Structured Intensive Multidisciplinary Program (SIMP) Review

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Executive Summary

This report describes the Structured, Intensive, Multidisciplinary Programs (SIMP) Evidence-Based Review project, summarizes the findings, and presents recommendations for potential opportunities to collaborate with key stakeholders to improve the current program and strengthen access to this treatment for workers in Washington State. L&I is a major payer of SIMPs in Washington State, and SIMPs are a critical treatment option in the workers' compensation system to address the psychosocial barriers to recovery for workers with chronic pain. Additional goals are to address opioid use, improve function, promote return to work (RTW), and ultimately, decrease chronic disability. Recent studies on global assessment of disease burden reported that low back pain is among the top conditions in the US associated with the most Years Lived with Disability (Murray 2013). Prior to this project, little information existed on the baseline characteristics and subsequent outcomes of workers who have undergone this intensive, costly treatment. Building upon prior efforts, this project commenced in early 2020 with the aim to better understand the current state of SIMPs and identify potential gaps in chronic pain care, in order to ensure that workers are receiving consistent, high quality, evidence-based care. The primary work of this project was divided into two workgroups: the Literature Review and Research Workgroup and the Data Analysis Workgroup.

The Literature Review and Research Workgroup assessed 12 published studies on intensive, multidisciplinary pain care. The intervention consisted of 3 weeks, 4 weeks, or 3 to 4 weeks of intensive, six- to eight-hour days interdisciplinary outpatient treatment with the key components provided including physical therapy, occupational therapy, cognitive behavioral therapy, patient education, opioid taper and medical management. The studies included 3496 adults with chronic pain and focused predominantly on the common chronic pain conditions: fibromyalgia, low back pain, and other chronic non-cancer pain (CNCP) conditions. SIMPs showed statistically significant improvements in pain, function, depression and pain catastrophizing and reduction in opioid use at discharge. The studies that tracked outcome measures at 6 and 12 months showed that, while improvements in these measures persisted, they were reduced.

L&I payment policy requires SIMP providers to be accredited by the Commission on Accreditation of Rehabilitation Facilities (CARF) International, an independent nonprofit accreditor of health and human services, including medical rehabilitation. In hopes of gathering additional outcome data and insight into these programs, L&I requested two CARF surveys from each SIMP provider. The workgroup received and reviewed two CARF surveys from three SIMP programs. However, the CARF survey reports focused primarily on business operations of the various programs, and the majority of the recommendations were administrative in nature. While these critical business areas are important and can help to facilitate high quality, patient-centered care, these reports did not include patient outcome data that would supplement our claim reviews and provide a more comprehensive picture of workers who participated in SIMP treatment.

The Data Analysis Workgroup reviewed the medical records of 108 claims for workers who participated in SIMPs billed between January 2017 and October 2019. The initial list of randomly selected sample claims was adjusted to more accurately represent the proportion of treatment provided by individual SIMP providers. Data on treatment outcomes were collected at discharge and at 6 and 12 months after SIMP treatment, using information available in medical records. Findings included earlier use of SIMPs

than was previously reported in 2014 and minimal impact of SIMP treatment on chronic opioid therapy. Overall, the claim review found variability in the services provided, in the documentation of those services, and in the timeliness of reporting among SIMP providers. Little meaningful coordination was seen between SIMP providers, treating providers, and claim managers (CMs) at treatment discharge and during the follow-up period. In general, the inconsistent use of validated tools to track progress prevented meaningful conclusions about the effectiveness of SIMP treatment on most intermediate outcomes, including pain, function and mental health conditions.

Despite evidence indicating that multidisciplinary pain management programs are superior to single modalities for treating patients with chronic pain, the number of these programs in the U.S. has decreased steadily since 1998 (Murphy 2021, Gatchel 2014, Schatman 2011). Although L&I spent $21,088,518 for SIMP services between 2017 and 2019, the number of SIMP providers and overall utilization in the L&I system has also been in decline since 2000. Various statewide and department's efforts to reduce inappropriate opioid prescribing and its adverse impact on disability may have served to decrease the number of workers who needed to be referred for SIMP services in the last few years.

In order to improve the current program and strengthen access to SIMP treatment for workers in Washington State, we offer the following recommendations:

- Require the use of validated tools, at minimum, at evaluation, treatment discharge, and follow-up visits,
- Require consistent treatment components be available across SIMPs,
- Require coordination with key stakeholders at treatment, discharge and during follow-up visits,
- Develop communications targeting attending providers (APs), prescribers and workers to set expectations regarding the scope of the program and participation in the program,
- Explore the potential and feasibility of value-based payments to drive improvements in workers' outcomes related to delivery of SIMP services.
- Create policies for consistent documentation and reporting,
- Reaffirm the importance of the CARF requirement, and
- Recommend additional evidence-based review and research to guide enhancement as well as the right time for SIMP treatment.

We are very grateful for the engagement and partnership of our SIMP providers. We look forward to collaborating with key stakeholders on identified opportunities to maximize the benefit from SIMP care for workers in the L&I system and across Washington State.

Introduction

L&I is a major payer of SIMPs in Washington State and has a long history of using this treatment tool for workers with chronic pain. Although utilization has decreased in recent years, SIMPs remain a critical treatment option in the workers' compensation system to address opioid use, improve function, promote RTW, and ultimately, decrease chronic disability.

SIMPs are outpatient programs that deliver regularly scheduled, daily, interdisciplinary care for the treatment of chronic pain. The programs consist of six- to eight-hour days, 5 days per week for two to four weeks duration. The medical services provided in a SIMP are coordinated, goal-directed, and team-based. SIMPs require referral from the AP and prior authorization from the CM. Payment for a SIMP is divided into three phases: the evaluation phase, the treatment phase, and the follow-up phase. The evaluation phase is reimbursed at a global fee even if conducted over multiple days. The treatment phase is reimbursed via a global fee for each six- to eight-hour day for up to 20 days. Follow-up services can be provided via face-to-face or non-face-to-face visits, up to 24 hours within six months of completing the treatment phase for open claims. Please see Chapter 34 of MARFS for detailed, current information on payment policy for SIMPs.

CARF International accredits SIMP as Interdisciplinary Pain Rehabilitation Program (IPRP). In 2019, there were no CARF accredited IPRP providers in Idaho, two in Oregon and five in Washington (Cathy Rebella, CARF). Of the five programs in Washington, one is no longer in operation and one is part of the VA system. Currently, there are five SIMP providers accredited by CARF International in the L&I system.

Prior to this project, little information existed on the baseline characteristics and subsequent outcomes of workers who have undergone this intensive, costly treatment. Additionally, there have been anecdotal reports that the services provided vary across SIMP providers. The number of SIMP providers in the L&I system has also decreased in recent years. In 2000, there were 10 contracted pain clinics or SIMPs (2000 Alan Tucker Report on Pain Clinics) and today there are five SIMP providers. Given the importance of SIMPs in our system and the potential benefits that intensive, multidisciplinary treatment can provide to the worker, it is important for L&I to understand the current state of SIMPs and identify potential gaps in chronic pain care, with a focus on ensuring workers are receiving consistent, high quality, evidence based care.

This project commenced in early 2020 and builds upon prior efforts, which include the 2014 claims Quality Assurance (QA) audit on the SIMP authorization process and, more recently, conversations between the Office of the Medical Director (OMD) and SIMP providers between 2016 and 2018. The goals of the current project are to:

- Assess whether workers participating in SIMPs are receiving consistent services amongst the various SIMP providers and whether those services reflect current published medical literature.
- Assess the level of coordination between SIMPs, referring providers, CMs and assigned vocational rehabilitation consultants (VRCs).
- Determine whether workers who participate in SIMPs are offered appropriate and consistent follow-up to transition back into their community for support and resources.

- Collect and analyze SIMP data to assist with making informed decisions on recommendations for improvement.

The project falls under Healthy Worker 2020, in partnership with the Insurance Service's Strategic Business Office (SBO). The primary work of this project was divided into two workgroups: the Literature Review and Research Workgroup and the Data Analysis Workgroup, both of which were supported by the project's steering committee. The Literature Review and Research Workgroup was tasked with examining the medical literature on intensive, multidisciplinary pain care to learn more about these interventions, the use of these programs, and outcomes achieved external to the L&I system. This workgroup also reviewed two CARF survey reports from each SIMP provider. The Data Analysis Workgroup examined the use of SIMPs within the L&I system. This involved reviewing SIMP utilization data, broken down into the various phases. This workgroup also reviewed a small sample of claims for workers that attended the various SIMPs to learn more about the baseline characteristics of workers participating in SIMPs and the outcomes achieved. The external findings of the Literature Review and Research Workgroup provided valuable context and comparison for the internal findings of the Data Analysis Workgroup.

This report describes the project, summarizes the findings, and presents recommendations for potential opportunities to collaborate with key stakeholders to improve the current program and strengthen access to intensive multidisciplinary pain treatment for workers in Washington State.

Part I – Literature Review

The Literature Review and Research Workgroup's task consisted of two components: a literature review and an assessment of CARF surveys. The literature review entailed an assessment of published literature pertaining to intensive, multidisciplinary treatment programs. This section of the report will focus on the literature review.

At the workgroup's kickoff in March 2020, the group defined roles and responsibilities, reviewed background on the project, and discussed the scope of the work. Subsequently, the group discussed and decided on the activities for the workgroup, along with the elements for the literature review. The purpose of the literature review was to give the project team, internal stakeholders, and L&I leadership a better understanding of SIMPs outside of the L&I system, and that this context could provide a useful framework and guidance for assessing our own system. Accordingly, the workgroup sought to include and evaluate studies of programs that most closely matched SIMPs in our current system.

Review Methods

For the elements of the literature review, the agreed upon search terms were "chronic pain" OR "functional restoration" OR "pain management" AND "interdisciplinary" OR "multidisciplinary" OR "multimodal" OR "comprehensive pain rehabilitation." The workgroup agreed to limit the study population in the literature review to adults (>18 years old) with chronic pain and/or one or more chronic pain diagnoses. The focus was on studies with an intensive, multidisciplinary intervention that mirrored the intensity of SIMPs. The group decided not to exclude studies based on comparators. The outcome measures included pain intensity, pain catastrophizing, level of function, quality of life, depression,

anxiety, use of opioids, disability, work status, and patient satisfaction. The review would focus on high-quality studies, ideally randomized controlled trials (RCTs), but could also include observational studies and systematic reviews.

For the literature review process, the workgroup agreed to pull an initial list of abstracts, and three workgroup members would individually review those abstracts and make recommendations on whether to include or exclude each study. Unanimous recommendations for inclusion or exclusion were immediately adopted by the workgroup. Studies that generated divided opinions were discussed at subsequent meetings to arrive at a consensus for inclusion or exclusion. In this manner, the group produced a final list of 12 articles to review.

The final list of studies was divided and reviewed by three workgroup members to extract the following information: first author of publication, title of publication, publication year, type of study, number of patients, age, sex, pain diagnosis, duration of pain, percent on opioids, morphine milligram equivalents (MME) of opioids, duration of opioid use, duration of intensive treatments, type of services offered in intensive treatment program, evaluation criteria of program, follow-up, the aforementioned outcome measures of interest, and assessment time point. An Evidence Table was produced to help facilitate the review and data extraction of these articles (see Appendix A). The workgroup decided our literature review would start in 2002, using a previously pulled systematic review as a starting point. The workgroup considered including a formal critical appraisal of the studies in this project, such as risk of bias or strength of evidence and/or conducting a meta-analysis, but ultimately concluded that this would be beyond the scope of this project.

Review Results

Of the 12 selected studies, there was one systematic review of RCTs, one secondary analysis of another RCT included in the review, and 10 observational studies (one prospective case series; the rest, retrospective reviews).

Guzman et al. (2002) was a systematic review searching MEDLINE, EMBASE, PsychLIT, CINAHL, Health STAR, and The Cochrane Library through June 1998, focusing on adults with disabling low back pain of greater than three months in duration that attended multidisciplinary bio-psycho-social rehabilitation (MBPSR). The systematic review included 1964 adults and captured 10 RCTs. The programs fell into two main categories; either daily intensive programs (>100 hours total) or once- or twice-a-week programs (<30 hours total). All of the MBPSR programs had a physical intervention component and at least one other dimension, such as psychological or social/occupational treatment. The social/occupational component includes a social worker, case manager or vocational therapist evaluating the patient's family, social and/or occupational status with subsequent targeted intervention. The review found strong evidence that intensive MBPSRs with a functional restoration approach resulted in statistically significant improvement in function. It also concluded that there was moderate evidence that intensive MBPSRs with a functional restoration approach reduce pain. The review found contradictory evidence regarding employment status outcomes of intensive MBPSRs. This systematic review served as the starting point for our review, and the information is not included in the below summary of the workgroup's findings. Based on this systematic review, the workgroup concluded there was sufficient evidence to determine that intensive, multidisciplinary pain programs are effective. The workgroup decided to focus the literature

search to new studies with additional outcomes, such as opioid taper, to build on this systematic review. Additionally, one of the studies included in the review (Darchuk et al.) was a secondary analysis of another included study (Townsend et al.) and, accordingly, was excluded in the summary to avoid redundancy. The remaining 10 studies will be summarized and discussed further below.

