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Report for submission to the governor and legislative committees

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Executive Summary

Using opioid settlement funds (Engrossed Substitute Senate Bill [ESSB] 5187, Chapter 475, Laws of 2023), the Washington State Department of Labor & Industries (L&I) contracted with the University of Washington to evaluate injured workers using chronic opioid therapy (COT) and measure the impact of efforts to improve outcomes among this population.

This effort is intended to help address the tide of overprescribing and inappropriate transition from acute to chronic opioid use in Washington state through research and evaluation. It includes research to understand the risks and benefits of remaining on chronic opioids vs. tapering and to inform best practices for addressing injured workers' clinical needs.

This is the third report on this multi-year effort. It focuses on evaluating L&I's implementation of the modified chronic opioid therapy (mCOT) pilot and the impact of the Bree Collaborative's Long-Term Opioid Therapy Report and Recommendations.

Implementation evaluation of the mCOT pilot

L&I implemented the mCOT pilot in April 2022. This state fund pilot focuses on assessing workers on chronic opioids to identify harms, barriers to recovery, and gaps in care, and offers resources for treating providers to address the identified issues in a worker-centered way. The goals of mCOT are to reduce harms and improve care for workers who are on COT, promote evidence-based treatment for chronic pain, and understand the impact of pre-existing COT on work-related injuries and explore strategies to address it.

The UW evaluation team also reviewed the claim file records of the workers who were selected for the pilot.

Summary

- As of March 2025, the Opioid Review Team (ORT) has reviewed 85 workers on COT.
- 26% of these claims closed within six months of the initial team review.
- The average age of the workers was 55 years.
- On average, the workers had three allowed conditions.
- About 21% of the ORT reviews included mention of a relevant non-claim medical condition.
- Over half of the workers have had a surgery or have a planned surgery.
- 75% were on chronic opioids prior to injury.
- Most workers (72%) were on low or moderate doses of opioids (<50 morphine equivalent daily dose [MEDD]).
- Claims managers attended the ORT meetings for 67% of the cases.
- Vocational rehabilitation counselors (VRC) attended the ORT meetings 85% of the time for cases with an assigned VRC.
- The most common issues identified were missing documents (69%), high risk for using opioids (51%), and lack of documentation for opioid prescribing best practices (46%).
- Provider contacts were attempted for 55% of the cases, and provider contacts were successful 94% of the time.

- Among the workers who had both follow-up reviews (at 6-8 weeks and six months after the initial review), 15% had stopped their COT, and 6% decreased their doses. No dosage information was available for the 26% of workers whose claim had closed.

The ORT process has provided benefit to the worker, the provider, and L&I staff. It has been useful for the claims managers and VRCs to participate in ORT where they hear treatment history of claim-related conditions, past medical history, a discussion of the workers' risk factors and any barriers to recovery, gaps in care, and suboptimal treatment, and why it matters when medical records are missing from the claim file. Although most of the workers were receiving opioids prior to the injury, opioids were stopped or the dose decreased in at least 21% of workers. In addition to potentially influencing opioid use or opioid dose, the ORT process has also been improving coordination of care for injured workers and collaboration among internal staff and external VRCs. It has allowed L&I to review claims in a prospective, holistic, and worker-centered way.

Impact evaluation of the Bree chronic opioid therapy guideline

As part of developing metrics to assess implementation of the Bree Long-Term Opioid Therapy Report and Recommendations, the evaluation team analyzed treatment pathways for injured workers receiving chronic opioids. This analysis relies on data from the Washington workers' compensation state fund program. State fund data includes employers whose workers' compensation is insured by the state, representing roughly 75% of all Washington workers. For the analysis of treatment pathways among state fund workers receiving COT, the evaluation team defined five categories:

- Increasing dose ($\geq$10% dose increase relative to prior calendar quarter);
- Stable dose (same dose or dose increased or decreased by <10% relative to prior quarter);
- Taper ($\geq$10% dose decrease relative to prior quarter);
- Discontinuation (no opioids for at least the last 30 days of a quarter, or no prescription data); and
- Transition to medications for opioid use disorder (MOUD).

The UW evaluation team analyzed the treatment pathways for workers on chronic opioids, comparing one calendar quarter to the next.

