5. Education [DK=1]				.04
Grade 0-8	4.0%	3.7%	4.7%	
Grade 9-11	16.3%	15.1%	19.9%	
High school diploma or GED	37.2%	34.8%	44.5%	
College: 1-3 years	38.7%	42.8%	26.1%	
College: 4 years	3.5%	3.6%	3.3%	
Post-graduate education	0.4%	0%	1.5%	
B6. Formal apprenticeship before injury [DK=9]	27.5%	27.1%	28.7%	NS
B7. Union member when injured [DK=4]	26.2%	25.8%	27.4%	NS

Survey Questions {unless otherwise noted: N=360; DK=0; R=0}	Full Sample	Option 1	Option 2	p-value
B8. Job satisfaction before injury [DK=7]				NS
Very satisfied	59.1%	57.9%	63.0%	
Somewhat satisfied	25.1%	26.5%	20.9%	
Neither satisfied nor dissatisfied	5.6%	5.4%	6.2%	
Somewhat dissatisfied	6.6%	6.5%	7.0%	
Very dissatisfied	3.5%	3.7%	2.9%	
B9. Years worked for employer before injury (mean) {range: <1 month-41 years} [DK=7]	6.1	6.1	6.0	NS
B10. Industry at injury (used surveys if claims data missing)				NS
Agriculture, Forestry, Fishing, Hunting	4.0%	4.1%	3.6%	
Construction, Utilities	27.5%	27.2%	28.6%	
Manufacturing	9.7%	10.4%	7.6%	
Retail/Wholesale Trade	16.7%	18.8%	10.1%	
Transportation, Warehousing	5.3%	4.9%	6.5%	
Info, Finance, Real Estate, Prof, Tech	2.6%	2.0%	4.7%	
Services: Admin, Support, Waste, Other	15.0%	14.5%	16.8%	
Education, Health Care, Social Services	13.7%	13.0%	15.8%	
Arts, Entertainment, Hospitality	5.5%	5.2%	6.4%	
B11. Occupation at injury (used surveys if claims data missing)				NS
Business, Science, Arts, Entertainment	4.3%	3.1%	7.9%	
Health Care	6.8%	6.3%	8.3%	
Food Prep and Service	7.9%	8.4%	6.1%	
Bldg/Grounds, Maintenance, Protective	6.4%	6.9%	4.7%	
Personal Care and Service	2.4%	1.7%	4.7%	
Sales, Office, Admin Support	4.1%	3.8%	5.0%	
Farming, Fishing, Forestry	3.5%	4.6%	0%	
Construction, Extraction	26.8%	27.2%	25.8%	
Installation, Maintenance, Repair	6.6%	6.0%	8.6%	
Production	11.5%	11.7%	10.8%	
Transportation	19.7%	20.2%	18.3%	
B12. Years in occupation before injury (mean) {range: <1 month-50 years} [DK=5; R=1]	14.9	14.9	14.8	NS

Survey Questions {unless otherwise noted: N=360; DK=0; R=0}	Full Sample	Option 1	Option 2	p-value
B13. Hours/week worked before injury (mean, all jobs) {range: 4-160} [DK=25]	44.2	44.3	44.0	NS
Summary:				
0-39 hours per week	9.3%	8.5%	11.9%	
40 hours per week	56.3%	57.9%	51.2%	
41-54 hours per week	20.5%	20.2%	21.4%	
55-90 hours per week	13.9%	13.4%	15.5%	
B14a. Adjusted hourly wages before injury (mean $/hour, across all jobs, rough estimate) [DK=46; R=4]	$18.94	$18.68	$19.73	NS
B14b. Adjusted monthly wages before injury (mean $/month, all jobs combined, rough estimate) [DK=53; R=4]	$3,528	$3,526	$3,533	NS
B15. Health status at PD [DK=12]				.006
Excellent	13.0%	15.0%	6.6%	
Very good	11.3%	10.1%	15.0%	
Good	25.5%	28.8%	15.0%	
Fair	27.8%	24.8%	37.4%	
Poor	22.5%	21.3%	26.0%	
B16. Ability to function outside work at PD [DK=16]				.06
Excellent	10.0%	11.1%	6.7%	
Very good	8.5%	9.3%	5.9%	
Good	21.5%	23.4%	15.9%	
Fair	29.8%	29.9%	29.7%	
Poor	30.2%	26.4%	41.9%	
B17. Union member at interview [DK=3; R=1]	5.8%	5.7%	5.8%	NS
B18. Current health status [DK=7]				NS
Excellent	5.6%	6.3%	3.3%	
Very good	10.3%	11.3%	7.4%	
Good	26.4%	24.6%	32.2%	
Fair	30.9%	32.3%	26.3%	
Poor	26.8%	25.5%	30.7%	

Survey Questions {unless otherwise noted: N=360; DK=0; R=0}	Full Sample	Option 1	Option 2	p-value
B19. Current ability to function outside work [DK=14]				NS
Excellent	2.4%	2.8%	1.1%	
Very good	7.2%	7.6%	5.9%	
Good	26.1%	25.7%	27.4%	
Fair	35.1%	36.8%	29.6%	
Poor	29.2%	27.1%	35.9%	
B20. Primary reason for choosing Option 1 [N=245; DK=11]				N/A
Best way to get work/more $/new skills (a)	82.1%	N/A	N/A	
Liked plan/goal (a)	0.6%	N/A	N/A	
Advice: attorney (b)	0.2%	N/A	N/A	
Advice: health care provider (b)	2.3%	N/A	N/A	
Advice: CM or VRC (b)	5.1%	N/A	N/A	
Advice: friends/family (b)	1.2%	N/A	N/A	
Wanted support for retraining/RTW (c)	3.0%	N/A	N/A	
Wanted TL while in training (c)	0.3%	N/A	N/A	
Can't work and didn't want claim closure/TL to end (c)	1.2%	N/A	N/A	
Didn't understand/know about Opt2 (d)	1.8%	N/A	N/A	
Did not choose Opt1/pressured into it (d)	2.3%	N/A	N/A	
B20. Given among top 3 reasons for choosing Option 1				
a. Option 1 was best path forward/liked plan	87.2%	N/A	N/A	N/A
b. Chose Option 1 due to advice from others	11.4%	N/A	N/A	N/A
c. Wanted ongoing support/benefits	7.7%	N/A	N/A	N/A
d. Chose Option 1 under pressure/due to lack of information	6.7%	N/A	N/A	N/A

Survey Questions {unless otherwise noted: N=360; DK=0; R=0}	Full Sample	Option 1	Option 2	p-value
B21. Primary reason for choosing Option 2 [N=115; DK=4]				N/A
Didn't like my plan/goal (a)	N/A	N/A	7.1%	
Don't like/didn't want to go to school/training (a)	N/A	N/A	14.9%	
Too hard to attend school (commute, parking) (a)	N/A	N/A	1.1%	
Didn't understand Opt1 (a)	N/A	N/A	1.1%	
Not physically/emotionally capable of Opt1 (a and b)	N/A	N/A	27.1%	
Need/wanted money right away (c)	N/A	N/A	21.2%	
Opt2 worth more than Opt1 (c)	N/A	N/A	1.1%	
Wanted to control my own training/future (d)	N/A	N/A	9.7%	
Wanted to RTW (d)	N/A	N/A	1.1%	
Wanted out of govt/L&I/WC system (d)	N/A	N/A	4.5%	
Advice: health care provider (e)	N/A	N/A	1.5%	
Advice: CM or VRC (e)	N/A	N/A	3.7%	
Advice: friends/family (e)	N/A	N/A	0.4%	
Retirement or other income source	N/A	N/A	1.1%	
Moving	N/A	N/A	3.3%	
Legal issues	N/A	N/A	1.1%	
B21. Given among top 3 reasons for choosing Option 2				
a. Poor plan fit	N/A	N/A	57.3%	N/A
b. Physically/emotionally incapable of Option 1 (subset of a)	N/A	N/A	33.8%	N/A
c. Financial reasons	N/A	N/A	26.8%	N/A
d. Wanted more control/independence	N/A	N/A	21.2%	N/A
e. Chose Option 2 due to advice from others	N/A	N/A	8.9%	N/A
B22. Fully understood consequences of option choice				NS
Yes	69.8%	68.1%	75.3%	
No	24.1%	24.9%	21.5%	
Don't know	6.1%	7.0%	3.2%	
B23. Received legal advice on option choice [DK=5]	26.4%	25.8%	28.0%	NS
B24. Legal advice on option choice was helpful [N=95; DK=2]	84.5%	87.2%	76.9%	NS