The observational studies accounted for 3496 adults with chronic pain. The age of patients attending an Intensive Multidisciplinary Pain Program in the studies ranged from an average of 43.5 years to 52.6 years. The studies included in the review focused predominantly on the following pain conditions: fibromyalgia, chronic low back pain, and other CNCP. In the studies of patients with CNCP, pain was attributed to either specified or unspecified conditions. The specified conditions consisted of fibromyalgia, low back pain, chronic headache, lower limb pain, and shoulder or upper limb pain.

Only eight of 10 observational studies reported duration of pain. The average duration of the pain in the studies ranged from 35 months to 10.8 years. Some studies provided additional breakdown on the duration of pain amongst patients entering the program. For example, in Hooten et al., 58.2% had pain for five or more years, 38.6% had pain for 10 or more years, 23.4% had pain for 15 or more years, and 13.3% had pain for 20 or more years. In Rome et al., 51% of patients had a history of pain for four or more years, 28.8% had pain for 10 or more years, and 9.7% for 20 or more years. Table A provides the average duration of pain reported in the studies.

Table A: Duration of Pain	
Study	Average Pain Duration
Rome et al. (2004)	7.8 years
Huge et al. (2006)	Munich Functional Restoration Program:10.3 years Control: 6.9 years
Hooten et al. (2007)	9.9 years
Cristosomo et al. (2008)	Fusion: 12.6 years Non-fusion Spine Surgery: 9 years No Spine Surgery: 6.6 years
Townsend et al. (2008)	9.4 years
Gagnon et al. (2013)	35 months
Cunningham et al. (2016)	No Daily Opioids: 13.8 years Daily opioids: 8.6 years
Gilliam et al. (2018)	10.8 years

Eight of the 10 studies reported information on opioid use at admission. The percentage of patients taking opioids at admission to the programs ranged from 35% to 100%. The average MME of these patients on opioids ranged from 61.2 in Cristosomo et al. to 47.1 MME in the low dose chronic opioid therapy (COT) group and 342.1 MME in the high dose COT group in Huffman et al.. Table B below highlights the average MME in the studies. Additionally, three studies reported on average duration of opioid use. In Townsend et al., Cunningham et al., and Gilliam et al., patients were on chronic opioids for an average of 3.9 years, 4.6 years, and 5.8 years, respectively.

Table B: MME of Patients on Opioids	
Study	Average MME
Rome et al. (2004)	78.4 (range 3.5-780)
Cristosomo et al. (2008)	61.2
Townsend et al. (2008)	99 (range 1 – 1060)
Huffman et al. (2013)	Therapeutic Opioid Addiction (TOA) Average MME: 206.6 No TOA Average MME: 65.2
Cunningham et al. (2016)	99 (range 5-600)
Huffman et al. (2017)	LD COT MME: 47.1 (range 1 – 98) HD COT MME: 342.1 (range 100 – 8441.5)
Gilliam et al. (2018)	66.2 (range 4 – 330)

All studies in the review provided details about the intervention provided in the pain program. The intervention consisted of 3 weeks, 4 weeks, or 3 to 4 weeks of intensive, daily interdisciplinary outpatient treatment. The key components provided included physical therapy, occupational therapy, cognitive behavioral therapy, patient education, opioid taper and medical management, although Huge et al. did not mention tapering or medical management and Gagnon et al. did not reference tapering.

The predominant outcome measures included pain, function, depression, anxiety, pain catastrophizing, quality of life, and opioid use. Pain and depression were the most commonly assessed measures with nine of 10 studies evaluating these impacts. Eight of 10 studies evaluated function and reported on opioid use post intervention. Seven of the studies tracked pain catastrophizing while six of the studies tracked quality of life as outcome measures. In addition, one study reported on patient satisfaction. There was also one study involving the workers compensation system that reported on release to work and RTW. This study is highlighted in detail later in this section.

Of the 10 studies, eight presented outcome measures at discharge. Of these studies, three additionally included 6-month follow-up, one of which included 6- and 12-month follow-up. The other two studies presented outcomes just at the 12-month follow-up. Intensive Multidisciplinary Pain Programs showed statistically significant improvements in pain, function, depression and pain catastrophizing at discharge. The studies that tracked outcome measures at 6 and 12 months showed that, while improvements in these measures persisted, they were reduced. The studies also found significant reduction in opioid use, see Table C.

Table C: Opioid Use			
Study	Discharge	6-Month Follow-Up	12-Month Follow-Up
Rome et al. (2004)	97.8% completed taper		
Hooten et al. (2007)	Percent on opioids 38.4% → 2.8%		
Cristosomo et al. (2008)	Fusion: Percent on Opioids 65.2% → 18% Non-Fusion Spine Surgery: Percent on Opioids 70% → 5% No Spine Surgery: Percent on Opioids 48.4% → 10.5%		
Townsend et al. (2008)	92.6% completed taper	86.1% not on opioids	
Huffman et al. (2013)	100% completed taper		77.5% not on opioids
Cunningham et al. (2016)	100% weaned off		
Huffman et al. (2017)	86.7% COT patients tapered • LD – 85.1% • HD – 88.9%	78.8% not on COT • LD – 71.4% • HD – 68.9%	Opioid use – 75.4% not on COT • LD – 64.7% • HD – 64.7%
Gilliam et al. (2018)	100% completed taper	89.9% not on opioids	

One study, Gagnon et al., specifically focused on Intensive Multidisciplinary Pain Programs in the workers' compensation system. This study was a retrospective review that included 101 patients with an active or contested workers' compensation claim, including catastrophic injuries. The average age of the worker was 43.5 years with an average pain duration of 35 months. The program consisted of an intensive 4-week, 8-hour day (M – F) outpatient interdisciplinary rehabilitation program providing physical therapy, occupational therapy, aerobic conditioning, biofeedback and relaxation training, psychological treatment, patient education, group therapy, medical management, and vocational counseling. Outcome measures were depression, pain catastrophizing, anxiety, and pain at both admission and discharge for program completers. The results of these measures were estimated from graphs in the study and are included in Table D.

Table D: Treatment Outcomes		
Measure	Admission	Discharge
Depression (Beck Depression Inventory)	19	14 (p=.000)
Pain Catastrophizing (PCS)	27	22 (p=.033)
General Anxiety (STAI)	48	45 (ns .098)
Pain (VAS)	67.9	51.6 (p=.000)

Gagnon et al. also reported on program completion as well as release to work and RTW. As far as program completion, the study found that 65% completed the program, 31% were discharged early, and 4% withdrew. The study found that, of program completers, 80.3% were released to full time work, 10.6 % were released for gradual RTW, 1.5% deferred, and release to work data was unavailable for 7.6% of program completers. Of those that completed the program and had available work status data, RTW was 49.1%. This was increased from 12.1% at baseline.

Several of the studies also described in detail the evaluation process for their programs, providing valuable information and perspective as to who participates in these programs and at what point in the course of treatment. For example, Townsend et al. highlighted that participants in the program have typically failed multiple pharmacological trials, multiple courses of physical therapy, interventional pain procedures, and, often, surgery. The evaluation process assesses for physical and emotional stability, and sets expectations on program structure and goals of treatment, including functional restoration and opioid withdrawal.

Part II – CARF Survey Reports

Per policy, L&I requires SIMP providers to be accredited by CARF International, an independent nonprofit accreditor of health and human services including medical rehabilitation. As part of the accreditation process, a team of experts will conduct an on-site survey of the program and business practices to verify conformity with CARF standards. Because these survey reports could potentially provide additional outcome data, offer a more comprehensive look into the programs, and give insight into other opportunities for partnership and collaboration, the Literature Review and Research Workgroup reviewed them.

L&I Process

The workgroup decided to request the two most recent CARF survey reports from each SIMP program. The submission for this material would be voluntary because of the potential sensitive nature of the content. In addition, the workgroup wanted to be flexible and agreed to partial submissions, if that better met the needs and comfort of an individual SIMP.

Communication Services helped develop a communication strategy to engage with the SIMPs for this request. On August 13, 2020, a brief “tee-off email” was sent to the SIMPs, introducing the project at a high-level, focusing on the purpose and scope. Then, on September 9, 2020, a more formal letter was sent discussing the purpose and scope of the project, but also transitioning into the “ask” for the CARF survey reports (see Appendix B). The SIMPs were given a one-month deadline to submit their reports. Three of the five SIMPs responded to this request. Two CARF survey reports were provided from each responding SIMP.

For the two SIMPs that did not respond, an additional email was sent to discuss the request further and to see if L&I could provide additional information and clarification to facilitate the request. Again, the remaining SIMPs did not submit their CARF survey reports. As this was a voluntary request, sponsors agreed to move forward at that time.

CARF Survey Reports

CARF survey reports are broken down into the following sections: Executive Summary, Survey Details, Survey Findings, Section 1: ASPIRE to Excellence, Section 2: The Rehabilitation and Service Process for the Person Served, and Section 3: Program Standards. Of note, there were some slight differences in the structure of the reports between the most recent reports and the older reports. Recognizing the sensitive nature of the report content and honoring a request by one of the SIMP providers to keep the report content confidential, comments will be made at a high level.

In general, CARF International recognized staff at these organizations for their enthusiasm, commitment, collaboration, and innovation and documented numerous strengths of these programs in areas of leadership, organizational structure, facilities, staff, and treating the person served with dignity and respect.

The majority of the CARF survey reports focused on business operations and business practices of the various programs. Correspondingly, the majority of the recommendations and consultations were administrative in nature in areas of strategic planning, evacuation planning, and succession planning. While these critical business areas are important and can help to facilitate and support high quality, evidence-based, patient-centered care, these reports did not include patient outcome data that would supplement our claim reviews and provide a more comprehensive picture of workers who participated in SIMP treatment.

Part III – Claim Reviews

Although L&I has a payment policy for SIMP services (MARFS, Chapter 34 - Chronic Pain Management) and is a major referral source for these services in Washington State, there is little information on the baseline characteristics and subsequent outcomes of workers who have undergone SIMP treatment in Washington. Additionally, there have been anecdotal reports that services rendered vary across the SIMP providers. Since SIMPs are an important treatment option for workers with chronic pain, it is incumbent on the department to ensure continued availability of SIMP services and that services provided are consistent, high quality, and evidence-based, thus maximizing the value and benefit to our workers.

In 2014, QA reviewed 100 randomly selected claims from 1066 claims with SIMP evaluation bills paid between March 1, 2013 and May 31, 2014. However, their focus was on SIMP authorizations to determine if claim process was followed, whether there were delays in the process, and, if so, how they could be avoided. In this project, medical records of a small sample of workers who participated in SIMPs were reviewed to assess and compare the various programs on the following elements:

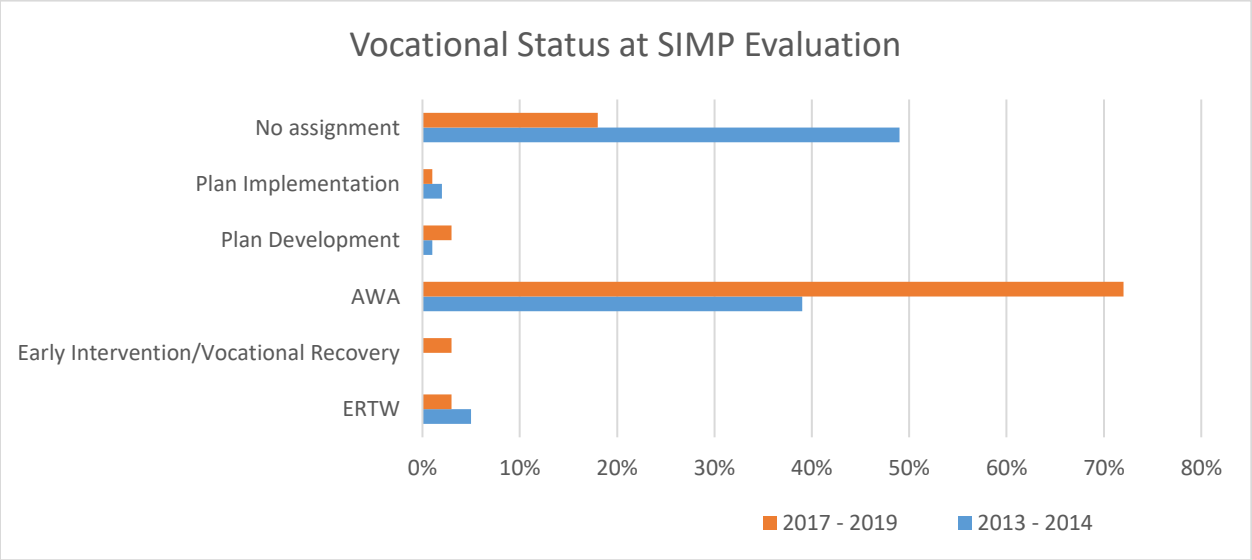
- Evaluation process and criteria for program participation,
- Treatment services provided,
- Follow-up services offered to promote consistent coordination with referring provider and transition of the worker back to his/her community, and
- Outcomes of workers who participated in treatment.