Summary

- The number of workers receiving chronic opioids in a calendar quarter decreased substantially between 2018 and 2021.
- Among workers receiving opioids chronically, most had low to moderate doses. In the first quarter of 2018, 62% had less than 50 MEDD, 19% had 50-89 MEDD, 7% had 90-119 MEDD, and 12% had equal to or greater than 120 MEDD.
- Between 2018 and 2021, for most workers on chronic opioids (over 60%), the dose remained relatively stable (did not increase or decrease by more than 10%).
- In the first quarter of 2018, 7% discontinued opioids, 16% tapered the opioid dose, 60% were on a stable dose, 17% had an increased dose, and none transitioned to MOUD (in the available data).
- The percentage in each treatment pathway remained relatively constant between 2018 and 2021.

- Opioid use disorder is not normally considered an industrial injury-related condition, so MOUD treatment was rarely billed and paid for under workers' compensation claims. Some workers may have received MOUD treatment outside of the workers' compensation system for opioid use disorders that started before the work injury.

The UW evaluation team also interviewed three Washington physicians with expertise in chronic pain management to learn about implementing the Bree guideline.

Summary

- All three physicians were aware of the guideline, but only one physician was aware of implementation efforts at their facility.
- Utilizing physician champions and tools in electronic medical records (EMRs) were reported as facilitators to implementing opioid guidelines.
- Challenges to implementing opioid guidelines included effectively operationalizing guidelines in a way that is practical for prescribers and limitations to EMR technology.

Background

The United States is in an opioid misuse and overdose crisis involving both prescription and illicit opioids (notably, fentanyl). In response, Washington state has undertaken significant efforts to stem the tide of overprescribing and inappropriate transition from acute to chronic opioid use, including implementing opioid prescribing guidelines and rules. Although the Bree Collaborative released the Long-Term Opioid Therapy Report and Recommendations in May 2020, questions remain regarding how best to address the clinical needs of the approximately 130,000 Washingtonians who are already on long-term opioid therapy.

The risks from opioid use are serious, including disability, opioid use disorder (addiction), overdose, and death. These patients, many of whom have been on opioids for years, are incredibly complex, often with multiple medical comorbidities, along with mental health and psychosocial needs. For primary care providers who are already overburdened, managing these patients is time-consuming and resource-intensive, which may exceed their capacity. In addition, providers are at the center of a difficult balance between reducing suffering from chronic pain and reducing harms associated with opioid use. Therefore, research is necessary to understand the risks and benefits of remaining on chronic opioids vs. tapering and to inform best practices for addressing the clinical needs of this population.

Purpose

L&I was allotted opioid settlement funding to evaluate patients who are on chronic opioids to understand their clinical needs and evaluate potential interventions to improve care and reduce harms in this population. In support of this purpose, L&I has contracted with the University of Washington's Occupational Epidemiology and Health Outcomes Program (Department of Environmental and Occupational Health Sciences) to:

1. Evaluate the implementation of L&I's mCOT pilot.

   This pilot focuses on assessing workers on chronic opioids to identify harms, barriers to recovery, and gaps in care, and offer available resources to providers to address the identified issues in a worker-centered way. The goals of mCOT are to reduce harms and improve care for workers who are on COT, promote evidence-based treatment for chronic pain, and understand the impact of pre-existing COT on work-related injuries and explore strategies to address it.

2. Evaluate the impact of the Bree Collaborative's Long-Term Opioid Therapy Report and Recommendations.

This is the third report from a multi-year effort. This report includes:

- results of surveys with mCOT providers;
- an analysis of workers on pre-existing chronic opioids;
- an analysis plan for evaluating the mCOT pilot;
- an analysis of the Bree guideline treatment pathways;
- an update on interviews with health plans and health systems regarding implementing the Bree guideline; and

- potential best practices for addressing the clinical needs of patients on chronic opioid therapy.

Implementation evaluation of the mCOT pilot

Description

L&I launched the mCOT pilot in April 2022 for state fund claims. L&I had been hearing from clinical stakeholders — particularly primary care providers — that they were struggling with patients who were on COT for years. Patients on chronic opioids can be very time-intensive with complex medical and psychosocial comorbidities. L&I had also been hearing from providers that felt they did not have enough time or resources to manage these patients.