Survey Questions {unless otherwise noted: N=360; DK=0; R=0}	Full Sample	Option 1	Option 2	p-value
B25. Legal advice on option choice would have been helpful [N=265]				NS
Yes	42.3%	40.3%	48.8%	
No	42.4%	44.5%	35.3%	
Don't know	15.3%	15.1%	15.9%	
B23/24/25. Received legal advice on option choice/helpful [DK=5]				NS
Received legal advice, helpful	22.1%	22.3%	21.5%	
Received legal advice, unsure if helpful	0.3%	0.3%	0.0%	
Received legal advice, unhelpful	4.0%	3.2%	6.5%	
Didn't receive legal advice, would have been helpful	31.5%	30.3%	35.1%	
Didn't receive legal advice, unsure if would have been helpful	10.5%	10.2%	11.5%	
Didn't receive legal advice, would not have been helpful	31.7%	33.7%	25.4%	
B26. Would you make the same option choice again?				NS
Yes	60.4%	59.7%	62.4%	
No	22.0%	22.4%	20.8%	
Don't know	17.6%	17.9%	16.8%	
B27. Primary reason would choose different option [N=68; DK=1]				N/A
Training inadequate/didn't help RTW (a)	N/A	14.4%	10.3%	
Didn't like the training/training site (a)	N/A	13.7%	N/A	
Wanted Opt1, but Opt1 plan inadequate/poor fit (a)	N/A	N/A	17.3%	
Not successful in training/too hard (b)	N/A	16.4%	N/A	
Not physically/emotionally capable of training (b)	N/A	30.5%	17.3%	
Needed more structure/support (c)	N/A	N/A	15.5%	
Ran out of $/needed more $ (c)	N/A	6.0%	5.2%	
Needed more medical care (c)	N/A	N/A	1.8%	
L&I didn't make Opt2 training payments in time (c)	N/A	N/A	1.8%	
Didn't understand options/not what I expected (d)	N/A	8.7%	10.3%	
Wanted more flexibility/freedom (d)	N/A	2.7%	5.2%	
Couldn't/can't physically RTW (e)	N/A	6.9%	10.3%	
Couldn't/can't find job (f)	N/A	0.8%	5.2%	
B27. Given among top 3 reasons for why would choose different option				

Survey Questions {unless otherwise noted: N=360; DK=0; R=0}	Full Sample	Option 1	Option 2	p-value
a. Training/plan inadequate/unsatisfactory	34.9%	35.0%	34.5%	NS
b. Physically/emotionally/academically incapable of training	46.2%	52.9%	24.2%	.03
c. Needed more structure/support/benefits	12.9%	9.4%	24.2%	NS
d. Didn't understand option choices/not what was expected	21.9%	21.7%	22.4%	NS
e. Can't physically RTW	16.9%	17.3%	15.5%	NS
f. Can't find work	4.4%	2.5%	10.3%	NS
B28. Primary reason did not complete retraining plan [N=70; DK=2]				N/A
Not successful in training/too hard	N/A	37.6%	N/A	
Couldn't physically continue training	N/A	25.5%	N/A	
Personal/emotional distress	N/A	10.9%	N/A	
RTW/returned to school/no longer needed training	N/A	4.4%	N/A	
Didn't like the training/site	N/A	2.1%	N/A	
Not what I expected	N/A	1.7%	N/A	
No help/communication from VRC	N/A	1.5%	N/A	
Child/adult care issues	N/A	1.2%	N/A	
Closure of school/program/training/class cancelled	N/A	5.2%	N/A	
Not accepted into college course	N/A	1.7%	N/A	
Never started training plan	N/A	1.7%	N/A	
Still in training	N/A	1.2%	N/A	
I did complete it (records indicate otherwise)	N/A	5.4%	N/A	
B29/30/31. Use of Option 2 retraining funds [N=115]				N/A
Already using funds	N/A	N/A	20.5%	
Within next 6 months	N/A	N/A	15.4%	
6 months to 1 year from now	N/A	N/A	14.3%	
1 to 2 years from now	N/A	N/A	10.0%	
More than 2 years from now	N/A	N/A	3.6%	
Unsure if/when will use funds	N/A	N/A	26.5%	
Does not plan to use funds	N/A	N/A	9.7%	
B32/36. Current work status				NS
Never RTW	78.8%	77.2%	83.5%	
RTW, no work past 4 wks	4.0%	4.3%	3.2%	
RTW, worked in past 4 wks	17.2%	18.5%	13.3%	

Survey Questions {unless otherwise noted: N=360; DK=0; R=0}	Full Sample	Option 1	Option 2	p-value
B32/36/37/38/39/40/41. Current FT/PT work status with reasons				NS
Never RTW	78.8%	77.2%	83.5%	
RTW, no work past 4 wks: no work available	2.8%	3.4%	1.1%	
RTW, no work past 4 wks: health/disability issues	1.2%	0.9%	2.1%	
Worked PT past 4 wks: health/disability issues (all WR)	1.4%	0.8%	3.2%	
Worked PT past 4 wks: no available FT work	3.7%	4.8%	0.4%	
Worked PT past 4 wks: inadequate training	0.6%	0.8%	0%	
Worked PT past 4 wks: no FT preference	0.7%	0.7%	0.7%	
Worked FT past 4 wks	10.8%	11.4%	8.9%	
B33. Primary reason hasn't RTW since claim closure [N=280; DK=3]				NS
No available job	38.2%	39.9%	33.4%	
Starting own business	0.4%	0.5%	0%	
Health issues/disability related to work injury	45.7%	42.9%	53.7%	
Health issues/disability not related to work injury	1.4%	1.0%	2.6%	
Inadequate voc training	7.6%	9.2%	3.0%	
Logistical barriers to working	1.2%	0.7%	2.6%	
Going to school or in training	2.1%	2.4%	1.3%	
Too busy due to volunteer work or family/home care	2.1%	2.2%	1.7%	
Don't need to work (other income)	1.4%	1.2%	1.8%	
B34. Months between claim closure and first RTW, if RTW [N=80; DK=1]				NS
RTW before claim closure or within first month	44.7%	48.6%	28.3%	
1 month	7.6%	9.5%	0%	
2 months	14.7%	12.0%	26.0%	
3 months	10.0%	10.3%	8.7%	
4 months	15.7%	15.3%	17.5%	
5 months	6.0%	4.3%	13.0%	
6 months	1.3%	0%	6.5%	

Survey Questions {unless otherwise noted: N=360; DK=0; R=0}	Full Sample	Option 1	Option 2	p-value
B35. Number of employers since claim closure, if RTW [N=80; DK=1]				NS
1 employer	90.8%	92.3%	84.8%	
2 employers	2.7%	1.7%	6.5%	
3 employers	3.1%	1.7%	8.7%	
20 employers	3.4%	4.2%	0%	
B43. Current wages compared with pre-injury wages				NS
Not currently working	82.8%	81.5%	86.7%	
A lot less than before the injury	8.7%	9.4%	6.8%	
Somewhat less than before the injury	3.0%	3.0%	3.2%	
About the same as before the injury	1.7%	1.9%	1.1%	
Somewhat more than before the injury	2.1%	2.4%	1.1%	
A lot more than before the injury	1.7%	1.9%	1.1%	
B43. Current wages compared with pre-injury wages, if working [N=65]				NS
A lot less than before the injury	50.8%	50.7%	51.5%	
Somewhat less than before the injury	17.7%	16.1%	24.3%	
About the same as before the injury	9.8%	10.2%	8.1%	
Somewhat more than before the injury	12.0%	12.9%	8.1%	
A lot more than before the injury	9.7%	10.1%	8.1%	
B44. The change in wages was due to the injury, if increased [N=14]	40.3 %	38.7%	50%	NS
B44. The change in wages was due to the injury, if decreased [N=45]	81.4%	76.6%	100%	NS
B45. Current or most recent job, if RTW [N=80; DK=5]				NS
Same employer/same job	4.8%	6.1%	0%	
Same employer/different job	7.1%	5.7%	13.0%	
New employer	77.0%	78.3%	71.8%	
Self-employed	11.0%	10.0%	15.2%	
B46. Doing the same type of work as pre-injury [N=80]	15.5%	13.1%	26.0%	NS
B47. Current occupation, if RTW (see Chapter 3)				
B48. Current industry, if RTW (see Chapter 3)				
B49/50/51. Use of acquired skills in RTW job (see Chapter 3)				