The Data Analysis Workgroup met several times to determine the appropriate claims to review, identify elements of interest and create a file review template for data collection. The workgroup decided on sampling 10% of the 1,084 claims with SIMP treatment billed between January 2017 and October 2019, as identified by Research and Data Services. The identified list of sample claims was adjusted to be representative of the proportion of treatment provided each year by individual SIMP providers. Over 100 elements of claim and clinical data were identified for collection from this review. QA staff reviewed and collected claim-related elements while several Occupational Nurse Consultants (ONCs) volunteered to collect clinical-related elements. Please refer to Appendix D, QA 2020 Research Report on Structured Intensive Multidisciplinary Programs for details.

Vocational Status

Consistent with the 2014 QA report, most workers who participated in SIMP treatment were not working at the time of their evaluation: 95% in 2014 compared to 93% now. However, in the current sample, significantly more workers have been assigned a VRC and have undergone an ability to work assessment (AWA). See Figure 1.

Figure 1: Vocational Status



Demographics

Table E contains demographic information from reviewed claims. This group of claims had less legal representation: 56% in 2014 compared to 48% now. The average worker's age was 46 years old, and median claim age was 22 months at SIMP evaluation. The predominant language was Spanish: 49% of the sampled claims. All sampled workers had chronic pain; the majority were unable to work due to the pain. Only 18% of the workers were on chronic opioids at the time of the evaluation. Of interest, workers participated in SIMP treatment earlier, on average, in the claim than previously noted in the 2014 QA report: 2 years compared to 3.5 years.

Table E: Worker Characteristics	
	Claim Sample (N=108)
Mean age	46 years
Claim age at evaluation	
Median	22 months
Range	3 months - 12 years
Language	
English	49 (45%)
Spanish	53 (49%)
Other	6 (6%)
Legal representation	52 (48%)
Reason for SIMP referral	
Chronic pain	108 (100%)
Unable to work due to pain	99 (92%)
Chronic opioid use	19 (18%)
Work status at evaluation	
Working	8 (7%)
Not working	100 (93%)

Approval Process

Ninety-six evaluation requests (89%) came from SIMP providers; this was less than 97% reported in the 2014 QA report. There were a small number of claims where CMs have referred to their ONC for further guidance, but this proportion is consistent with previous report findings. An increase in initial authorization is seen for both evaluation and treatment, 90% and 86%, respectively, compared to 88% and 66% in the previous report.

Table F: Approval Process	
	Claim Sample (N=108)
Request from SIMP providers	96 (89%)
Evaluation - Initial request	
ONC referral prior to decision	8 (7%)
CM decision	
Authorize	97 (90%)
Deny	3 (3%)
Defer	8 (7%)
Treatment - Initial request	
ONC referral prior to decision	24 (22%)
CM decision	
Authorize	93 (86%)
Deny	2 (2%)
Defer	13 (12%)
Follow-up - Initial request (n=88)	
ONC referral prior to decision	1 (1%)
CM decision	
Authorize	88 (100%)

For evaluation requests, 77% were responded to within 17 days with a median response time of 4 days (compared to 84% in 2014). For treatment requests, 75% were responded to within 17 days with a median response time of 8 days (compared to 65% in 2014). Incidentally, reviewers noticed some instances where the CM authorized SIMP evaluation, treatment and follow-up services, all before the worker attended the initial evaluation.

Table G: Response Time		
	Claim Sample (N=108)	
	Evaluation	Treatment
Median	4 days	8 days
Average	23 days	16 days
Responses within 17 days	83 (77%)	81 (75%)
Responses within 30 days	88 (81%)	88 (81%)
Responses within 60 days	97 (90%)	98 (91%)
Responses 61^{+} days	11 (10%)	10 (9%)

Use of Validated Tools

The use and type of validated tools to assess baseline status and treatment outcomes varied across SIMP providers. Pain severity was widely documented in the evaluation report, while only 2/3 of the sampled claims have documented mental health and disability assessment, using validated tools. Although

catastrophizing is associated with increased disability, heightened pain and illness behaviors and greater use of health care services, only 56% of sampled claims were assessed using a catastrophizing scale. Aside from pain severity, no validated tools were used consistently to report treatment outcome or changes in status at treatment discharge or during follow-up visits.

Table H: Validated Tools for Assessment	
	Claim Sample (N=108)
Evaluation	
Catastrophizing (PCS, TSK,FAS)	60 (56%)
Pain (NRS, VAS, BPI)	104 (96%)
Pain interference (PEG, 2-item, PROMIS)	21 (19%)
Mental health (PHQ-9, GAD-7, HAM-D, BDI, DASS 21, BAI)	72 (67%)
Disability (ODI, WHODAS 2.0)	71 (66%)
Treatment discharge	
Pain (NRS, VAS, BPI)	86 (80%)

PCS – Pain Catastrophizing Scale, TSK – Tampa Scale of Kinesiophobia, FAS – Fear Avoidance Scale, NRS – Numerical Rating Scale, VAS – Visual Analog Scale, BPI – Brief Pain Inventory, PEG – Pain, Enjoyment of life and General activity, 2-item – 2-item Graded Chronic Pain Scale, PROMIS – Patient Reported Outcomes Measurement Information System, PHQ-9 – Patient Health Questionnaire, GAD-7 – General Anxiety Disorder, HAM-D – Hamilton Depression Rating Scale, BDI – Beck Depression Inventory, DASS 21 – Depression Anxiety and Stress Scale, BAI – Beck Anxiety Inventory, ODI – Oswestry Disability Index, WHODAS 2.0 – World Health Organization Disability Assessment Schedule 2.0

Program Completion and Treatment Components

Because of the intensity of SIMP services, which deliver regularly scheduled interdisciplinary care for six to eight hours per day, five days per week, for four weeks in duration, the worker's motivation is an important factor in treatment outcomes. Sixty-nine percent of SIMP evaluation reports documented the worker's willingness to participate in treatment. Of the 108 claims reviewed, eight workers (7%) did not complete the SIMP treatment, even though their willingness to participate in treatment was documented for six of those workers. This is lower than reported in the reviewed studies, which range from 8.4% to 35%. The main reason for not completing treatment was noncompliance.

Table I: Reasons for Non-completion	
	Early Discharge (n=8)
Noncompliance	4 (50%)
Medical instability	2 (25%)
Declined	1 (12.5%)
Opposed	1 (12.5%)

If the SIMP evaluation identifies an important associated/comorbid condition that is a barrier to completing SIMP treatment, the evaluation report may recommend treatment needed prior to admission for SIMP treatment. This may be referred to as preSIMP, preloading, pre-pain management or SIMP readiness services. Twenty-three percent of sampled claims received preSIMP treatment, extending the

length of SIMP treatment beyond 20 days. The majority of preSIMP services requested were physical or occupational therapy and others, such as injections and imaging.

Table J: PreSIMP or SIMP readiness Services	
	PreSIMP (n=25)
Treatment components	
Physical therapy/occupational therapy	15 (60%)
Medical management	4 (16%)
Behavioral health (biofeedback, CBT)	4 (16%)
Inpatient detoxification	1 (4%)
Others (injections, imaging, preexisting conditions, etc.)	15 (60%)

Most workers undergoing SIMP treatment received physical or occupational therapy, medical management, education and vocational services. Behavioral health services were provided in 2/3 of the claims. Documentation of biofeedback was inconsistent; even though it was part of the evaluation recommendation, there was not always evidence that treatment was provided. Forty-four percent of sampled claims received mental health treatment.

Table K: Treatment Components	
	Claim Sample (N=108)
Physical therapy/occupational therapy	108 (100%)
Medical management	101 (94%)
Behavioral health (biofeedback, CBT)	73 (68%)
Education	100 (93%)
Opioid wean	8 (7%)
Mental health	47 (44%)
Vocational services	100 (93%)

Opioid Use

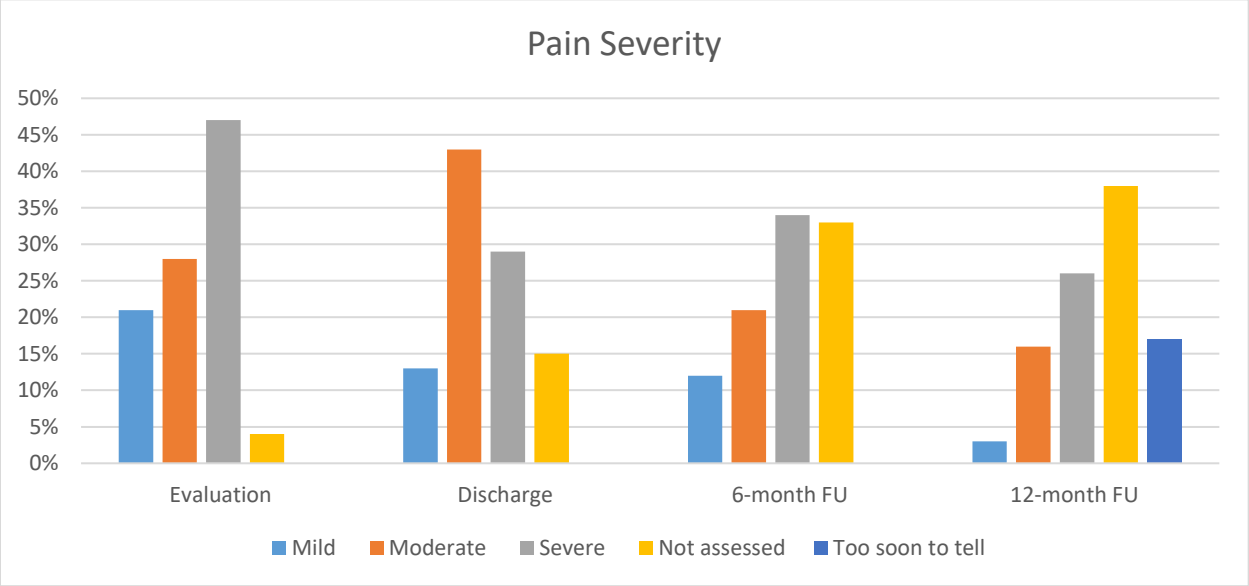
Opioid use was assessed using controlled substance history information from the state's Prescription Monitoring Program (PMP). MME was calculated using the Agency Medical Directors' Group (AMDG) Opioid Dose Calculator. Nineteen workers (18%) were on chronic opioid therapy at the time of their SIMP evaluation. At discharge, three of those 19 workers (16%) had discontinued opioid use. Of those workers who remained on opioids, there was an overall decline in the average daily MME at the 6- and 12-month follow-ups.

Table L: Opioid Use (PMP)				
	Claim Sample (N=108)			
	Evaluation	Discharge	6-month FU	12-month FU
Chronic opioid Dose	n=19	n=16	n=15	n=14
1 - 20 MME	3 (16%)	2 (13%)	4 (27%)	6 (43%)
21 - 50 MME	8 (42%)	6 (38%)	5 (33%)	5 (36%)
51 - 90 MME	6 (32%)	7 (44%)	5 (33%)	3 (21%)
91 - 120 MME	1 (5%)	1 (5%)	1 (7%)	0
>120 MME	1 (5%)	0	0	0

Treatment Outcomes

Data on treatment outcomes were collected at discharge and at 6 and 12 months after SIMP treatment, using information available in medical records. Workers who did not complete treatment or workers whose claim was closed during the follow-up period were excluded from the analysis for pain, function, mental health and vocational status. L&I does not have access to medical record after a claim is closed, thus are unable to collect these data elements at 6 and 12 months post SIMP treatment. Claim status is reported as a separate outcome below. In general, there is a lack of consistent use of validated tools to track changes in workers' status, making it difficult to assess outcomes from SIMP treatment. Although pain status was commonly reported at SIMP discharge, it is unclear if there was improvement in pain severity for workers undergoing SIMP treatment. Of note, the proportion of workers reporting mild pain decreased at discharge and follow-up.

Figure 2: Pain Status



It is also unclear if there was improvement in function for workers undergoing SIMP treatment. Although the percentage of workers with severe functional impairment decreased at discharge and follow-up, there was a corresponding increase in the percentage of workers that were not assessed for function. See Table M.