To help these providers, L&I created the mCOT pilot. The objectives of mCOT are to reduce harms and improve care for workers on COT and promote evidence-based treatment for chronic pain by reviewing claims on chronic opioids to identify harms, barriers, gaps in care, or suboptimal treatment, and then offer available resources to address the identified issue. L&I also wanted to provide resources and education to help busy providers manage workers on chronic opioids and increase field nurses' participation to address the opioid crisis. Additionally, L&I wanted to understand the impact of pre-existing chronic opioid therapy on work-related injuries and explore strategies to address it.

L&I'S VISION IS TO ENSURE THAT WORKERS ON CHRONIC OPIOID THERAPY RECEIVE SAFE AND APPROPRIATE TREATMENT THAT IMPROVES THEIR HEALTH AND AVOIDS LONG-TERM DISABILITY, ALLOWING FOR A QUICKER RETURN TO WORK AND MORE PRODUCTIVE, FULFILLING LIVES.

mCOT structure

To accomplish these objectives, the mCOT pilot has three components: the Opioid Review Team; the involvement of field occupational nurse consultants; and provider education.

The first component is the ORT, composed of members with various functional areas of expertise including a claims manager, field occupational nurse consultant (FONC), VRC, pharmacist, and physician. The team has been staffing claims of workers on COT to identify harms, barriers to recovery, gaps in care, and suboptimal treatment, and then determining the appropriate resources that can help address the identified issue(s) in a worker-centered way. The team develops a plan to engage the attending provider, prescriber, and worker to participate in the treatment plan and authorize and coordinate services. The ORT is the hub of the pilot.

The second component is the FONCs that L&I employs throughout the state. FONCs play a critical role in the pilot. They conduct a comprehensive review of the claim file to understand treatment history, gaps

in care and/or potential barriers or harm. They try to ascertain what has happened since the worker was put on opioids. The FONC presents the claim at an ORT meeting. Based on the ORT's recommendations, the FONC meets with the provider or their staff to encourage safe and clinically proven treatments.

The third component is provider education. Staff identify potential training opportunities for providers, such as regional pain conferences where primary care providers have an opportunity to learn concepts that align with the pilot. The team develops educational offerings for providers as needed.

Collaborative approach

Creating mCOT has been a team effort. A workgroup of medical specialists in the Office of the Medical Director, FONCs, regional leadership, claims managers, communications consultants, change management staff, and staff from the Lean Transformation Office met weekly for over a year to develop the policy, process, and support to conduct the pilot. Together they refined the criteria for identifying workers on COT to review. The workgroup developed a template checklist for claim review, a list of available regional resources, and the policy and process to support this work. They also identified FONCs' training needs and developed the training needed for FONCs to perform this work.

At the same time, the workgroup worked closely with the Lean Transformation Office, Office of Change Management, and the communications team to develop materials to ensure successful implementation of the mCOT pilot. This includes both internal and external communication. The workgroup has presented to L&I's Industrial Insurance Medical Advisory Committee, Industrial Insurance Chiropractic Advisory Committee, Advisory Committee on Healthcare Innovation and Evaluation, Vocational Recovery Advisory Committee, Vocational Service Specialist All-Staff, Claims All-Staff, and Self-Insured Colloquium. The workgroup conducted substantial internal communications to prepare for pilot implementation.

The workgroup also presented on the mCOT pilot externally at the 2023 International Association of Industrial Accident Boards and Commission annual meeting in Denver, Colorado, and at the Washington Opioid Prevention Workgroup meeting in March 2024.

mCOT workflow process

The first step of the mCOT workflow process is to create a list of workers by region based on specific criteria. Because of limited resources to address all workers on chronic opioid therapy, the focus was narrowed to workers who have been on chronic opioid therapy (opioids for 60 days or longer in a quarter) and whose cases are currently open and were open when the opioid prescription was filled by the worker. Further, the workgroup wanted to concentrate on less complicated claims for better engagement.