Survey Questions {unless otherwise noted: N=360; DK=0; R=0}	Full Sample	Option 1	Option 2	p-value
B52. Overall satisfaction with current employment status [DK=12; R=1]				NS
Very satisfied	10.7%	11.1%	9.4%	
Somewhat satisfied	10.5%	9.5%	13.3%	
Neither satisfied nor dissatisfied	9.5%	9.9%	8.3%	
Somewhat dissatisfied	12.1%	12.0%	12.5%	
Very dissatisfied	57.2%	57.4%	56.5%	
B53. Currently looking for work [DK=3]	54.5%	57.4%	46.2%	NS
B56. Receiving payments/cash benefits (not mutually exclusive) [DK=1]				
Another WC claim	0.2%	0.3%	0%	NS
Social Security	5.6%	5.3%	6.5%	NS
SSDI	15.9%	16.2%	14.8%	NS
Other short/long-term disability	1.5%	1.2%	2.5%	NS
Welfare (eg, GA, TANF, SSI)	7.9%	7.9%	7.9%	NS
Retirement/pension	7.9%	5.8%	14.4%	.007
Unemployment	23.5%	27.1%	12.2%	.003
None of these	48.2%	46.6%	53.3%	NS
B57. Used WorkSource services [DK=8]	33.1%	36.9%	21.6%	.008
B58. Satisfaction with WorkSource services [N=120; DK=4]				NS
Very satisfied	31.0%	28.9%	42.6%	
Somewhat satisfied	37.1%	39.5%	24.1%	
Neither satisfied nor dissatisfied	15.5%	15.3%	16.7%	
Somewhat dissatisfied	7.6%	7.0%	11.1%	
Very dissatisfied	8.8%	9.4%	5.6%	
B59. Effect of WorkSource services on RTW [N=120; DK=6]				NS
Very positive effect	9.8%	7.7%	21.3%	
Somewhat positive effect	28.5%	28.5%	28.5%	
No effect	53.3%	54.6%	46.4%	
Somewhat negative effect	6.7%	7.6%	1.9%	
Very negative effect	1.7%	1.6%	1.9%	

Survey Questions {unless otherwise noted: N=360; DK=0; R=0}	Full Sample	Option 1	Option 2	p-value
B60. Satisfaction with claim manager [R=1]				NS
Very satisfied	33.7%	35.1%	29.1%	
Somewhat satisfied	18.3%	16.5%	23.6%	
Neither satisfied nor dissatisfied	7.0%	7.0%	7.2%	
Somewhat dissatisfied	8.2%	7.5%	10.4%	
Very dissatisfied	24.6%	23.9%	26.9%	
Don't know	8.3%	10.0%	2.9%	
B61. Effect of claim manager on RTW				.006
Very positive effect	18.7%	20.7%	12.6%	
Somewhat positive effect	15.6%	17.1%	10.7%	
No effect	36.7%	35.9%	39.1%	
Somewhat negative effect	5.5%	3.7%	11.1%	
Very negative effect	13.7%	11.4%	20.8%	
Don't know	9.8%	11.1%	5.8%	
B62. Satisfaction with VRC				.NS
Very satisfied	43.8%	45.2%	39.4%	
Somewhat satisfied	20.6%	21.9%	16.5%	
Neither satisfied nor dissatisfied	4.2%	2.6%	8.9%	
Somewhat dissatisfied	9.1%	8.6%	10.4%	
Very dissatisfied	20.1%	19.1%	23.0%	
Don't know	2.3%	2.5%	1.8%	
B63. Effect of VRC on RTW				NS
Very positive effect	28.8%	31.8%	19.3%	
Somewhat positive effect	18.3%	16.6%	23.3%	
No effect	27.2%	26.9%	28.0%	
Somewhat negative effect	8.8%	8.7%	9.3%	
Very negative effect	13.1%	12.6%	14.4%	
Don't know	3.9%	3.4%	5.8%	

Survey Questions {unless otherwise noted: N=360; DK=0; R=0}	Full Sample	Option 1	Option 2	p-value
B64. Effect of retraining plan on RTW [R=2]				.03
Very positive effect	19.6%	21.9%	12.6%	
Somewhat positive effect	22.0%	22.0%	21.9%	
No effect	34.6%	35.0%	33.5%	
Somewhat negative effect	6.5%	7.5%	3.6%	
Very negative effect	12.4%	9.9%	20.4%	
Don't know	4.8%	3.8%	7.9%	
B65. Overall, voc services received were appropriate				NS
Yes	57.4%	60.3%	48.4%	
No	36.0%	33.1%	44.8%	
Don't know	6.6%	6.6%	6.8%	
B66. Overall satisfaction with voc rehab system				NS
Very satisfied	26.3%	27.3%	23.3%	
Somewhat satisfied	20.4%	21.5%	16.9%	
Neither satisfied nor dissatisfied	12.8%	12.3%	14.7%	
Somewhat dissatisfied	14.5%	13.4%	17.9%	
Very dissatisfied	23.8%	24.1%	23.0%	
Don't know	2.2%	1.5%	4.3%	
B67. Suggested improvements to voc rehab system				NS
None needed/worked fine for me	16.5%	15.2%	20.8%	
Whole system needs improvement/can't limit to one change	9.8%	9.7%	10.0%	
Suggested improvement [N=223]	63.2%	65.1%	57.4%	
Don't know/refused [DK=38, R=1]	10.5%	10.1%	11.9%	
B67. Suggested improvements by theme (not mutually exclusive)				N/A
More training choices/worker input into training goal/better fit of training goal with workers' experience/interests/abilities	24.8%	21.5%	36.3%	
Listen to/respect the worker, understand the worker's interests, goals, limitations	16.7%	13.7%	27.5%	
More RTW support (eg, job placement, keep claim open till RTW, training in job hunting & work re-entry skills)	9.2%	11.5%	1.3%	
Better/more communication/service from VRC (eg, initiate more contact, return calls, reduce caseloads, more helpful, better counseling)	7.5%	9.0%	1.9%	

Survey Questions {unless otherwise noted: N=360; DK=0; R=0}	Full Sample	Option 1	Option 2	p-value
Training/RTW expectations should comport with physical limitations (eg, follow prescribed work restrictions, allow more recovery time, don't push beyond capacity	6.3%	5.0%	11.2%	
More money/time for training	5.8%	7.3%	0.6%	
More flexibility (eg, bend rules when reasonable; allow: change in training goal, break in training for pregnancy or health problems, home-based training)	5.4%	6.4%	1.9%	
More continuity: assign just one CM/VRC for whole process	4.9%	5.2%	3.7%	
Better/more communication/service from CM (eg, initiate more contact, return calls, reduce caseloads, more helpful)	4.3%	5.0%	1.9%	
More direct interaction/support/direction from VRC in choosing training/sharing available goals	3.9%	3.7%	4.4%	
More efficiency in VR process/ fewer delays/less red tape	3.8%	2.6%	8.1%	
More diligent/better educated VRCs (re: LNI rules, training program content, courses required, demands of courses/training/goal job, tailoring training goal to worker	3.7%	3.2%	5.6%	
Better/more thorough explanations, make process easier to understand, provide simple booklet	3.7%	3.5%	4.4%	
Better/more realistic training (eg, better teachers, use current software/tools, include OJT/internships)	3.8%	4.3%	1.9%	
Ease college re-entry (eg, allow fewer courses at first, allow retaking of difficult/failed courses)	3.4%	3.8%	1.9%	
Improve education options (eg, allow continuation of education, degree completion, 4 year degrees)	3.2%	4.1%	0%	
More attention to special needs of older workers	2.3%	1.8%	4.4%	
Better health care/coverage (eg, quality providers, massage, motivational counseling, mental health)	2.3%	2.0%	3.1%	
Better/more explanation of option choices	1.9%	1.4%	3.7%	
Don't outsource the VRCs	1.3%	1.2%	1.9%	
Improve Opt2 (eg, higher buyout, equal payment for repeat injuries, more flexibility in use of funds)	1.3%	1.2%	1.9%	
Make timeline allowance for courses not being offered/space not being available every quarter/semester	1.5%	1.9%	0%	
Ability to change VRC when unsatisfactory	1.5%	1.7%	0.6%	
ESL training/support	1.1%	0.9%	1.9%	
LNI should pay education/training bills on time/faster	0.7%	0.9%	0%	
Focus on training for high demand jobs	0.7%	0.9%	0%	
Training goal should pay at least what pre-injury job paid	0.6%	0.6%	0.6%	

Survey Questions {unless otherwise noted: N=360; DK=0; R=0}	Full Sample	Option 1	Option 2	p-value
Monitor teaching/training to ensure quality	0.5%	0.6%	0%	
Better/more communication by CM/VRC with employer	0.1%	0%	0.6%	
Other [N=6]	2.2%	1.8%	3.7%	

APPENDIX C

Survey Questions

Survey A

A1. What is your current age?
1. Number of years (Specify): A1age:_____(integer)
98. DON'T KNOW
99. REFUSED

A2. What is your preferred or primary language?
1. English
2. Spanish
3. Other (Specify): A2oth: _____
98. DON'T KNOW
99. REFUSED

A3. Were you born in the United States?
1. Yes
2. No
98. DON'T KNOW
99. REFUSED

A4. Which one or more of the following would you use to describe yourself…[READ LIST] [CHECK ALL THAT APPLY]
1. White?
2. Latino/Hispanic/Mexican American?
3. Black or African American?
4. Asian?
5. American Indian or Alaska Native?
6. Native Hawaiian or other Pacific Islander?
7. Something else? (Please specify): A4oth:_____
98. DON'T KNOW
99. REFUSED

READ: When I refer to your injury during this survey, I'm thinking of the injury or occupational illness that led to your most recent referral for vocational rehabilitation services. Now please think back to when you were injured. The next few questions refer to that time.