Table M: Function Status

	Claim Sample (N=108)			
	Evaluation (n=108)	Discharge (n=100)	6-month FU (n=87)	12-month FU (n=76)
Minimal	10 (9%)	7 (7%)	6 (7%)	5 (7%)
Moderate	18 (17%)	31 (31%)	17 (20%)	11 (14%)
Severe	76 (70%)	47 (47%)	19 (22%)	12 (16%)
Not assessed	4 (4%)	15 (15%)	45 (52%)	35 (46%)
Too soon to tell				13 (17%)

Again, we are unable to conclude if SIMP treatment resulted in improvement in workers' mental health due to the lack of consistent use of validated tools to track treatment outcomes. See Table N.

Table N: Mental Health Status

	Claim Sample (N=108)			
	Evaluation (n=108)	Discharge (n=100)	6-month FU (n=87)	12-month FU (n=76)
Mental Health				
No diagnosis	7 (6%)	6 (6%)	3 (3%)	2 (3%)
Mild	22 (20%)	22 (22%)	7 (8%)	8 (11%)
Moderate	40 (37%)	35 (35%)	15 (17%)	4 (5%)
Severe	37 (34%)	18 (18%)	10 (11%)	9 (12%)
Not assessed	2 (3%)	19 (19%)	52 (60%)	40 (53%)
Too soon to tell				13 (17%)

There were slightly more workers undergoing ability to work assessment (AWA) at the time of discharge. More workers moved into plan development (PD) and plan implementation (PI) at 6- and 12-month follow-up. See Table O.

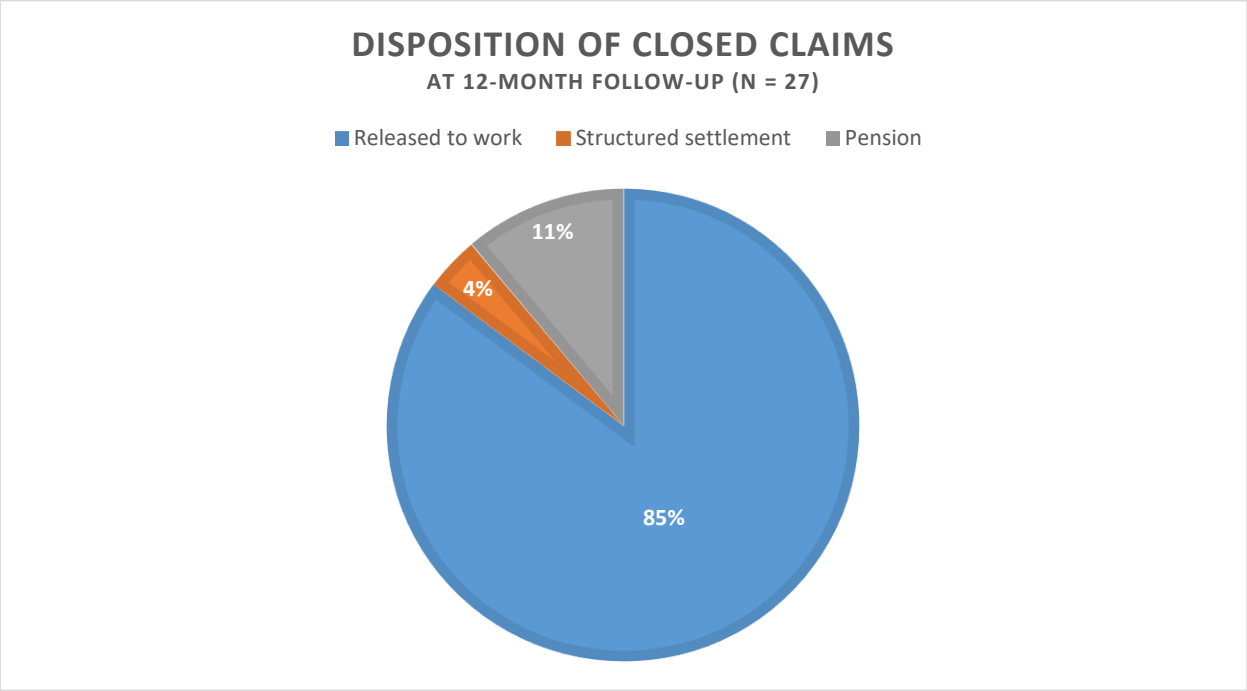
Table O: Vocational Status				
	Claim Sample (N=108)			
	Evaluation (n=108)	Treatment (n=100)	6-month FU (n=87)	12-month FU (n=76)
ERTW	3 (3%)	0	0	0
Early intervention/vocational recovery	3 (3%)	3 (3%)	1 (1%)	1 (1%)
AWA	78 (72%)	80 (80%)	50 (57%)	32 (42%)
PD	3 (3%)	4 (4%)	21 (24%)	6 (8%)
PI	2 (1%)	1 (1%)	5 (6%)	13 (17%)
No assignment	19 (18%)	12 (12%)	10 (11%)	11 (14%)
Too soon to tell				13 (17%)

Table P contains claim status at the 6- and 12-month follow-ups. Fourteen claims were closed at the 6-month follow-up. This increases to 27 claims at the 12-month follow up, with 13 claims yet to reach their 12 months post-SIMP treatment. The median claim age for closed claims was 17 months (range 3 months to 7.9 years), slightly younger than the overall sample population.

Table P: Claim Status				
	Claim Sample (N=108)			
	Evaluation	Discharge	6-month FU	12-month FU
Closed	0	0	14 (13%)	27 (25%)
Open	108 (100%)	108 (100%)	94 (87%)	68 (63%)
Too soon to tell				13 (12%)

Of the 27 claims that closed at 12-month follow up, the majority were released to work. Only four closed claims went to pension or structured settlement. See Figure 3 below.

Figure 3: Disposition of Closed Claims



Follow-up

Of the 100 claims that completed SIMP treatment, 88 received follow-up services, most commonly medical management, followed by vocational services. Vocational services were counted if the SIMP VRC coordinated with L&I assigned VRC or worked with the worker's RTW action plan or goal. Little meaningful coordination was seen between SIMP providers, treating providers and CMs at treatment discharge and during the follow-up period. In addition, only 23 claims had documented service for care transition during follow-up.

Table Q: Follow-up Services	
	Claim Sample (N=108)
Follow-up services (n=88)	
Care coordination	17 (19%)
Medical management	84 (95%)
Vocational services	67 (76%)
Care transition	23 (26%)
No documentation	4 (5%)

Comparison between SIMP Providers

Between 2017 and 2019, there were six SIMP providers: Northwest Occupational Medicine Center (NWOMC), Northwest Return to Work (NWRTW), Pacific Rehabilitation Centers (PRC), Progressive

Rehabilitation Associates (PRA), Rehabilitation Institute of Washington (RIW) and St. Luke's Rehabilitation Institute (St. Luke's).

To investigate whether different SIMP providers are rendering different services, we compared selected services and outcomes across the SIMP providers. The claim samples are too small to make broad statements. Although only 25 claims have SIMP readiness services, these requests came from just three SIMP providers. See Table R.

Table R: Readiness Services by SIMP						
Claim Sample (n=25)	PRC (n=12)	NWRTW	RIW (n=12)	PRA	St Luke's (n=1)	NWOMC
Treatment components						
Physical therapy/occupational therapy	5 (42%)		10 (83%)		0	
Mental health	2 (17%)		1 (8%)		1 (100%)	
Behavioral health (biofeedback, CBT)			4 (33%)			
Inpatient detoxification			1 (8%)			
Others (injections, imaging, preexisting conditions, etc.)	10 (83%)		5 (42%)			

Variation in treatment components provided to workers was in line with the overall sample claims pattern with the most common services being physical or occupational therapy, medical management, education and vocational services. Additionally, there was a wide variation in the behavioral health services provided to workers among SIMP providers. See Table S.

Table S: Treatment Components by SIMP						
Claim Sample (N=108)	PRC (n=55)	NWRTW (n=23)	RIW (n=17)	PRA (n=3)	St Luke's (n=8)	NWOMC (n=2)
Treatment components						
Physical therapy/occupational therapy	55(100%)	23 (100%)	17 (100%)	3 (100%)	8 (100%)	2 (100%)
Medical management	53 (96%)	19 (83%)	17 (100%)	3 (100%)	7 (88%)	2 (100%)
Behavioral health (biofeedback, CBT)	47 (85%)	11 (48%)	10 (59%)	1 (33%)	2 (25%)	2 (100%)
Education	51 (93%)	22 (96%)	15 (88%)	3 (100%)	0	1 (50%)
Opioid wean	4 (7%)	0	2 (12%)	1 (33%)	0	1 (50%)
Mental health	23 (42%)	10 (43%)	9 (53%)	0	4 (50%)	1 (50%)
Vocational services	55 (100%)	22 (96%)	14 (82%)	0	8 (100%)	1 (50%)

Slightly more workers underwent AWA at onset of treatment with NWRTW compared to the other SIMP providers. See Table T.

Table T: Vocational Status by SIMP						
Vocational status at treatment	PRC (n=50)	NWRTW (n=21)	RIW (n=17)	PRA (n=2)	St Luke's (n=8)	NWOM (n=2)
ERTW	0	0	0		0	0
Early intervention/vocational recovery	1 (2%)	0	1 (6%)		1 (13%)	0
AWA	39 (78%)	19 (90%)	13 (76%)	1 (50%)	6 (75%)	2 (100%)
Plan development	3 (6%)	1 (5%)	0		0	0
Plan implementation	0	0	0	1 (50%)	0	0
No assignment	7 (14%)	1 (5%)	3 (18%)		1 (12%)	0

The proportion of claims closure is slightly higher at 6-month follow-up for NWRTW compared to the other SIMP providers. However, this effect equalizes by the 12-month follow-up. See Table U and V.

Table U: Claim Status at 6-month FU by SIMP						
	PRC (n=50)	NWRTW (n=21)	RIW (n=17)	PRA (n=3)	St Luke's (n=8)	NWOMC (n=2)
Closed	7 (14%)	4 (19%)	2 (12%)	0	0	0
Open	43 (86%)	17 (81%)	15 (88%)	3 (100%)	8 (100%)	2 (100%)

Table V: Claim Status at 12-month FU by SIMP						
	PRC (n=50)	NWRTW (n=21)	RIW (n=17)	PRA (n=3)	St Luke's (n=8)	NWOMC (n=2)
Closed	13 (26%)	5 (24%)	4 (24%)	1 (33%)	1 (13%)	0
Open	30 (60%)	12 (57%)	12 (71%)	2 (67%)	6 (75%)	2 (100%)
Too soon to tell	7 (14%)	4 (19%)	1 (6%)		1 (12%)	

Of the 19 workers (18%) on chronic opioid therapy at SIMP evaluation, the rate of opioid discontinuation varied among SIMP providers at discharge and 6- and 12-month follow-ups. Again, conclusions are limited by the small sample size, but of note, four of nine workers on chronic opioid therapy (44%) that went to PRC were off opioids by the 12-month follow-up, whereas one worker that went to NWRTW was initiated on chronic opioid therapy at the 12-month follow-up.

Table W: Chronic Opioid (PMP)				
IW on chronic opioid therapy	Evaluation	Discharge	6-month FU	12-month FU
PRC (n=50)	9 (18%)	7 (14%)	5 (10%)	5 (10%)
NWRTW (n=21)	0	0	2 (10%)	1 (5%)
RIW (n=17)	6 (35%)	6 (35%)	5 (29%)	6 (35%)
PRA (n=3)	1 (33%)	0	0	0
St. Luke's (n=8)	2 (25%)	2 (25%)	2 (25%)	1 (13%)
NWOMC (n=2)	1 (50%)	1 (50%)	1 (50%)	1 (50%)

Variation in coordination was seen among SIMP providers; claims with documented care coordination during follow-up visits range from 0% at St. Luke's and NWOMC to 29% at RIW. Variation was also seen with vocational services and care transition during follow-up. See Table X.