The list is validated and an introductory letter is mailed to the providers of workers who have been identified as possible participants in the pilot. The validated list is delivered to the FONC in the appropriate region. Once the list is received, the FONC will pick and review a case and complete the Chronic Opioid Therapy Checklist. (See description below under "Tools and resources.") When the review is completed, the claim is staffed at the ORT, which assesses the worker's need by discussing any potential barriers, opioid-related harms, and gaps in care. The team then determines the appropriate resources to address the identified issue(s) and the best engagement strategy. Next, the FONC will contact the attending provider, prescriber, and/or surgeon (if needed) and offer resources and/or services identified by the ORT. These resources are provided to providers for their consideration, but

ultimately, it's left to the provider to determine how to proceed with the claim. The claims manager or FONC will authorize and coordinate services as needed.

The ORT meets bimonthly to review injured workers (i.e., cases) selected for assessment as part of the mCOT pilot. Each case undergoes an initial review by the ORT, as well as follow-up reviews at approximately six to eight weeks and six months after the initial review. Follow-up reviews will not occur if the case has closed before the follow-up period.

Tools and resources

To expand access to alternative therapies for chronic pain and make them readily available to reduce reliance on opioids, the workgroup developed a list of Non-Opioid Alternatives for Providers. This list includes evidence-based, non-opioid pharmacologic and non-pharmacologic treatment alternatives for chronic pain. It also contains information and resources for substance use disorders. This is an easy-to-use handout with information on the department's coverage that helps FONCs interact with providers. The group also created an extensive list of regional resources the nurse can use to help providers and workers identify non-opioid treatments in their region. The list of resources enhances access to evidence-based, non-opioid alternatives and improves treatment of chronic non-cancer pain. Additionally, a flyer was created with more information about the pilot that FONCs can leave with the provider.

The workgroup also collaborated with Return-to-Work Partnerships at L&I to create a preparation guide that helps assigned VRCs prepare for the ORT meetings. To support the claim review process and ensure consistency among FONCs, the workgroup developed a Chronic Opioid Therapy Review Checklist. It collects information on workers' treatment history, opioid use, risk factors, and relevant co-morbid conditions. In addition, the checklist helps identify gaps in care, potential barriers, or harms. This tool is used to help facilitate discussion at ORT meetings.

The workgroup also created an introductory letter to providers who have workers on chronic opioids and have been identified as possible pilot participants. The letter informs the provider of the mCOT pilot and introduces them to the respective FONC(s). It also describes mCOT as a resource for busy providers and explains how L&I can partner with them to improve the treatment of an injured worker's chronic pain. The purpose of this letter is to facilitate and enhance FONC outreach. The workgroup created an mCOT website with more details and resources.

The goal of the additional support for injured workers and providers is to reduce the risk of harm from opioid use and promote evidence-based treatments for chronic pain. The pilot also supports claim managers who manage these complex claims while potentially decreasing overall long-term disability in the workers' compensation system.

Surveys with mCOT providers

As reported in previous deliverables, the University of Washington (UW) evaluation team developed an online survey to assess providers' experiences with information provided by the FONCs. Recruitment for the survey began in December 2022. Providers who had already met with a FONC were mailed a recruitment letter. For future provider participants, recruitment postcards and business cards were created for FONCs to distribute at meetings with providers. In addition, UW staff created recruitment bullet points for the FONCs for use with email or letter communication. Among 44 providers contacted, no providers have completed the survey as of June 2025. This is likely due to multiple factors, including

provider time constraints and lack of financial compensation for survey time. The lack of responses to the survey does not reflect providers' interest and engagement in the pilot but rather the reality of healthcare practice as well as general limitation on survey.

Analysis of workers on pre-existing chronic opioids

The UW evaluation team examined the records of the 85 injured workers on chronic opioids who have been reviewed by the ORT to date, using notes from the ORT and other information found in the claim files. The evaluation team prepared descriptive information of these workers in the following areas: age; number of allowed conditions; presence of substance use disorders; previous mental health diagnoses; surgeries; medical complexity; use of opioids before injury; opioid dose and changes in dose; use of best practices by their providers; time-loss status; and claim closure. Detailed results have been presented to L&I during monthly meetings. Highlights include:

Demographic and medical

- Average age of workers was 55 years (median 54).
- Workers had three allowed conditions on average.
- 42% of the workers were considered medically complex.
- Over half of the workers had surgery (54%) or had a planned surgery (9%) as part of their workers' compensation claim at the time of the initial opioid team review.
- Most (75%) of the workers who were selected for the mCOT pilot were receiving an opioid prescription prior to their injury.
- Most workers (72%) who were selected for the mCOT pilot were on low or moderate doses of opioids (<50 MEDD).
- Almost half (46%) of the workers selected for the mCOT pilot were working at the time of the initial team review.