A5. What is the highest grade or year of school you had completed before your injury? [READ LIST IF NEEDED]
1. Grade 0-8 or less (less than high school/grade 9)
2. Grades 9-11 (some high school)
3. Grade 12 or GED (high school graduate)
4. College 1-3 yrs (some college, technical school, AA degree)
5. College graduate (4 years of college, BA, BS)
6. Post-graduate work or degree (MA, Master's, MD, JD, PHD, etc)
98. DON'T KNOW
99. REFUSED

A6. Aside from your formal education, had you completed a formal apprenticeship program before your injury? [IF NEEDED: This refers to an apprenticeship program approved by the Apprenticeship Council. Apprenticeship is a combination of on-the-job training and related classroom instruction under the supervision of a journey-level craft person or trade professional in which workers learn the practical and theoretical aspects of a highly skilled occupation.] [NOTE: There are many apprenticeship programs, including: accounts payable clerk, cook, library technician, etc. For a list of approved programs, see http://www.lni.wa.gov/TradesLicensing/Apprenticeship/Programs/TradeDescrip/default.asp]
1. Yes
2. No
98. DON'T KNOW
99. REFUSED

A7. Were you a member of a union at the time of your injury?
1. Yes
2. No
98. DON'T KNOW
99. REFUSED

A8. Please think about the job where you were injured. Overall, how would you rate your job satisfaction before you were injured? Would you say you were
1. Very satisfied
2. Somewhat satisfied
3. Neither satisfied nor dissatisfied
4. Somewhat dissatisfied
5. Or very dissatisfied
98. DON'T KNOW
99. REFUSED

A9. How long had you worked for that particular employer before you were injured? [IF NEEDED: This question refers to the job where you were injured.]
A9D: ___ # days
A9W: ___ # weeks
A9M: ___ # months
A9Y: ___ # years
98. DON'T KNOW
99. REFUSED

A10. Thinking about the job where you were injured, what was the nature of the business or company? [PROMPT for enough detail to clarify exact occupation and assign a specific industry code.]
1. Nature of business/industry (Specify): A10ind: _____(list only one)
98. DON'T KNOW
99. REFUSED

A11. What kind of work did you do there? What was your occupation? [IF NEEDED: If you did several kinds of work for this employer, please name your primary occupation.] [PROMPT for enough detail to assign a specific occupation code.]
1. Occupation (Specify): A11occ: _____(list only one)
98. DON'T KNOW
99. REFUSED

A12. How long had you worked in that occupation at the time of your injury, with any employer?
A12D: ___ # days
A12W: ___ # weeks
A12M: ___ # months
A12Y: ___ # years
98. DON'T KNOW
99. REFUSED

A13. Now please think about the 4 weeks before you were injured. On average, about how many hours per week did you work for pay, at all your jobs combined? This includes paid vacation hours. [NOTE: If a range is given, prompt for average]
1. Hours per week (Specify): A13H:_____(integer)
98. DON'T KNOW
99. REFUSED

A14. Again thinking about the 4 weeks before you were injured, approximately how much were you earning from all of your jobs combined, before taxes and other deductions? Please include all tips, bonuses, overtime pay and commissions in your estimate. Please tell me both the dollar amount and the amount of time the dollar amount covers. [IF NEEDED: You can tell me an hourly, weekly, bimonthly, monthly, or yearly amount, whichever makes it easiest for you to give a dollar amount. If you get paid using different time scales for different jobs, you can tell me the amounts for each time scale separately.] [NOTE TO INTERVIEWER: All amounts entered will be added together on the proper scale, please DO NOT enter the same payments using two different time scales.]
A14H: ___ $ per hour
A14W: ___ $ per week
A14T: ___ $ per 2 weeks/every other week
A14B: ___ $ bimonthly/twice per month
A14M: ___ $ per month
A14Y: ___ $ per year
98. DON'T KNOW
99. REFUSED

A15. Now please think about your financial situation today. How often do you worry that your total income will not be enough to meet your expenses and bills? Would you say
1. Almost all the time
2. Often
3. Once in a while
4. Hardly ever
5. Or never?
98. DON'T KNOW
99. REFUSED

A16. In the past 3 months, have you been contacted by a collection agency because of unpaid bills?
1. Yes
2. No
98. DON'T KNOW
99. REFUSED

A17. In the past 3 months, have you been at risk of losing your housing because of unpaid or underpaid rent or mortgage payments?
1. Yes
2. No
3. NOT APPLICABLE (e.g., not responsible for own housing costs)
98. DON'T KNOW
99. REFUSED

A18. Now please think about how you're doing today. In general, would you say your health is excellent, very good, good, fair, or poor?
1. Excellent
2. Very good
3. Good
4. Fair
5. Poor
98. DON'T KNOW
99. REFUSED

A19. Would you say your current ability to function outside of work is excellent, very good, good, fair, or poor?
1. Excellent
2. Very good
3. Good
4. Fair
5. Poor
98. DON'T KNOW
99. REFUSED

A20. Thinking about the big picture, how well would you say the Washington State workers' compensation system meets the needs of injured workers? Would you say the workers' compensation system is
1. Very effective
2. Somewhat effective
3. Somewhat ineffective
4. Or very ineffective
98. DON'T KNOW
99. REFUSED

A21. How would you rate your overall experience with the vocational rehabilitation system so far? Would you say you were
1. Very satisfied
2. Somewhat satisfied
3. Neither satisfied nor dissatisfied
4. Somewhat dissatisfied
5. Or very dissatisfied
98. DON'T KNOW
99. REFUSED

A22. Now please think about the future and about the vocational plan being developed for you. How much of an effect do you think your vocational plan will have on your ability to return to work? Would you say your vocational plan is likely to have a
1. Very positive effect on your ability to return to work
2. A somewhat positive effect
3. No effect
4. A somewhat negative effect
5. Or a very negative effect on your ability to return to work?
96. N/A: VOCATIONAL PLAN WILL NOT BE DEVELOPED/COMPLETED
98. DON'T KNOW
99. REFUSED

A23. How certain are you that you will return to work within 6 months after completing your vocational plan? [NOTE: This refers to physical condition, job availability, etc.; any factors the worker thinks will affect their return to work.]
1. Very certain
2. Somewhat certain
3. Neither certain nor uncertain
4. Somewhat uncertain
5. Very uncertain
96. N/A: VOCATIONAL PLAN WILL NOT BE DEVELOPED/COMPLETED
98. DON'T KNOW
99. REFUSED

Survey B

B1. What is your current age?
1. Number of years (Specify): B1age:_____(integer)
98. DON'T KNOW
99. REFUSED

B2. What is your preferred or primary language?
1. English
2. Spanish
3. Other (Specify): B2oth: _____
98. DON'T KNOW
99. REFUSED

B3. Were you born in the United States?
1. Yes
2. No
98. DON'T KNOW
99. REFUSED

B4. Which one or more of the following would you use to describe yourself…[READ LIST] [CHECK ALL THAT APPLY]
1. White?
2. Latino/Hispanic/Mexican American?
3. Black or African American?
4. Asian?

5. American Indian or Alaska Native?
6. Native Hawaiian or other Pacific Islander?
7. Something else? (Please specify): B4oth:_____

98. DON'T KNOW
99. REFUSED

READ: When I refer to your injury during this survey, I'm thinking of the most recent injury or occupational illness that led to vocational rehabilitation services. Now please think back to when you were injured. The next few questions refer to that time.