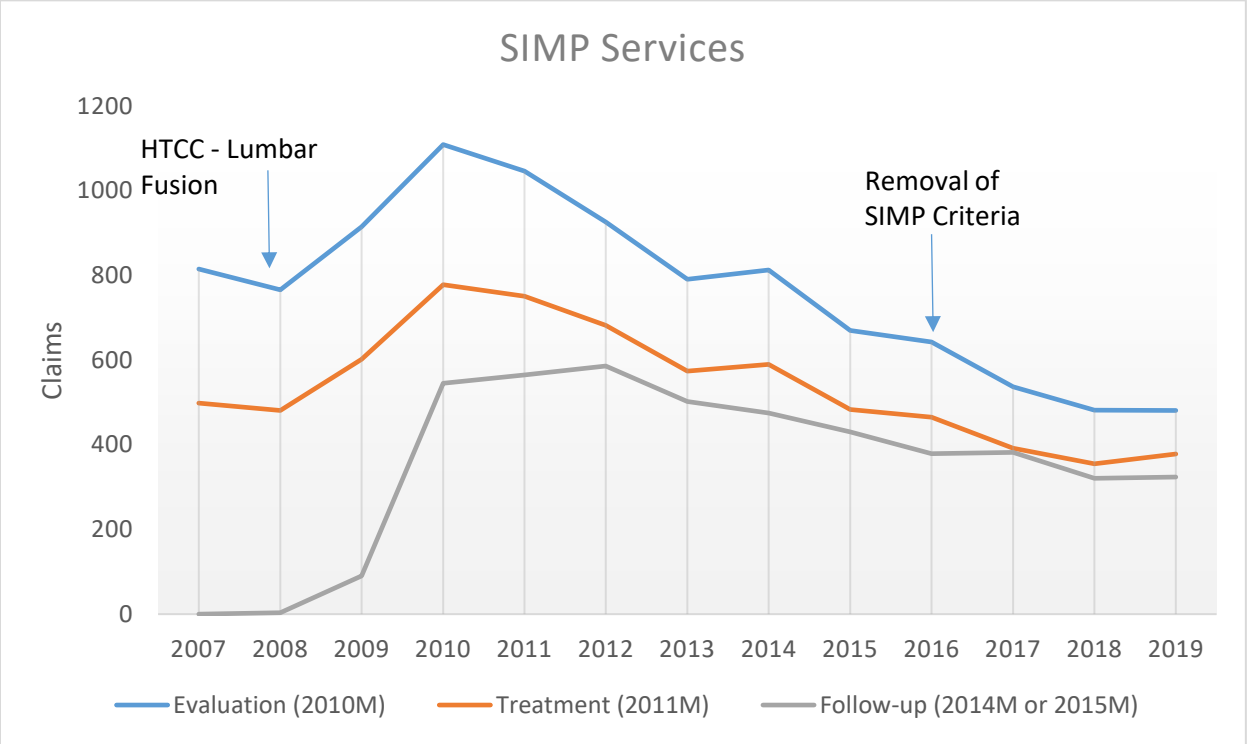
Table X: Follow-up Services by SIMP					
Follow-up services (n=88)	Care coordination	Medical management	Vocational services	Care transition	No documentation
PRC (n=43)	8 (19%)	42 (98%)	34 (79%)	15 (35%)	1 (2%)
NWRTW (n=21)	4 (19%)	20 (95%)	14 (67%)	14 (67%)	1 (5%)
RIW (n=17)	5 (29%)	17 (100%)	17 (100%)	4 (24%)	1 (6%)
PRA (n=0)	0	0	0	0	0
St. Luke's (n=5)	0	3 (60%)	2 (40%)	0	2 (40%)
NWOMC (n=2)	0	2 (100%)	0	0	0

Part IV – Data Analysis

L&I spent a total of $20,521,890 for SIMP services between 2017 and 2019. Of the total, $1,939,118 was for evaluation, $16,642,876 was for treatment and $1,939,896 was for follow up services.

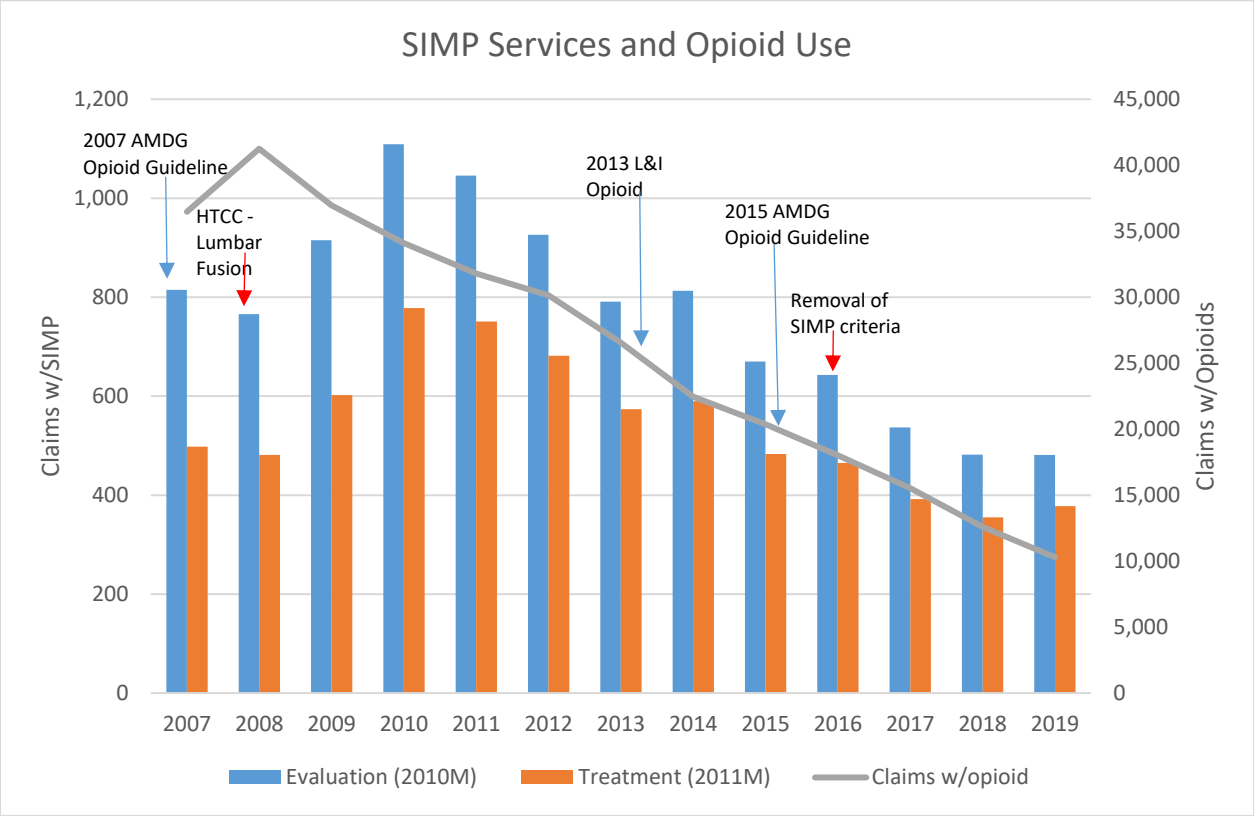
In 2008, the Health Technology Clinical Committee (HTCC), as part of their lumbar fusion coverage decision, required patients with chronic low back pain and uncomplicated degenerative disc disease to undergo a SIMP before lumbar fusion surgery could be approved. In 2016, this requirement was removed. Although this decision temporarily increased SIMP services, the overall use of SIMPs has been in decline since 2010.

Figure 4: SIMP Services



Despite evidence that indicates multidisciplinary pain management programs are better than unimodal options for patients with chronic pain, the number of these programs in the U.S. has decreased steadily since 1998. This decline has been attributed to limited or nonexistent coverage by third-party payers (Murphy 2021, Gatchel 2014, Schatman 2011). The decline in the number of CARF-accredited SIMP providers is also reflected in the L&I system as this number has dropped from 10 in 2000 to five, today. At the same time, policy changes at the state and national level to allow and promote the use of opioids for chronic non-cancer pain dramatically increased opioid prescriptions, which resulted in increased emergency visits, hospitalizations and deaths from opioid overdoses. In addition, exposure to opioids after an injury has significantly increased disability among workers. (Haight 2020, Franklin 2008). L&I, through collaborative efforts such as the AMDG and Bree Collaborative, has been working to reverse the opioid epidemic since the early 2000s. Particular to the workers' compensation system, these and other efforts to reduce inappropriate opioid prescribing and the impact of opioids on disability may have served to decrease the number of workers who were referred for SIMP services in recent years. See Figure 5.

Figure 5: SIMP Services and Opioids



The next three figures compare evaluation (2010M), treatment (2011M) and follow-up (2014M and 2015M) services among SIMP providers in the L&I system. Because the data span a 13-year period, it includes SIMPs that are no longer in practice. In 2019, approximately 55% of all workers undergoing SIMP evaluation and treatment were seen at Pacific Rehabilitation Centers, which include three sites.