Claim status

- At the time of the initial team review, 18% of selected workers had a claim status of Medical Only, and 18% had a claim status of Kept on Salary (KOS).
- About a quarter (26%) of the workers selected for the mCOT pilot had not received any time-loss compensation at the time of the initial team review.
- 26% of claims closed within 6 months of the initial team review.

Issues Identified by the opioid review team

The opioid review team identified the following issues. An average of six issues (range 1-11) were identified per worker.

- Missing documents (e.g., visit notes or test results): 69%
- High risk for using opioids: 51%
- Lack of documentation for opioid prescribing best practices: 46%
- Claim being affected by unrelated medical conditions: 21%
- Slow recovery progression: 18%
- Lack of care coordination: 16%
- With at least some opioid best practices observed: 15%
- Gaps in medical care or issues with treatment adherence: 14%
- Lack of a treatment plan: 11%

Missing records

The most frequently mentioned missing records from the claim file included:

- opioid records;
- unspecified medical visit records;
- initial visit notes (e.g., ER);
- post-op visit notes; and
- MRI or x-ray reports.

Claims manager and vocational rehabilitation counselor involvement

- Claims managers attended the ORT meetings for 67% of the cases.
- For cases involving a VRC, a VRC attended the ORT meetings 85% of the time.

Provider engagement

Table 1 reports details on provider engagement.

- Provider contacts were attempted for 55% of the cases.
- Provider contact was successful 94% of the time it was attempted.

Table 1. Provider contacts.

	n
Reviews conducted	85
Provider contacts attempted	47 (55% of reviewed workers)
Provider contacts successful	44 (94% of attempted contacts)

Changes in opioid dose

Among the 68 workers who have reached six months after the initial opioid team review:

- Opioids were stopped in 15%
- Opioid doses decreased in 6%
- Opioid doses increased in 6%
- 26% of the claims had closed, so no information was available.

Figure 1 reports the dosage change at the 6 month review compared to the initial team review, among all 85 injured workers who have been reviewed (including those who have not yet reached the six-month follow-up). Workers on pre-existing COT and workers on new COT are presented separately.

- Among 64 workers on pre-existing COT:
    - Opioids were stopped in 8%.
    - Opioid doses decreased in 5%.
    - Opioid doses increased in 2%.
    - Opioid doses did not change in 45%.
- Among 21 workers on new COT:
    - Opioids were stopped in 24%.
    - Opioid doses decreased in 5%.
    - Opioid doses increased in 14%.
    - Opioid doses did not change in 14%.