B5. What is the highest grade or year of school you had completed before your injury? [READ LIST IF NEEDED]
1. Grade 0-8 or less (less than high school/grade 9)
2. Grades 9-11 (some high school)
3. Grade 12 or GED (high school graduate)
4. College 1-3 yrs (some college, technical school, AA degree)
5. College graduate (4 years of college, BA, BS)
6. Post-graduate work or degree (MA, Master's, MD, JD, PHD, etc)
98. DON'T KNOW
99. REFUSED

B6. Aside from your formal education, had you completed a formal apprenticeship program before your injury? [IF NEEDED: This refers to an apprenticeship program approved by the Apprenticeship Council. Apprenticeship is a combination of on-the-job training and related classroom instruction under the supervision of a journey-level craft person or trade professional in which workers learn the practical and theoretical aspects of a highly skilled occupation.] [NOTE: There are many apprenticeship programs, including: accounts payable clerk, cook, library technician, etc. For a list of approved programs, see http://www.lni.wa.gov/TradesLicensing/Apprenticeship/Programs/TradeDescrip/default.asp]
1. Yes
2. No
98. DON'T KNOW
99. REFUSED

B7. Were you a member of a union at the time of your injury?
1. Yes
2. No
98. DON'T KNOW
99. REFUSED

B8. Please think about the job where you were injured. Overall, how would you rate your job satisfaction before you were injured? Would you say you were
1. Very satisfied
2. Somewhat satisfied
3. Neither satisfied nor dissatisfied
4. Somewhat dissatisfied
5. Or very dissatisfied
98. DON'T KNOW
99. REFUSED

B9. How long had you worked for that particular employer before you were injured? [IF NEEDED: This question refers to the job where you were injured.]
B9D: ___ # days
B9W: ___ # weeks
B9M: ___ # months
B9Y: ___ # years
98. DON'T KNOW
99. REFUSED

B10. Thinking about the job where you were injured, what was the nature of the business or company? [PROMPT for enough detail to clarify exact occupation and assign a specific industry code.]
1. Nature of business/industry (Specify): B11ind: _____(list only one)
98. DON'T KNOW
99. REFUSED

B11. What kind of work did you do there? What was your occupation? [IF NEEDED: If you did several kinds of work for this employer, please name your primary occupation.] [PROMPT for enough detail to assign a specific occupation code.]
1. Occupation (Specify): B11occ: _____(list only one)
98. DON'T KNOW
99. REFUSED

B12. How long had you worked in that occupation at the time of your injury, with any employer?
B12D: ___ # days
B12W: ___ # weeks
B12M: ___ # months
B12Y: ___ # years
98. DON'T KNOW
99. REFUSED

B13. Now please think about the 4 weeks before you were injured. On average, about how many hours per week did you work for pay, at all your jobs combined? This includes paid vacation hours. [NOTE: If a range is given, prompt for average]
1. Hours per week (Specify): B13H:_____(integer)
98. DON'T KNOW
99. REFUSED

B14. Again thinking about the 4 weeks before you were injured, approximately how much were you earning from all of your jobs combined, before taxes and other deductions? Please include all tips, bonuses, overtime pay and commissions in your estimate. Please tell me both the dollar amount and the amount of time the dollar amount covers. [IF NEEDED: You can tell me an hourly, weekly, bimonthly, monthly, or yearly amount, whichever makes it easiest for you to give a dollar amount. If you get paid using different time scales for different jobs, you can tell me the amounts for each time scale separately.] [NOTE TO INTERVIEWER: All amounts entered will be added together on the proper scale, please DO NOT enter the same payments using two different time scales.]
B14H: ___ $ per hour
B14W: ___ $ per week
B14T: ___ $ per 2 weeks/every other week
B14B: ___ $ bimonthly/twice per month
B14M: ___ $ per month
B14Y: ___ $ per year

98. DON'T KNOW
99. REFUSED

READ: For the next two questions, please remember back to the time your most recent vocational plan was being developed.

B15. During the time your most recent vocational plan was being developed, in general, would you say your health was excellent, very good, good, fair, or poor?
1. Excellent
2. Very good
3. Good
4. Fair
5. Poor
98. DON'T KNOW
99. REFUSED

B16. During the time your most recent vocational plan was being developed, would you say your ability to function outside of work was excellent, very good, good, fair, or poor?
1. Excellent
2. Very good
3. Good
4. Fair
5. Poor
98. DON'T KNOW
99. REFUSED

B17. Are you currently a member of a union?
1. Yes
2. No
98. DON'T KNOW
99. REFUSED

B18. In general, would you say your health is excellent, very good, good, fair, or poor?
1. Excellent
2. Very good
3. Good
4. Fair
5. Poor
98. DON'T KNOW
99. REFUSED

B19. Would you say your current ability to function outside of work is excellent, very good, good, fair, or poor?
1. Excellent
2. Very good
3. Good
4. Fair
5. Poor
98. DON'T KNOW
99. REFUSED

READ: After your most recent vocational plan was approved, you were given the opportunity to choose Option 1 or Option 2. Option 1 was the choice to move forward with the approved vocational plan. Option 2 was the choice to close the claim and end medical benefits, while accepting a vocational award equal to 6 months of time-loss compensation and access to retraining dollars.

B20. [Only ask if Option 1 from IMPORT, otherwise SKIP to B21] Our records indicate that you chose Option 1, which was to proceed with your approved vocational plan. What was the primary reason you chose Option 1? [NOTE: If they state they did not choose Option 1, re-read the "READ TO ALL" paragraph, and clarify to the extent possible. IF NEEDED, ask "Did you ever start your approved vocational plan?" If so, they chose Option 1. L&I believes the Option 1/2 data to be highly accurate, although the worker may have defaulted to Option 1 without realizing it.] [DO NOT READ; record only one reason; PROBE for at least one reason.]

1. That wasn't the option I selected [NOTE: Try to avoid this answer, see extra prompts above]
2. Best way for me to get a job/make more money/get new skills
3. I liked my plan/goal
4. Advice from attorney
5. Advice from doctor/health care provider
6. Advice from claim manager or vocational rehabilitation counselor (VRC)
7. Advice from friends/family
8. Didn't really understand Option 2/the other option
9. Wanted help/support for vocational training and/or getting back to work/Option 2 doesn't offer support
10. Wanted to get time-loss payments while in training
11. Can't work and didn't want my claim to close/Wanted to keep my benefits as long as possible
12. Wanted to keep Option 2 as an option later on/Can only choose Option 2 once
13. I've already chosen Option 2 and didn't have a choice
14. Missed the deadline for Option selection form/Defaulted to Option 1/Didn't choose an Option
15. Other (Specify): B20oth:_____

98. DON'T KNOW
99. REFUSED

B20a. Was there another reason? [unless B20=1 or B20=98 or B20=99, then SKIP to B22] [DO NOT READ; record only one reason.]

1. No other reason
2. Best way for me to get a job/make more money/get new skills
3. I liked my plan/goal
4. Advice from attorney
5. Advice from doctor/health care provider
6. Advice from claim manager or vocational rehabilitation counselor (VRC)
7. Advice from friends/family
8. Didn't really understand Option 2/the other option
9. Wanted help/support for vocational training and/or getting back to work/Option 2 doesn't offer support
10. Wanted to get time-loss payments while in training
11. Can't work and didn't want my claim to close/Wanted to keep my benefits as long as possible
12. Wanted to keep Option 2 as an option later on/Can only choose Option 2 once
13. I've already chosen Option 2 and didn't have a choice
14. Missed the deadline for Option selection form/Defaulted to Option 1/Didn't choose an Option
15. Other (Specify): B20otha:_____

98. DON'T KNOW
99. REFUSED

B20b. Any other reason? [unless B20a=1 or B20a=98 or B20a=99, then SKIP to B22] [DO NOT READ; record only one reason.] [REGARDLESS OF RESPONSE, SKIP to B22]

1. No other reason
2. Best way for me to get a job/make more money/get new skills
3. I liked my plan/goal
4. Advice from attorney
5. Advice from doctor/health care provider
6. Advice from claim manager or vocational rehabilitation counselor (VRC)
7. Advice from friends/family
8. Didn't really understand Option 2/the other option
9. Wanted help/support for vocational training and/or getting back to work/Option 2 doesn't offer support
10. Wanted to get time-loss payments while in training
11. Can't work and didn't want my claim to close/Wanted to keep my benefits as long as possible
12. Wanted to keep Option 2 as an option later on/Can only choose Option 2 once
13. I've already chosen Option 2 and didn't have a choice
14. Missed the deadline for Option selection form/Defaulted to Option 1/Didn't choose an Option
15. Other (Specify): B20othb:_____

98. DON'T KNOW
99. REFUSED

B21. [Only ask if Option 2 from IMPORT, otherwise SKIP to B22] Our records indicate that you chose Option 2, which was to accept a vocational award and access to retraining dollars rather than proceed with your approved vocational plan. What was the primary reason you chose Option 2? [NOTE: If they state they did not choose Option 2, re-read the "READ TO ALL" paragraph, and clarify to the extent possible. IF NEEDED, ask "Instead of starting your approved vocational plan right away, did you choose to accept a vocational award and access to future retraining dollars?" If so, they chose Option 2. L&I believes the Option 1/2 data to be highly accurate.] [DO NOT READ; record only one reason; PROBE for at least one reason.]