Figure 6: Evaluation by SIMP

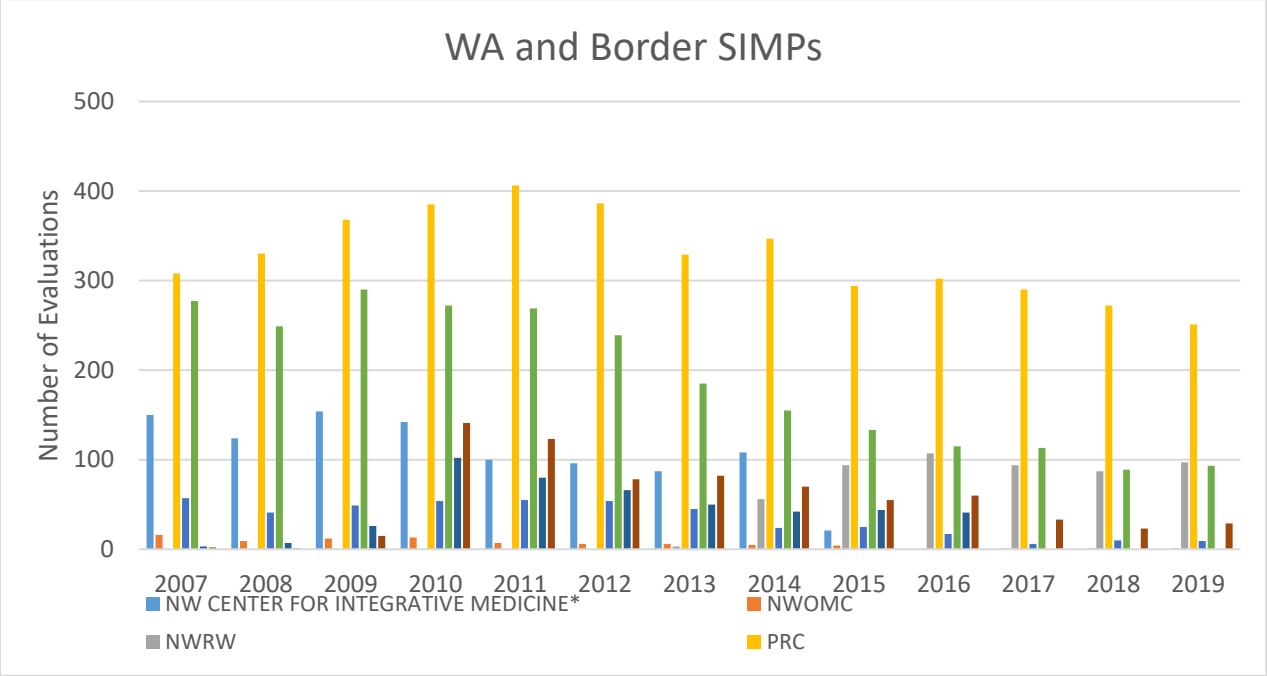


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Figure 7: Treatment by SIMP

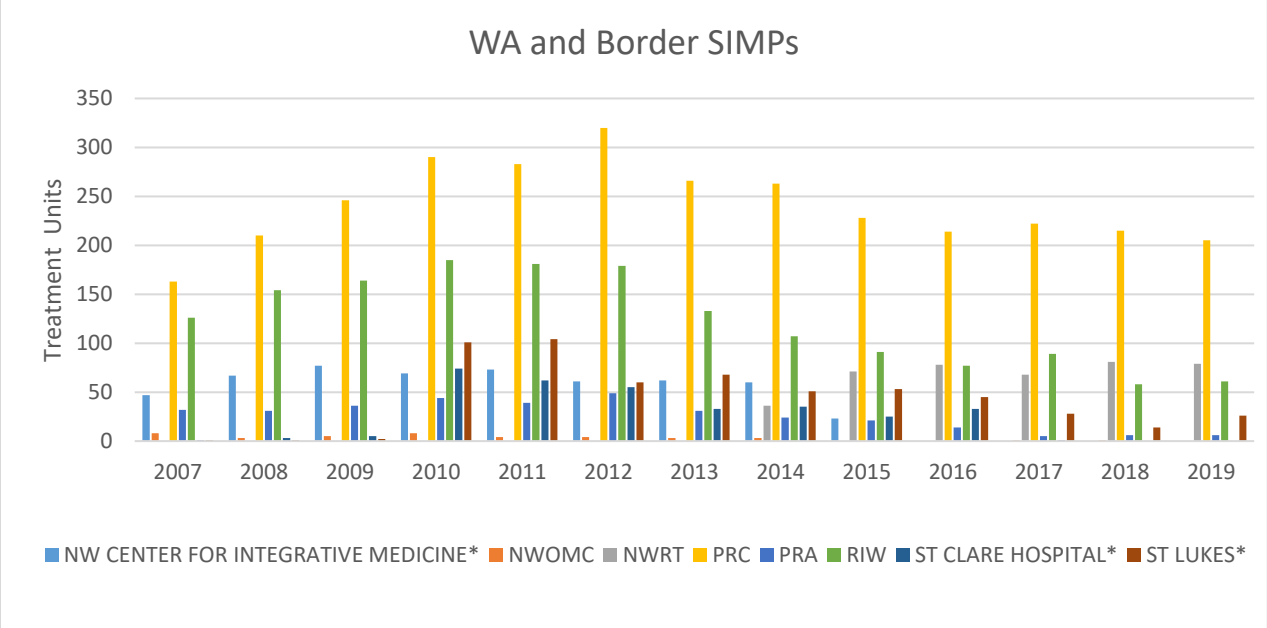

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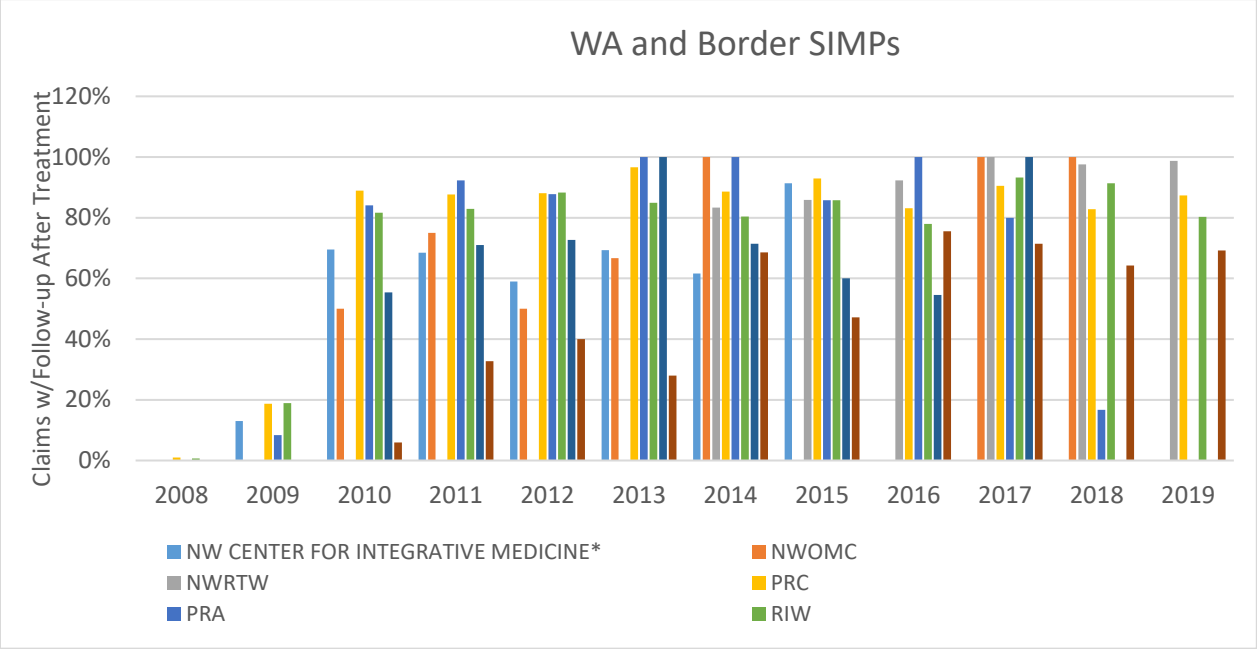
Figure 8: Follow-up by SIMP



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Conclusions and Recommendations

The following areas were identified as potential collaboration and/or improvement:

Validated tools to track worker progress

- There was inconsistent use of validated tools to track workers' progress preventing meaningful conclusions about the effectiveness of SIMP treatment on most intermediate outcomes, including pain, function, and mental health conditions. Accordingly, we recommend requiring the use of validated tools, at minimum, at evaluation, treatment discharge, and at specified follow-up times.

The use of validated tools during the program at specific times such as evaluation, discharge and follow up visits may potentially provide valuable insight to SIMPs, L&I, and other stakeholders as to how the worker is doing in the program. Consistent use of objective measures can help track clinical progress and guide changes in the treatment plan when the progress is not as expected. Additionally, the use of validated tools to track outcomes can better quantify and highlight the benefits of SIMPs for payers, government agencies, and other stakeholders, with the potential to make a business case for expanding use of these programs.

Service components offered

- Critical services that could be provided, such as opioid taper and behavioral/mental health treatment, were provided inconsistently across the SIMPs. Therefore, we recommend requiring consistent application of critical components to patient-centered care for injured workers.

It is expected that all SIMPs receiving a global fee reimbursement model would provide the same core treatment services and treat the same broad range of conditions. Similarly, a worker who goes to one SIMP would have the same important medical conditions addressed during treatment at that SIMP as if they went to another SIMP, and that the treatment provided would be based on the needs of that worker, as opposed to being determined by which SIMP the worker attended.

Stakeholder coordination

- There was inadequate coordination with key stakeholders, such as the attending provider, prescriber, CM and external VRC at treatment, discharge and during follow-up visits. Accordingly, we recommend requiring coordination with these stakeholders at treatment, discharge and during follow-up visits.

Communication and coordination between the SIMPs and external stakeholders, particularly at discharge and follow-up is essential to sustaining any functional gains attained during SIMP treatment and enabling a smooth transition back to the worker's community. This a crucial step to maximize the long-term benefits of these programs by ensuring that treatment after the SIMP aligns with and builds upon progress towards continued and successful use of pain self-management techniques, reduced opioid use, improved function, and, ultimately, RTW.

Communication to set expectations

- There was little to no communication with workers and APs. As such, we recommend L&I develop communications targeting APs, prescribers and workers to set expectations regarding the scope of the program and participation in the program.

Realistic expectations about participation in a SIMP is crucial to ensuring that a worker fully participate in the program and attain the maximum potential benefit. This is important, given the time commitment required of the worker (20 consecutive business days) and the financial commitment of L&I. In addition to educating the worker, the AP must also have that same understanding. Accurate expectations and understanding about SIMP participation from the worker and the AP is a critical piece to ensuring that the right worker attends the program at the right time when it will be most effective.

Timely and consistent documentation

- The claim review confirmed variability in report content associated with the treatment phase and follow-up visits and in the timeliness of those reports across SIMP providers. Accordingly, we recommend creating policies for consistent and timely documentation and reporting.

Incomplete documentation and delays in reporting promote disability and can confuse and/or impede implementation of the discharge plan. Timely and comprehensive documentation is essential to ensuring a smooth transition to the community and continuity of care. This can help to maximize the long-term benefits of the program by maintaining and potentiating the treatment gains.

Feasibility of value-based payments for SIMP

- There were inconsistent outcomes, such as sustained opioid wean and progress in RTW, with current global reimbursement model across SIMP providers. We recommend that L&I explore the potential and feasibility of value-based payments to drive improvements in workers' outcomes with SIMP services.

In recent years, the Centers for Medicare & Medicaid Services and commercial insurers have been transitioning away from the traditional fee-for-service to pay-for-performance model as a way to promote quality in health care. Concerns have been raised that fee-for-service reimbursement has promoted quantity and the over utilization of medical services. In attempts to transition from quantity to quality, health care payers have been implementing pay-for-performance models where payment is tied to desired outcomes, and providers are financially rewarded if they meet certain quality or performance measures. This payment model could play an important role in promoting evidence-based care and better outcomes for workers in SIMPs.

Importance of CARF accreditation

- There was a lack of clarity about the necessity of CARF accreditation. Accordingly, we want to reiterate and explain the rationale for this requirement.

L&I payment policy requires SIMPs to be accredited by CARF. Accreditation provides value to the worker and L&I by ensuring that programs are meeting minimal standards, an important safeguard in health care quality.

Additional evidence-based review and research

- There was lack of clarity about the right timing for SIMP treatment and the best ways to transition patients back to their community. Accordingly, we recommend additional evidence-based review and research in these areas to help guide enhancement as well as the right time for SIMP treatment.

Although this project has increased our understanding of intensive, multidisciplinary pain care in our system, many questions remain. For example, the claim review found that the median claim age at the time of SIMP evaluation was 22 months, while the average duration of pain found in the literature review ranged from 35 months to 10.8 years. The only workers' compensation study among those reviewed has a pain duration that is 50% greater, at 35 months, than seen in our claim review. Additional research on timing would help guide efforts to improve SIMP services in our system, strengthen access to SIMP and help our workers heal and RTW.

We are very grateful for the engagement and partnership of our SIMP providers. We look forward to collaborating with key stakeholders on identified opportunities to maximize the benefit from SIMP care for workers in the L&I system and across Washington State.

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Appendix A – SIMP Evidence Table

Authors (Year); Trial Name; Study Design; N	M/F; Age	Pain Condition; Pain Duration Percent On Opioids; Opioid Dose; Opioid Duration	Treatment Intensity and Duration; Service Components	Outcome (Time of Assessment)	Comments
Guzman et al. (2002) Multidisciplinary bio-psycho-social rehabilitation (MBPSR) for chronic low back pain Systematic review (Cochrane) N=1964 (n range 37 – 149); 10 RCTs Search MEDLINE, EMBASE, PsychLIT, CINAHL,Health STAR, and The Cochrane Library from beginning to June 1998		Adults with disabling LBP of more than three months in duration; not reported	Program duration fell into two main categories: daily intensive programs (>100 hours) and once or twice a week programs (<30 hours) MBPSR has a minimum of the physical and one of the other dimensions (psychological or social/occupational)	Strong evidence that intensive MBPSR with a functional restoration approach improves function Moderate evidence that intensive MBPSR with a functional restoration approach reduces pain Contradictory evidence regarding employment status outcomes of intensive MBPSR Less intensive outpatient MBPSR trials could not demonstrate beneficial effects on pain, function or vocational outcomes	Treatment intensity ranges from outpatient, 2 hours twice a week for 6 weeks, to inpatient, 42 hours per week for 3 weeks 5 out of 10 RTCs have a social component that focus on occupational aspects 10 out of 10 RTCs have psychological (e.g., CBT, biofeedback, relaxation) and physical (e.g., hydrotherapy, weights, group exercise) component

Rome et al. (2004) Chronic Noncancer Pain Rehabilitation With Opioid Withdrawal: Comparison of Treatment Outcomes Based on Opioid Use Status at Admission Retrospective N=356 Admitted to the Mayo Comprehensive Pain Rehabilitation Center in Rochester between January 2002 and December 2002	Total 92/264 44.3 years (13-83) Daily use of opioids (n=135) 38/97 45.6 years Not using opioids daily (n=221) 54/167 43.6	Fibromyalgia, Low back, Chronic headache; 7.8 years (51% reported pain for 4 or > years, 28.8% for 10 or > years, and 9.7% for 20 or > years) 37.9% on opioids daily; 78.4 (3.5-780)	The Mayo Comprehensive Pain Rehabilitation Center is an intensive 3-week multidisciplinary outpatient rehabilitation program Physical reconditioning, Occupational therapy, Relaxation training and biofeedback, Patient education, Opioid discontinuation, Medical management	Pre(Admission) → Post (Discharge) **Daily use of opioids** • Pain severity (MPI) 49.4 → 41.1 (p<.001) • Interference with life (MPI) 51 → 37.6 (p<.001) • Perceived life control (MPI) 48 → 57.1 (p<.001) • Affective distress (MPI) 49.1 → 39.2 (p<.001) • General activity level (MPI) 51.9 → 58.2 (p<.001) • Depression (CES-D) 24.7 →14.3 (p<.001) • Pain catastrophizing 16.1 → 10.4 (p<.001) **Not using opioids daily** • Pain severity (MPI) 47.5 → 36.9 (p<.001) • Interference with life (MPI) 49 → 36.8 (p<.001) • Perceived life control (MPI) 48.5 → 56.8 (p<.001) • Affective distress (MPI) 46.7 → 37.3 (p<.001) • General activity level (MPI) 52.9 → 58.3 (p<.001) • Depression (CES-D) 22.4 → 12.6 (p<.001) • Pain catastrophizing 14.4 → 8.2 (p<.001)	Opioid use at admission determined by patient self-report, medical record, and medication logs. 305 (85.7%) completed the 3-week program. There was no significant differences between the percentage of patients who completed the program in the opioid and nonopioid group Lack of long term follow up

	years			At completion of the 3-week program, only 3 of the 135 pts in the opioid group had not completed the taper.	