1. That wasn't the option I selected [NOTE: Try to avoid this answer, see extra prompts above]
2. Wanted lump sum settlement/Needed to pay bills/Needed money right away
3. Option 2 worth more money than the training plan
4. Wanted to go back to work
5. Wanted to control my own training/future
6. Didn't like my plan/goal
7. Not physically/emotionally capable of doing my plan/training
8. Don't like school/Didn't want to go to school or get training
9. Don't like the government/Want to be away from L&I/Want to be out of workers' comp system
10. Advice from attorney
11. Advice from doctor/health care provider
12. Advice from claim manager or vocational rehabilitation counselor (VRC)
13. Advice from friends/family
14. Didn't really understand Option 1/the other option
15. Retirement or other income source
16. Other priorities (e.g., sick relative, travel, moving)
17. Legal issues
18. Other (Specify): B21oth:_____

98. DON'T KNOW
99. REFUSED

B21a. Was there another reason? [unless B21=1 or B21=98 or B21=99, then SKIP to B22] [DO NOT READ; record only one reason.]

1. No other reason
2. Wanted lump sum settlement/Needed to pay bills/Needed money right away
3. Option 2 worth more money than the training plan
4. Wanted to go back to work
5. Wanted to control my own training/future
6. Didn't like my plan/goal
7. Not physically/emotionally capable of doing my plan/training
8. Don't like school/Didn't want to go to school or get training
9. Don't like the government/Want to be away from L&I/Want to be out of workers' comp system
10. Advice from attorney
11. Advice from doctor/health care provider
12. Advice from claim manager or vocational rehabilitation counselor (VRC)
13. Advice from friends/family
14. Didn't really understand Option 1/the other option
15. Retirement or other income source
16. Other priorities (e.g., sick relative, travel, moving)
17. Legal issues
18. Other (Specify): B21otha:_____
98. DON'T KNOW
99. REFUSED

B21b. Any other reason? [unless B21a=1 or B21a=98 or B21a=99, then SKIP to B22] [DO NOT READ; record only one reason.]

1. No other reason
2. Wanted lump sum settlement/Needed to pay bills/Needed money right away
3. Option 2 worth more money than the training plan
4. Wanted to go back to work
5. Wanted to control my own training/future
6. Didn't like my plan/goal
7. Not physically/emotionally capable of doing my plan/training
8. Don't like school/Didn't want to go to school or get training
9. Don't like the government/Want to be away from L&I/Want to be out of workers' comp system
10. Advice from attorney
11. Advice from doctor/health care provider
12. Advice from claim manager or vocational rehabilitation counselor (VRC)
13. Advice from friends/family
14. Didn't really understand Option 1/the other option
15. Retirement or other income source
16. Other priorities (e.g., sick relative, travel, moving)
17. Legal issues
18. Other (Specify): B21othb:_____
98. DON'T KNOW
99. REFUSED

B22. Do you think you fully understood the consequences of choosing Option 1 versus Option 2?

1. Yes
2. No
98. DON'T KNOW
99. REFUSED

B23. Did you receive legal advice on this choice?
1. Yes
2. No [SKIP to B25]
98. DON'T KNOW [SKIP to B25]
99. REFUSED [SKIP to B25]

B24. Was receiving legal advice helpful? [REGARDLESS OF RESPONSE, SKIP to B26]
1. Yes [SKIP to B26]
2. No [SKIP to B26]
98. DON'T KNOW [SKIP to B26]
99. REFUSED [SKIP to B26]

B25. Looking back, do you think legal advice would have been helpful?
1. Yes
2. No
98. DON'T KNOW
99. REFUSED

B26. If you had the opportunity to make the choice between Option 1 and Option 2 again, do you think you would make the same choice?
1. Yes [SKIP to B28]
2. No
98. DON'T KNOW [SKIP to B28]
99. REFUSED [SKIP to B28]

B27. What is the primary reason you would have chosen differently? [DO NOT READ; record only one reason; PROBE for at least one reason; lean toward free text if hard to categorize.]
1. Training didn't prepare me for work/Didn't help me/Inadequate training
2. Didn't like the training/training site
3. Not successful in the training/Classes were too hard/Flunked out
4. Not physically/emotionally capable of doing my plan/training
5. Couldn't/can't find a job
6. Couldn't/can't physically go back to work
7. Wished I had more flexibility/freedom
8. Didn't understand what I was getting into/Not what I expected
9. Needed more structure/support
10. Ran out of money/Could have used the money/Needed more money
11. Wish I had saved my Option 2/Can only choose Option 2 once
12. Other (Specify): B27oth:_____
98. DON'T KNOW
99. REFUSED

B27a. Was there another reason? [unless B27=98 or B27=99, then SKIP to B28] [DO NOT READ; record only one reason.]
1. No other reason
2. Training didn't prepare me for work/Didn't help me/Inadequate training
3. Didn't like the training/training site
4. Not successful in the training/Classes were too hard/Flunked out
5. Not physically/emotionally capable of doing my plan/training
6. Couldn't/can't find a job

7. Couldn't/can't physically go back to work
8. Wished I had more flexibility/freedom
9. Didn't understand what I was getting into/Not what I expected
10. Needed more structure/support
11. Ran out of money/Could have used the money/Needed more money
12. Wish I had saved my Option 2/Can only choose Option 2 once
13. Other (Specify): B27otha:_____
98. DON'T KNOW
99. REFUSED

B27b. Any other reason? [unless B27a=1 or B27a=98 or B27a=99, then SKIP to B28] [DO NOT READ; record only one reason.]

1. No other reason
2. Training didn't prepare me for work/Didn't help me/Inadequate training
3. Didn't like the training/training site
4. Not successful in the training/Classes were too hard/Flunked out
5. Not physically/emotionally capable of doing my plan/training
6. Couldn't/can't find a job
7. Couldn't/can't physically go back to work
8. Wished I had more flexibility/freedom
9. Didn't understand what I was getting into/Not what I expected
10. Needed more structure/support
11. Ran out of money/Could have used the money/Needed more money
12. Wish I had saved my Option 2/Can only choose Option 2 once
13. Other (Specify): B27othb:_____
98. DON'T KNOW
99. REFUSED

B28. [Only ask if Option 1 from IMPORT and VR plan not completed from IMPORT, otherwise SKIP to B29.] Our records indicate that you did not complete your most recent vocational plan. What was the primary reason you didn't complete it? [DO NOT READ; record only one reason; lean toward free text if hard to categorize.] [IF NEEDED: This refers to the last vocational plan approved before your claim closed.] [REGARDLESS OF RESPONSE, SKIP to B32]

1. I did complete it
2. Got a job/Went to school/No longer needed training
3. Couldn't physically continue participating
4. Personal/emotional distress
5. Child/adult care issues
6. Transportation issues (no car, car broke down, department didn't pay travel in a timely manner)
7. Too far from home/family
8. I moved
9. I didn't understand what I was getting into
10. Didn't like the training/training site
11. Not successful in the training/Classes were too hard/Flunked out
12. Expelled by the school
13. Closure of school, program, training employer's business, or key class cancelled
14. Other (Specify): B28oth:_____
98. DON'T KNOW
99. REFUSED

B29. [Only ask if Option 2 from IMPORT, otherwise SKIP to B32.] Have you started using the vocational training funds available to you under Option 2?
1. Yes [SKIP to B32]
2. No
98. DON'T KNOW
99. REFUSED

B30. [Only ask if Option 2 from IMPORT] Do you plan to use the vocational training funds available to you under Option 2 at some point in the future?
1. Yes
2. No [SKIP to B32]
98. DON'T KNOW [SKIP to B32]
99. REFUSED [SKIP to B32]

B31. [Only ask if Option 2 from IMPORT] Approximately when do you think you will start using your vocational training funds? Would you say you will start using them
1. Within the next 6 months
2. More than 6 months but less than a year from now
3. One to two years from now
4. More than two years from now
98. DON'T KNOW
99. REFUSED

B32. For these next questions, please think back to [IMPORT clmclosemonth] of [IMPORT clmcloseyear/this year] when your claim closed. Since your claim closed, have you worked at all for pay? This includes self-employment. [IF NEEDED: This includes paid vacation.]
1. Yes [SKIP to B34]
2. No
98. DON'T KNOW [SKIP to B34]
99. REFUSED [SKIP to B34]

B33. What is the primary reason you have not worked for pay since your claim closed? Was it mainly due to work being unavailable, health or disability issues, inadequate vocational training, logistical barriers to working, being too busy, not needing to work, or not wanting to work? [DO NOT READ; record only one reason; PROBE for primary reason; if bolded major category does not have a code, continue to clarify after major category is selected until one of the coded subcategories can be selected.] [Regardless of answer, SKIP to B51 if Option 1 from IMPORT or B52 if Option 2 from IMPORT]

Work being unavailable
1. [Don't use this code]
2. Unable to find work because jobs weren't available
3. Starting your own business or waiting for a job to start

Health or disability issues
4. Had health issues or disability related to a work injury
5. Had health issues or disability NOT related to a work injury
6. Inadequate vocational training
7. Logistical barriers to working (e.g., no transportation, legal problems, language problems, bad weather, no available/affordable child care)