Huge et al. (2006) Impact of a functional restoration program on pain and health-related quality of life in patients with chronic low back pain Retrospective matched concurrent-control trial N= 44 Comparison of functional restoration program-- the Munich Functional Restoration Program (MFRP)-- for CLBP versus standard outpatient therapy with a 1 year follow up.	MFRP (n=22) 11/11; 52.6 years Control (n=22) 11/11; 59.1 years	Chronic Low Back Pain; MFRP 10.3 years Control 6.9 years;	Intensive 4 week, 6-8 hour day M - F outpatient interdisciplinary rehabilitation program; Patient education, physical therapy, occupational therapy, CBT group therapy, relaxation training	Pre (Admission) → Post (1 year follow up after beginning of treatment) **MFRP subjects** • NRS 5.9→ 4.3 (p=.02) • Pain Disability Index (PDI) 31.6 → 16.5 (p=.008) • Depression (CES-D) 21.1→ 14.1 (p=.001) **Control subjects** • NRS 6.7→ 6.7 • Pain Disability Index (PDI) 40.7→38.7 • Depression (CES-D) 24.6→ 25.6 Of the SF-36 subscales, Physical Role Limitations, General Health, and Social Functioning were significantly better in MFRP group than in controls at one year **Patient Satisfaction** • 66.7% MFRP patients rated success of treatment as good or very good • 16.7% of control patients rated treatment success as good or very good	Assessment for Munich Functional Restoration Program (MFRP) by team of physicians (Anesthesiologists, Physicians for Physical Medicine and Rehabilitation) and a psychologist. Control group were patients that met entry criteria but were unable to participate in program due to other factors. The control group received a 60-90 minute visit with physician and psychologist for physical exam and psychological interview. A treatment plan created of PT, psychological intervention and relaxation. Implementation of this plan was determined by patient and PCP There were no differences in age, education, or occupation level between MFRP group and control Medical and psychiatric comorbidities of patients not mentioned

				• 4.6% of MFRP patients rated success of intervention as bad • 33% of control patients rated treatment success as bad	Retrospective matched trial One year follow up

Hooten et al. (2007) Treatment outcomes after multidisciplinary pain rehabilitation with analgesic medication withdrawal for patients with fibromyalgia. Prospective case series N= 159 Test if immediate post treatment measures improve during multidisciplinary pain rehab w/concurrent analgesic medication withdrawal.	22/137; 45 years (13)	Fibromyalgia; 9.9 years (58.2% had pain for 5 or more years, 38.6% had pain for 10 or more years, 23.4% had pain for 15 or more years, 13.3% had pain for 20 or more years); 38.4% on opioids; (29.6% on benzodiazepine, 40.3% on NSAIDS, 50.3% on SSRI, 20.8 % on TCA, 44.7% on other antidepressant)	Intensive 3 week, 8 hour day M - F outpatient interdisciplinary rehabilitation program; PT, OT, CBT, Biofeedback and relaxation training, stress management, chemical health education, activity moderation, elimination of pain behaviors, tapering of multiple medications, Medical management	Pre (Admission) → Post (Discharge) **MPI** • Pain Severity 49.4 → 37.9 (P<.001) • Life interference 50.0 → 35.7 (p<.001) • Life control 47.7 → 57.9 (p<.001) • Affective distress 48.3 → 37.1 (p<.001) • Social activity 49.5 → 56.8 (p<.001) • General activity 51.4 → 57.9 (p<.001) **SF-36** • Health Perception 31.5 →42 (p<.001) • Physical functioning 25 →38.4 (p<.001) • Physical limitations 27.2 → 40.2 (p<.001) • Emotional limitations 37.7 → 48.4 (p<.001) • Pain catastrophizing 14.3 → 7.8 (p<.001) • Depression (CES-D) 25.8 → 13.2 (P<.001) • Percent on opioids 38.4% → 2.8%	17 patients (10.7%) did not complete the rehab program with average dismissal of 5.2 days. 58.8% of the dropouts left in during the first week. At admission to the program, patients were taking an average of 8.6 prescription and nonprescription medications 93% of patients taking opioids and 75% of patients on muscle relaxants upon entry to the program discontinued them by program completion. Significant reductions in percent of patients on benzodiazepine, NSAIDS, NSAID, and muscle relaxants. Lack of control group Lack of long term follow up

Cristosomo et al. (2008) Withdrawal of analgesic medication for chronic low-back pain patients: improvement in outcomes of multidisciplinary rehabilitation regardless of surgical history Retrospective non-randomized, three group pre-post study N=383 Patients divided by history of lumbar spine surgery: no prior surgery (n=196), fusion (n=125), nonfusion lumbar surgery (n=62)	146/237; 47.1 years (range 16-81)	Chronic low back pain; 6.61-12.58 years across groups Fusion 65.2% on opioids Non-fusion lumbar surgery 70% on opioids No surgery 48.4% on opioids; Mean MME 61. 2 mg/day; 33% smoking	Intensive 3 week, 8 hour day M - F outpatient interdisciplinary rehabilitation program; PT, OT, CBT, Biofeedback and relaxation training, stress management, chemical health education, activity moderation, elimination of pain behaviors, tapering of multiple medications, Medical management	Pre (Admission) → Post (Discharge) **Fusion patients** • Pain Severity 51.2 → 43.4 • Life interference 51.3 → 38.5 • Life control 48.1 → 56.5 • Affective distress 49.4 → 39 • General activity level 52.1 → 57.6 • Social activities 50.6 → 55.8 • SF-36 physical function 22.8 → 34.3 • SF-36 physical role limitation 28.5→ 36.4 • General health 37.9 → 44.1 • CES-D 24.3 → 13.6 • CSQ-C 13.4 → 7.7 • Percent on Opioids 65.2% → 18% **Non-fusion lumbar surgery** • Pain Severity 48.5 → 41.8 • Life interference 51.6 → 41.1 • Life control 46.8 → 55.1 • Affective distress 50.2 → 38.7 • General activity level 51.7 → 56.5 • Social activities 50.6 → 53.9 • SF-36 physical function 24.2 → 37.2 • SF-36 physical role limitation 26.4→ 35.8 • General health 36.9 → 44.3 • CES-D 25.4 → 15.1 • CSQ-C 14.9 → 8 • Percent on Opioids 70% → 5%	Significant group differences existed in pain duration, pain severity, life interference, sex, and opioid use at admission. NSAID, muscle relaxants, and benzodiazepines all reduced. Medication use at end of program did not differ significantly except for use of benzodiazepines Retrospective review of fusion, non-fusion lumbar surgery, no surgery groups Lack of long term follow up Primary goal functional restoration, secondary goal reduction of pharma.

				No spine surgery • Pain Severity 46.9 → 39.7 • Life interference 48.6 → 38.2 • Life control 49.1 → 56.2 • Affective distress 47.6 → 39.2 • General activity level 52.4 → 57.7 • Social activities 50.8 → 55.3 • SF-36 physical function 23 → 34.4 • SF-36 physical role limitation 27.7 → 36.3 • General health 37.5 → 43.2 • CES-D 22.3 → 15.5 • CSQ-C 13.0 →8.5 • Percent on Opioids 48.4% → 10.5% For all the above groups, the MPI, SF-36, CES-D, and CSQ-C improved significantly from admission to program end, with $P < 0.0001$ for all measures (except for MPI Social Activities in the nonfusion group where $P = 0.005$)	

Townsend et al. (2008) A longitudinal study of the efficacy of a comprehensive pain rehabilitation program with opioid withdrawal: Comparison of treatment outcomes based on opioid use status at admission Retrospective chart review and FU survey N=373 (no opioid n=160; opioid n=213) CNCP who were admitted consecutively to the Mayo Clinic Comprehensive Pain Rehabilitation	78/295; 44.5 (14.2) No opioid 35/125; 44.4 (14.3) Opioid 43/170; 44.5 (14.2)	Chronic back pain, fibromyalgia, chronic headache/migraine; 9.4 (9.9) Opioid - 57%; mean daily MME = 99 (range 1 – 1060 mg); 3.9 (4.2)	Intensive 3-week, 8 hour day, M-F outpatient interdisciplinary rehabilitation program Medical management, CBT, PT, OT, education, taper, treatment of comorbid MH, family education and aftercare planning	Admission → Discharge, 6-month FU **Discharge (n=340)** • Pain severity (MPI) – no opioid 46.2 → 37.2*; opioid 49.3 → 40.0* • Function (SF36) – no opioid 30.4 → 41.2*; opioid 28.2 → 39.7* • Depression (CES-D) – no opioid 24.8 → 14.7*; opioid 29.3 → 16.3* • Catastrophizing (PCS) – no opioid 25.3 → 12.1¥; opioid 28.3 → 12.9¥ • Opioid use – 176/190 completed taper **6-month FU (n=238)** • Pain severity (MPI) – no opioid 46.2 → 38.2*; opioid 49.3 → 39.1* • Function (SF36) – no opioid 30.4 → 38.9*; opioid 28.2 → 37.8* • Depression (CES-D) – no opioid 24.8 → 16.9*; opioid 29.3 → 17.8* • Catastrophizing (PCS) – no opioid 25.3 → 13.1¥; opioid 28.3 → 13.9¥ • Opioid use – 33/238 reported using opioids (91% were on opioid at admission) ○ Mean daily MME – 99 → 67.6 mg	Baseline characteristics: • Patients in opioid group endorsed significantly greater pain severity and symptoms of depression • Both groups reported clinically significant levels of distress and disability • A significantly greater proportion of patients in opioid group were taking benzodiazepines, muscle relaxants and anticonvulsants 8.8% did not complete treatment after a mean of 7.8 (3.4) days in the program Significantly greater proportion of patients in the opioid group returned to work after the completion of rehabilitation Losses of treatment gains were found for all outcome variables Opioid dose and time were not significant for all treatment outcome variables Rate of return opioid use = 13.9%

Program from January 2005 to February 2006					

Darchuk et al. (2010) Longitudinal Treatment Outcomes for Geriatric Patients With Chronic Non-Cancer Pain at an Interdisciplinary Pain Rehabilitation Program Quai-experimental time series N=449 patients Patients admitted to the Mayo Clinic Comprehensive Pain Rehabilitation Center from October 2004 to April 2006	Total 96/353; 45.8 years Young N=141 25/116; 30.4 years Middle Age N=230 43/187; 48.2 years Older N=78	Low back pain, Fibromyalgia, Headache; Total 9.9 years Younger 5.7 years Middle Age 10.7 years Older 15.5 years;	Intensive 3 week outpatient program-8 hour/days for 15 consecutive business days PT,OT, Biofeedback and relaxation training, Patient education, Medical management, Opioid weaning	Admiss, Disch, 6 m f/u **Young** • CES-D 28.7, 15.7, 17.3 • PCS 27.3, 11.5, 12.1 • Pain severity 46.9, 36.7, 36.6 • Pain interference 49.9, 34.6, 33.5 • Perceived control 45.9, 56.4, 54.8 • General activity 52.7, 60.6, 60.5 • Health Perception 30.7, 39.2, 38 • Physical functioning 24.4, 39.4, 37.7 • Social functioning 28.8, 44.2, 42.4 • Limitations physical 24.0, 39.1, 35.7 • Limitations emotional 36.7, 47.7, 46.4 **Middle** • CES-D 27.8, 15.5, 18.4 • PCS 26.2, 12.2, 13.8 • Pain severity 48.1, 38.4, 39.3 • Pain interference 51.2, 37.9, 38 • Perceived control 46.2, 55.9, 53.8 • General activity 52.8, 57.7, 57.2 • Health Perception 36.6, 44.2, 41.3 • Physical functioning 28.9, 39.6, 36.8 • Social functioning 29.2, 44.1, 39.9 • Limitations physical 29.9, 41.5, 35.2 • Limitations emotional 35.9, 46, 43.2 **Older** • CES-D 22.4, 14.7, 16.1 • PCS 25.6, 14.4, 16.1 • Pain severity 48.5, 40.9, 39.9 • Pain interference 48, 36.2, 35.3 • Perceived control 48.6, 56.3, 54.7 • General activity 51.6, 55.2, 54.6	Study is secondary analysis of Townsend et al N=411 (91.6%)completed the 3 week program Data collected by self-administered questionnaires At 6 months, surveys were mailed to study participants. Those who did not return the survey within two weeks were sent a follow up letter. This was followed by a phone call from the study coordinator two weeks later N=292 (71%) of those that completed program returned the questionnaire at 6 months Opioid use by PRN opioids was determined by average dose used per day in previous week

	28/50; 66.5 years	56.3% on opioids at admission; Average daily MME= 112.3		• Health Perception 45.5, 49.1, 47 • Physical functioning 38.9, 44.7, 42.6 • Social functioning 36.3, 45.7, 43.7 • Limitations physical 38.6, 46.8, 43.1 • Limitations emotional 41.7, 47.6, 46.5 At discharge only 14 patients (3.4% of 411) remained on opioids with an average MME of 157.1. There was no significant difference by age group At 6-month follow up, 44 patients were on opioids (15.1% of 292). There was no significant difference by age group	

Huffman et al. (2013) Opioid Use 12 Months Following Interdisciplinary Pain Rehabilitation with Weaning Longitudinal retrospective treatment outcome study N=120 patients Consecutive admissions to the Cleveland Clinic interdisciplinary chronic pain rehabilitation program between January 2007 to December 2010 that met inclusion criteria	TOA (N=39) 16/23; 50.6 years No TOA (N=81) 24/57; 49.0 years	All patients in study entered on opioids TOA Average MME=206.6 No TOA Average MME=65.2	3-4 week intensive, interdisciplinary outpatient program; PT,OT, individual and group psychotherapy, education, medication management, weaning	27 patients resumed opioids at 12 months (22.5%) • 15 resumed opioids other than buprenorphine or tramadol • 4 started buprenorphine • 8 resumed tramadol **TOA resumption** • N=11 (28.2%) • Average MME=73.9 **No TOA resumption** • N=16 (19.8%) • Average MME=34.1 There was no significant difference in opioid resumption frequency or average resumption MME between patients with and without TOA **Predictors of resumption** • Resuming opioids at 1 year was positively associated with depression level at discharge with dose response • No relationship with TOA presence, MME at intake, lifetime hx of nonopioid substance use, pain at discharge, anxiety at discharge	TOA diagnosed using consensus definition from AAPM, APS, and ASAM Only included patients that were on opioids at admission, completed program (82.1% of admissions) and completely weaned from opioids by discharge of program (83.1% of completers who were on opioids at intake) Follow up data collected by mail-in survey. Only those who completed follow-up survey included (29.8% of completers) Patients excluded if unclear diagnosis of TOA (n=14) Prescription opioid use at 12 month assessed by self-report

Gagnon et al. (2013) Treatment Outcomes for Workers Compensation Patients in a U.S.-based Interdisciplinary Pain Management Program Retrospective chart review N= 101 Assess efficacy of interdisciplinary pain rehabilitation program for worker compensation patients	64/37; 43.52 years (range 20-60)	Low back pain, lower limb pain, shoulder or upper limb pain; 34.98 months Opioid use not stated	Intensive 4 week, 8 hour day M - F outpatient interdisciplinary rehabilitation program; PT, OT, aerobic conditioning, biofeedback and relaxation training, psychological treatment, patient education, group therapy, medical management, vocational counseling	Pre (Admission) → Post (Discharge) **Mood** • Depression (BDI) 19 → 14 (p=.000) • Pain Catastrophizing (PCS) 27 → 22 (p=.033) • Trait subscale (STAI) 48 → 45 (ns .098) Estimated from graphs – no table **Pain** • VAS 67.9 → 51.6 (p=.000) **Release to Work for program completers** • 80.3% full time release • 10.6% gradual return • 1.5% deferred • 7.6% unavailable **Return to Work** • Working: 12.1% → 49.1% For those that completed program and have available work status data	Worker's compensation specific, includes catastrophic Program Completion Status 65% completed 31% discharged early 4% withdrew Of those that did not complete the program (excluded), initial score vs last obtained score were compared Return to work data was missing for 25%. 64% of the missing data was attributed to non-completers Medical and psychiatric comorbidities of patients not mentioned No long term follow up

Cunningham et al. (2016) Opioid Tapering in Fibromyalgia Patients: Experience from an Interdisciplinary Pain Rehabilitation Program Retrospective chart review N=159 159 patients consecutively admitted with fibromyalgia to the Mayo Clinic Pain Rehabilitation Center from 2006 through 2012	Pts not taking daily opioids (N=76) 16/60; 46.9 years Pts taking daily opioids (N=55) 9/46; 48.6 years	Fibromyalgia; Patients not taking daily opioids 13.8 years Patients taking daily opioids 8.6 years; 35% on daily opioids; Average daily MME=99 (range 5-600); 4.6 years	Intensive 3 week, 8 hour day M - F outpatient interdisciplinary rehabilitation program; PT, OT, CBT, Biofeedback and relaxation training, Patient education, Group therapy, Medication management, Taper	Pre (Admission) → Post (Discharge) **Patients not on daily opioids** • Numeric Pain rating- 5.7 → 4.3 • Depression (CES-D)- 24.8 → 11.5 • Pain Catastrophizing (PCS)- 24.1 → 12.7 • Health Perception (SF 36)- 33.9 → 44 • Interference with life (MPI)- 52.3 → 42.4 • Perceived life control (MPI) 47.3 → 59 **Patients on daily opioids** • Numeric Pain rating- 7.2 → 5.2 (<.001) • Depression (CES-D)- 30.4 → 18.0 (<.001) • Pain Catastrophizing (PCS)- 27.7 → 15.1 (<.001) • Health Perception (SF 36)- 33.3 → 42.9 (<.001) • Interference with life (MPI)- 55.2 → 45.2 (<.001) • Perceived life control (MPI)- 45.3 → 58.7 (<.001) All patients were weaned off opioids	28 patients taking opioids on non-daily, prn basis were excluded from review Retrospective review Medical and psychiatric comorbidities of patients not mentioned Unclear statistical significance of effect for patients not on opioids No long term follow up

Huffman et al. (2017) Sustained improvements in pain, mood, function and opioid use post interdisciplinary pain rehabilitation in patients weaned from high and low dose chronic opioid therapy Retrospective chart review and FU survey N=1457 (No COT n=516;LD COT n=528, HD COT n=413) Patients treated in the Cleveland Clinic interdisciplinary chronic pain rehabilitation programs (ICPRP)	519/938;46.29 (13.72) No COT 155/316; 45.65 (14.19) LD COT 174/354; 47.84 (13.71) HD COT 190/223; 45.11 (12.98)	Various chronic pain conditions; not reported No COT – 49/516 on PRN opioids; average MME = 2.88 (range 0.26 – 12.60 mg) LD COT – 36%; average MME = 47.05 (range 1.02 – 98 mg); not reported HD COT – 28%; average MME = 342.09 (range 100 – 8441.46 mg); not reported	Intensive 3 to 4 weeks, 8 hour day M - F outpatient interdisciplinary rehabilitation program Medical management, individual and group psychotherapy, CBT, PT, OT, education, taper, optional monthly follow-up	Admission → Discharge, 6-month FU, 12-month FU **Discharge (n=1194)** • NRS – 6.61 → 3.50ɣ • Depression (DASS) – 18.93 → 6.36ɣ • Anxiety (DASS) –13.26 → 6.59 ɣ • FI (PDI) – 42.95 → 18.29ɣ • Opioid use – 654/754 COT patients tapered ○ LD – 366/430; HD – 288/324 ○ Mean daily MME – 176.54 → 33.26ɣ **6-month FU (n=544)** • NRS – 6.61 → 4.45ɣ • Depression (DASS) – 18.93 → 9.83 ɣ • Anxiety (DASS) – 13.26 → 6.21 ɣ • FI (PDI) – 42.95 → 18.29 ɣ • Opioid use – 522/663 not on COT ○ LD – 170/238; HD – 111/161 **12-month FU (n=461)** • NRS – 6.61 → 4.65* • Depression (DASS) – 18.93 → 7.32 ɣ • Anxiety (DASS) – 13.26 → 7.32 ɣ • FI (PDI) – 42.95 → 23.70 ɣ • Opioid use – 424/562 not on COT ○ LD – 132/204; HD – 90/139	Baseline characteristics: • HD COT were significantly more likely to be men (P<0.05) • LD COT were significantly older (P<0.05) • HD COT reported higher levels of baseline depression and anxiety (P<0.05) and higher levels of baseline FI (P<0.01). • Differences were statistically but not clinically significant 20% admission did not complete treatment (more common in HD COT, high anxiety, divorced) Pain-related FI at discharge predicted opioid resumption at FU Rate of return opioid use = 21.3% after 6 month, 24.6% after 12 months Although benefits are retained at 6 and 12 months FU, evidence showed decay in treatment gains

between 2007 and 2012					
Gilliam et al. (2018) Longitudinal treatment outcomes for an interdisciplinary pain rehabilitation program: Comparisons of subjective and objective outcomes on the basis of opioid use status Retrospective chart review N=344 (no opioid n=179; opioid n=165) CNCP enrolled in the Mayo Clinic Pain	105/180;49.2 (14.34)	Various chronic pain conditions; 10.83 (range 6 months – 60 years) Opioid – 48%; mean daily MME = 66.2 mg (range 4 – 330 mg); 5.8 (4.9) years Daily opioid dose was calculated using various sources including PDMP	Intensive 3-week, 8 hour day, M-F outpatient interdisciplinary rehabilitation program Medical management, individual and group CBT, PT, OT, education, taper	Admission → Discharge, 6-month FU **Discharge (n=285)** • Pain severity (MPI) – no opioid 4.10 → 2.84*; opioid 4.31 → 3.02* • Function (SF36) – no opioid 32.20 → 60.58*; opioid 30.35 → 57.24* • Depression (CES-D) – no opioid 23.31 → 10.80*; opioid 25.28 → 12.00* • Catastrophizing (PCS) – no opioid 24.22 → 11.36ᵛ; opioid 26.17 → 13.13ᵛ • Opioid use – 142/142 completed taper **6-month FU (n=119)** • Pain severity (MI) no opioid 4.06 → 3.00*; opioid 4.05 → 3.24* • Function (SF36) – no opioid 32.61 → 48.85*; opioid 30.88 → 44.50* • Depression (CES-D) – no opioid 24.42 → 17.16*; opioid 23.34 → 15.79* • Catastrophizing (PCS) – no opioid 25.63 → 14.82ᵛ; opioid 24.61 → 15.76*	Baseline characteristic: • Opioid group (mean = 52.79, SD = 13.50) being significantly older 17% admission did not complete treatment (discrepancy in expectations, intensity of treatment, psychosocial stressors) Significant greater proportion of opioid users finishing treatment were still on benzodiazepines, anticonvulsants, and prescription sleep medications Loss of treatment gains were significant for all outcomes except for pain interference Rate of return opioid use = 10.1%

Rehabilitation Center (PRC) from January 2015 to December 2015				• Opioid use – 12/119 reported using opioids (91.6% were on opioid at admission)	

[v]Clinical meaningful changes
*Statistical significant

Appendix B – CARF Survey Report Request Letter

STATE OF WASHINGTON

DEPARTMENT OF LABOR AND INDUSTRIES

*PO Box 44321 * Olympia, WA 98504-4322*

September 9, 2020

We hope this note finds you well.

We are grateful for your continued engagement and partnership. Many thanks for your active participation in prior SIMP projects and previous feedback. As you may be aware, there have been some staff changes within our program. We hope to continue this work and wanted to take this opportunity to introduce ourselves as leads of this work. I am an Internist and an Associate Medical Director at L&I and Jaymie is our Pharmacy Director.

Review of current SIMP activities
L&I is currently looking into our existing SIMP policies and processes for potential opportunities where we can collaborate to improve the current program.

As part of that process, we want to understand what is happening in our system and the impact of previous changes in the SIMP program. We hope to better understand important elements like the services that workers currently receive at SIMPs, the coordination between SIMPs and the referring provider, claim manager and vocational provider, as well as care hand-offs and transitions that help get workers back to work, home or their community. We appreciate your partnership in previous work and hope for your partnership as we explore opportunities to improve the current program.

We need your help
We acknowledge that there is a lot of interest and enthusiasm in expanding services and creating new programs. While we appreciate this energy, right now our focus is on the current program and understanding the impact of the previous changes. We are hoping for some additional information and insight from the SIMPs.

As part of this review, we would like to review your two most-recent CARF surveys. Without creating more work for you, these surveys offer L&I with an opportunity to learn about your programs more comprehensively and to explore opportunities for partnership.

Your organization may have reservations about this request. We want to be sensitive and flexible. Please feel free to send us only the survey parts that your organization is comfortable sending. If possible, we would like to garner your report(s) by October 9, 2020. Please send a copy of the surveys to:

Jason Fodeman, MD
Office of the Medical Director
Department of Labor and Industries
PO Box 44321
Olympia, WA 98504-4321

Or if more convenient, you may send via secure email to Jason.fodeman@lni.wa.gov. Please contact us with any questions or concerns at 360-706-3991. We are very grateful for your engagement and partnership with L&I and look forward to continuing this partnership in the future.

Kindest regards,

Jason and Jaymie
CC – SIMP Medical Director

Appendix C – Acknowledgements and Workgroup Members

Acknowledgement and gratitude go to all L&I staff who contributed to this project:

Steering Committee and SBO

Executive Sponsor – Vickie Kennedy
Chief of Return to Work Partnerships – Ryan Guppy
Business Sponsor – Kim Wallace
Strategy and Innovation Manager – Diana Drylie
Project Manager – Sue Callaghan
Business Analyst – Micki Kohler

Workgroups

Lead – Jason Fodeman
Lead – Jaymie Mai
Diana Drylie
Angelique Guppy
Ray Hanley
Elizabeth Hurley
Jennifer Jonely
Sonya Matson
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Darryl Vaughan
Morgan Young

Claim Reviewers

Susan Abolafya
Niki Brent
Linda Bryant
Marina Early
Suzanne Gore
Christy Gustafson
Tracey Jacobson
Jeanine Keesey
Jessica McCracken
Crystal Nielsen
Rocio Ochoa-Geesaman
Claire Grossmann
Chris Roberts
Collen Seed

Report Reviewer

Doug Tuman

Appendix D – Quality Assurance Research Report

SIMP 2020 Report
with Element Report.F