Being too busy
8. Going to school or receiving training
9. Too busy due to volunteer work or taking care of your home or family

10. Not needing to work (e.g., retired or had enough income from government assistance or other sources)
11. Not wanting to work
97. OTHER (only if necessary, try to avoid) (Specify): B33oth:_____
98. DON'T KNOW
99. REFUSED

B34. I would like you to think back to the very first job you had after your claim closed in [IMPORT clmclosemonth] of [IMPORT clmcloseyear/this year]. What month, day and year did you start that first job? What is your best estimate? [IF NEEDED: The date can be approximate, or a rough guess.] [NOTE: if can't give even a rough date, enter month and year.]
1. I started working before my claim closed
2. Calendar date (Specify): B34D: _____(calendar date)
98. DON'T KNOW
99. REFUSED

B35. Since your claim closed in [IMPORT clmclosemonth] of [IMPORT clmcloseyear/this year], how many different employers have you worked for? [IF NEEDED: this refers to different employers, not different jobs or different locations. Count self-employment as one employer. This refers to working for pay, not volunteer work.]
1. One
2. Two
3. Three
4. Four
5. Five
6. More than 5 (Specify): B35N:_____(integer)
7. None [PROBE to make sure; GO BACK to B32]
98. DON'T KNOW
99. REFUSED

B36. Now I would like you to think back to the past 4 weeks. In the past 4 weeks, have you worked for pay? This includes paid vacation and self-employment.
1. Yes [SKIP to B38]
2. No
98. DON'T KNOW [SKIP to B38]
99. REFUSED [SKIP to B38]

B37. What is the primary reason you haven't worked for pay in the past 4 weeks? Was it mainly due to work being unavailable, health or disability issues, inadequate vocational training, logistical barriers to working, being too busy, not needing to work, or not wanting to work? [DO NOT READ; record only one reason; PROBE for primary reason; if bolded major category does not have a code, continue to clarify after major category is selected until one of the coded subcategories can be selected.] [Regardless of answer, SKIP to B45]

Work being unavailable
1. Were laid off, on work furlough, or it was slow at work
2. Unable to find work because jobs weren't available
3. Starting your own business or waiting for a job to start

Health or disability issues
4. Had health issues or disability related to a work injury
5. Had health issues or disability NOT related to a work injury
6. Inadequate vocational training

7. Logistical barriers to working (e.g., no transportation, legal problems, language problems, bad weather, no available/affordable child care)
   Being too busy
8. Going to school or receiving training
9. Too busy due to volunteer work or taking care of your home or family
10. Not needing to work (e.g., retired or had enough income from government assistance or other sources)
11. Not wanting to work
97. OTHER (only if necessary, try to avoid) (Specify): B37oth:_____
98. DON'T KNOW
99. REFUSED

B38. Once again thinking about the past 4 weeks, on average, about how many hours per week did you work for pay, at all your jobs combined? This includes paid vacation and self-employment. [IF NEEDED: Would you say you worked less than 35 hours a week on average, or more than that?] [NOTE: if a range is given, prompt for average; rough estimate is better than no estimate]
1. Hours per week (Specify): B38H: _____(integer)
2. PART-TIME or <35 HOURS/WEEK (only if can't get actual estimate)
3. FULL-TIME or ≥ 35 HOURS/WEEK (only if can't get actual estimate)
98. DON'T KNOW
99. REFUSED

B39. [Ask if B38H<35, or B38=2, or B38=98, or B38=99] In the past 4 weeks, did you want to work full-time, that is at least 35 hours per week?
1. Yes
2. No [SKIP to B41]
3. REGULAR HOURS ARE FULL-TIME [SKIP to B42]
98. DON'T KNOW [SKIP to B42]
99. REFUSED [SKIP to B42]

B40. What was your primary reason for working less than full-time in the past 4 weeks? Was it mainly due to full-time work being unavailable, health or disability issues, inadequate vocational training, logistical barriers to working full-time, or being too busy to work full-time? [DO NOT READ; record only one reason; PROBE for primary reason; if bolded major category does not have a code, continue to clarify after major category is selected until one of the coded subcategories can be selected.]
   Full-time work being unavailable
1. Were laid off, on work furlough, or it was slow at work
2. Only able to find or already had a job that was part-time, temporary, seasonal, or flex-time
3. Starting your own business or waiting for a job to start
   Health or disability issues
4. Had health issues or disability related to a work injury
5. Had health issues or disability NOT related to a work injury
6. Inadequate vocational training
7. Logistical barriers to working full-time (e.g., no transportation, bad weather, no available/affordable child care)
   Being too busy
8. Going to school or receiving training
9. Too busy due to volunteer work or taking care of your home or family
10. WERE WORKING FULL-TIME/CONSIDER HOURS WORKED FULL-TIME
97. OTHER (only if necessary, try to avoid) (Specify): B40oth:_____
98. DON'T KNOW

99. REFUSED

B41. What was the primary reason you did not want to work full-time in the past 4 weeks? Was it mainly due to work-related issues, health or disability issues, inadequate vocational training, logistical barriers to working full-time, being too busy, or not needing to work full-time? [DO NOT READ; record only one reason; PROBE for primary reason; if bolded major category does not have a code, continue to clarify after major category is selected until one of the coded subcategories can be selected.]

Work related issues

1. Want flexibility/prefer part-time work/less stress
2. Want to keep current part-time job
3. Starting your own business or waiting for a job to start

Health or disability issues

4. Had health issues or disability related to a work injury
5. Had health issues or disability NOT related to a work injury
6. Inadequate vocational training
7. Logistical barriers to working full-time (e.g., no transportation, bad weather, no available/affordable child care)

Being too busy

8. Going to school or receiving training
9. Too busy due to volunteer work or taking care of your home or family
10. Not needing to work full-time (e.g., retired or had enough income from government assistance or other sources)

97. OTHER (only if necessary, try to avoid) (Specify): B41oth:_____
98. DON'T KNOW
99. REFUSED

B42. For this question, I would again like you to think about the past 4 weeks. During the past 4 weeks, how much were you earning from all of your jobs combined, before taxes and other deductions? Please include all tips, bonuses, overtime pay and commissions in your estimate. Please tell me both the dollar amount and the amount of time the dollar amount covers. [IF NEEDED: You can tell me an hourly, weekly, bimonthly, monthly, or yearly amount, whichever makes it easiest for you to give a dollar amount. If you get paid using different time scales for different jobs, you can tell me the amounts for each time scale separately.] [NOTE TO INTERVIEWER: All amounts entered will be added together on the proper scale, please DO NOT enter the same payments using two different time scales.]

B42H: ___ $ per hour
B42W: ___ $ per week
B42T: ___ $ per 2 weeks/every other week
B42B: ___ $ bimonthly/twice per month
B42M: ___ $ per month
B42Y: ___ $ per year

1. DIDN'T WORK/EARN AT ALL IN THE LAST 4 WEEKS
98. DON'T KNOW
99. REFUSED

B43. Would you say your current earnings are

1. A lot more than before the injury
2. Somewhat more than before the injury
3. About the same as before the injury
4. Somewhat less

5. Or a lot less than before the injury
98. DON'T KNOW
99. REFUSED

B44. Is this change in earnings because of the injury?
1. Yes
2. No
98. DON'T KNOW
99. REFUSED

B45. Now, please think back to the job where you were injured and also about your current or most recent primary job. I'm going to read some statements and I would like you to tell me which one describes your current situation. [IF NEEDED: Your primary job is whichever job you think of as your main job, which could be because it accounts for most of your income, or most of your work hours, or is your preferred occupation.] [READ ALL RESPONSES]
1. You are working for the same employer and doing the same job that you were doing when you were injured. [RTW1]
2. You are working for the same employer as when you were injured but you are doing a different job. [RTW2/RTW3]
3. You have a job with a new employer [RTW4]
4. Or you are self-employed
5. OTHER (Specify): B45oth:_____
98. DON'T KNOW
99. REFUSED

B46. [Ask only if A11=1 or B11=1, otherwise SKIP TO B47] Earlier, you said that at the time of your injury your occupation was [FILL IN A11occ or B11occ]. Are you doing the same type of work now that you were doing then? [IF NEEDED: This refers to any of your current jobs or your most recent primary job if not currently working.] [*NOTE TO PROGRAMMER: B11 may have been asked during current survey; if not, A11 may be available in import; if not, skip to B47]
1. Yes [SKIP to B48]
2. No
98. DON'T KNOW
99. REFUSED

B47. What kind of work are you doing now (or most recently if not currently working)? What is your occupation? [IF NEEDED: Please name only one occupation, the primary occupation you have, or most recently had.] [PROMPT for enough detail to assign a specific occupation code.]
1. Occupation (Specify): B47occ: _____(list only one)
98. DON'T KNOW
99. REFUSED

B48. For your current or most recent primary job, what is the nature of the business or company? [IF NEEDED: If you have more than one employer, please describe the nature of the business for your primary employer.] [PROMPT for enough detail to clarify exact occupation and assign a specific industry code.]
1. Nature of business/industry (Specify): B48ind: _____(list only one)
98. DON'T KNOW
99. REFUSED

B49. [Ask only if Option 1 from IMPORT; Otherwise SKIP to B52] Please think about all of the jobs you have had since your claim was closed. Have you used the skills or knowledge acquired during your vocational training or education in your work?

1. Yes [SKIP to B52]
2. No
3. DID NOT RECEIVE VOCATIONAL TRAINING OR EDUCATION [SKIP to B52]
98. DON'T KNOW [SKIP to B51]
99. REFUSED [SKIP to B51]

B50. What is the primary reason you have not used the skills or knowledge from your vocational training or education? [DO NOT READ; record only one reason; PROBE for at least one reason.]

1. Did not receive vocational training or education
2. Did not complete vocational training or education
3. Returned to pre-injury job
4. Medical status/health condition improved
5. Medical status/health condition worsened
6. No jobs available in occupation I was trained for/Bad economy
7. Needed a job right away/Couldn't wait for better job
8. Don't like the work I was trained for/Like the work I'm doing better
9. Can't do the work I was trained for
10. The work I was trained for doesn't pay enough/The work I'm doing pays better
11. Vocational training/education/plan was inadequate
12. Didn't get enough help to find a job
13. Other (Specify): B50oth:_____
98. DON'T KNOW
99. REFUSED

B50a. Was there another reason? [unless B50=1 or B50=98 or B50=99, then SKIP to B51] [DO NOT READ; record only one reason.]

1. No other reason
2. Did not complete vocational training or education
3. Returned to pre-injury job
4. Medical status/health condition improved
5. Medical status/health condition worsened
6. No jobs available in occupation I was trained for/Bad economy
7. Needed a job right away/Couldn't wait for better job
8. Don't like the work I was trained for/Like the work I'm doing better
9. Can't do the work I was trained for
10. The work I was trained for doesn't pay enough/The work I'm doing pays better
11. Vocational training was inadequate
12. Didn't get enough help to find a job
13. Other (Specify): B50otha:_____
98. DON'T KNOW
99. REFUSED

B50b. Any other reason? [unless B50a=1 or B50a=98 or B50a=99, then SKIP to B51] [DO NOT READ; record only one reason.]

1. No other reason
2. Did not complete vocational training or education
3. Returned to pre-injury job
4. Medical status/health condition improved

5. Medical status/health condition worsened
6. No jobs available in occupation I was trained for/Bad economy
7. Needed a job right away/Couldn't wait for better job
8. Don't like the work I was trained for/Like the work I'm doing better
9. Can't do the work I was trained for
10. The work I was trained for doesn't pay enough/The work I'm doing pays better
11. Vocational training was inadequate
12. Didn't get enough help to find a job
13. Other (Specify): B50othb:_____
98. DON'T KNOW
99. REFUSED

B51. Although you have not used the skills or knowledge acquired during your vocational training or education in your work, was your vocational training helpful or useful in other ways?
1. Yes
2. No
3. DID NOT RECEIVE VOCATIONAL TRAINING OR EDUCATION
98. DON'T KNOW
99. REFUSED

B52. Please think about your current employment status, including whether you are working at all or working enough hours, as well as the type of work you may be doing. How satisfied are you with your current employment status? Would you say you are
1. Very satisfied
2. Somewhat satisfied
3. Neither satisfied nor dissatisfied
4. Somewhat dissatisfied
5. Or very dissatisfied
98. DON'T KNOW
99. REFUSED

B53. Are you currently looking for work?
1. Yes
2. No [SKIP to B56]
98. DON'T KNOW [SKIP to B56]
99. REFUSED [SKIP to B56]

B54. What kind of work? In what occupation? [IF NEEDED: Please tell me only one occupation, the one you are mainly looking for, or your first choice.] [PROMPT for enough detail to assign a specific occupation code.]
1. Occupation (Specify): B54occ: _____(list only one)
98. DON'T KNOW
99. REFUSED

B55. In what type of business? [IF NEEDED: Please describe only one type of business, the one you are mainly looking for, or your first choice.] [PROMPT for enough detail to clarify exact occupation and assign a specific industry code.]
1. Nature of business/industry (Specify): B55ind: _____(list only one)
98. DON'T KNOW
99. REFUSED

B56. Are you receiving any payments or cash benefits from [READ AND MARK ALL THAT APPLY]
1. Another workers' compensation claim
2. Social Security retirement benefits
3. Social Security Disability Insurance (SSDI)
4. Other short or long term disability insurance
5. Welfare program (such as GA, TANF, SSI)
6. Private retirement/pension benefits
7. Unemployment insurance
98. DON'T KNOW
99. REFUSED

READ: Next we will be asking your opinions about the vocational rehabilitation services you may have received.

B57. WorkSource is a joint venture between government and community agencies to provide services such as free use of computers, career resources, job and training referrals, job-hunting workshops, and translation services. Did you use WorkSource services?
1. Yes
2. No [SKIP to B60]
98. DON'T KNOW [SKIP to B60]
99. REFUSED [SKIP to B60]

B58. How satisfied were you with WorkSource services? Would you say you were
1. Very satisfied
2. Somewhat satisfied
3. Neither satisfied nor dissatisfied
4. Somewhat dissatisfied
5. Or very dissatisfied
98. DON'T KNOW
99. REFUSED

B59. How much of an effect do you think WorkSource services had on your ability to return to work? Would you say WorkSource services had a
1. Very positive effect on your ability to return to work
2. A somewhat positive effect
3. No effect
4. A somewhat negative effect
5. Or a very negative effect on your ability to return to work?
98. DON'T KNOW
99. REFUSED

B60. How satisfied were you with the services provided by your claim manager? Would you say you were
1. Very satisfied
2. Somewhat satisfied
3. Neither satisfied nor dissatisfied
4. Somewhat dissatisfied
5. Or very dissatisfied
98. DON'T KNOW
99. REFUSED

B61. How much of an effect do you think your claim manager had on your ability to return to work? Would you say your claim manager had a
1. Very positive effect on your ability to return to work
2. A somewhat positive effect
3. No effect
4. A somewhat negative effect
5. Or a very negative effect on your ability to return to work?
98. DON'T KNOW
99. REFUSED

B62. How satisfied were you with the services of your vocational counselor? Would you say you were [NOTE: If asked which one, please encourage the respondent to reply regarding either their most recent vocational counselor or the one with whom they had the most interaction.]
1. Very satisfied
2. Somewhat satisfied
3. Neither satisfied nor dissatisfied
4. Somewhat dissatisfied
5. Or very dissatisfied
98. DON'T KNOW
99. REFUSED

B63. How much effect do you think your vocational counselor had on your ability to return to work? Would you say your vocational counselor had a
1. Very positive effect on your ability to return to work
2. A somewhat positive effect
3. No effect
4. A somewhat negative effect
5. Or a very negative effect on your ability to return to work?
98. DON'T KNOW
99. REFUSED

B64. For this question, please think about the content of your most recent vocational plan. [IF NEEDED: This refers to the last vocational plan approved before your claim closed.] How much of an effect do you think your vocational plan had on your ability to return to work? Would you say your vocational plan had a
1. Very positive effect on your ability to return to work
2. A somewhat positive effect
3. No effect
4. A somewhat negative effect
5. Or a very negative effect on your ability to return to work?
98. DON'T KNOW
99. REFUSED

B65. Overall, do you feel that the vocational rehabilitation services you received were appropriate for you?
1. Yes
2. No
3. Not sure
99. REFUSED

B66. Overall, how would you rate your experience with the vocational rehabilitation system? Would you say you were

1. Very satisfied
2. Somewhat satisfied
3. Neither satisfied nor dissatisfied
4. Somewhat dissatisfied
5. Or very dissatisfied
98. DON'T KNOW
99. REFUSED

B67. Based on your experience with the vocational rehabilitation system, if you could make one improvement, what would it be? [DO NOT READ; record only one response; lean toward free text if hard to categorize.]

1. No improvement needed/worked fine for me
2. Too much needs improvement to specify one thing/The whole system needs fixing
3. Need more time to develop a plan, 90 days is too short
4. Better communication and/or service from claim manager
5. Better communication and/or service from vocational rehabilitation counselor
6. More money and/or time for training
7. Do more to help me get a job
8. More explanation/support for Option 1/Option 2 choice
9. Other (Specify): B67oth:_____
98. DON'T KNOW
99. REFUSED

APPENDIX D

Sources Used in Survey Question Development

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