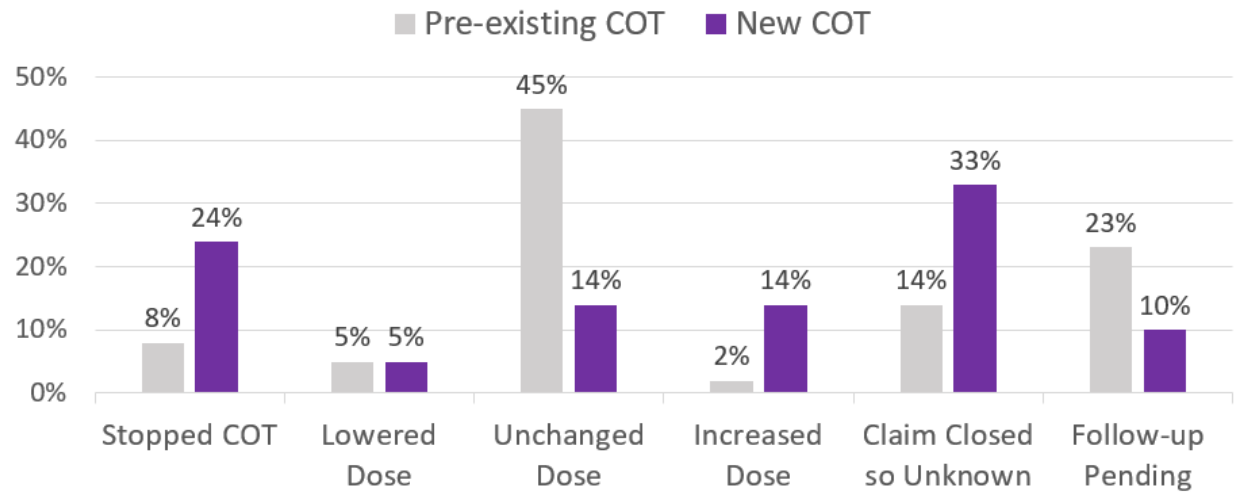

Figure 1. Dosage change at six-month review compared to initial team review, by pre-injury opioid use (N = 85, 64 pre-existing COT, 21 new COT).

Conclusions

The analysis presented here includes the records of 85 workers on chronic opioid therapy. The ORT has reached out to providers in over half of the cases offering resources that may benefit the care of the injured worker. Most (94%) of the provider contacts were successful. The ORT process has provided benefit to the worker, the provider, and L&I staff. It has been useful for the claims managers and VRCs to participate in ORT where they hear treatment history of claim-related conditions, past medical history, a discussion of the workers' risk factors and any barriers to recovery, gaps in care, and suboptimal treatment, and why it matters when medical records are missing from the claim file. Although most of the workers were receiving opioids prior to the injury, opioids were stopped or the dose decreased in at least 21% of workers. In addition to potentially influencing opioid use or opioid dose, the ORT process has also been improving coordination of care for injured workers and collaboration among internal staff and external VRCs. It has allowed L&I to review claims in a prospective, holistic, and worker-centered way.

Plan for continued analysis and evaluation of mCOT pilot

The following steps may be taken to continue the analysis and evaluation of the mCOT pilot.

1. Conduct a process evaluation of the pilot including, but not limited to, tracking the number of eligible workers, number of workers selected, number reviewed, and provider contact status (planned, attempted, successful). This could be a continuation of the above analysis.

2. Conduct key informant interviews with claims managers or VRCs who have participated in the project.

3. Conduct a descriptive comparison of mCOT time-loss outcomes and claim closure status to "expected" time-loss and claim outcomes. This could be based on new time-loss curves and a similar analysis of claim closure rates (that has not yet been conducted).

4. Conduct a descriptive comparison of cases who were selected for mCOT review to cases who were eligible but not selected for review. Compare demographics and measures of injury

severity. Compare time-loss status and claim closure status for these two groups (acknowledging that the groups may not be perfectly comparable).

Impact evaluation of the Bree chronic opioid therapy guideline

Description

The Bree Collaborative Long-Term Opioid Therapy Report and Recommendations, published in 2020, is for providers managing adult patients with chronic pain who are receiving long-term opioid therapy. It's a supplemental document that "updates the evidence and aligns best practice recommendations with those from the 2015 AMDG Interagency Guideline on Prescribing Opioids for Pain, guidelines from the HHS Guide for Clinicians on the Appropriate Dosage Reduction or Discontinuation of Long-Term Opioid Analgesics, the 2019 Bree Collaborative Care for Chronic Pain Report and Recommendations, and the Washington State Administrative Code (WAC) pain rules."

Analysis of treatment pathways

The Bree guideline describes the following treatment pathways for patients on chronic opioids:

- Maintain and monitor;
- Taper or discontinue; and
- Transition to MOUD.

As part of developing metrics to assess implementation of the Bree guideline, the UW evaluation team analyzed treatment pathways for injured workers receiving chronic opioids.

Methods

The UW evaluation team selected injured workers from the Washington State workers' compensation state fund system with at least one opioid prescription filled between Jan. 1, 2018, and Dec. 31, 2021. For this analysis, the UW evaluation team defined five categories of treatment pathways among workers receiving chronic opioid therapy:

- Increasing dose ($\geq$10% dose increase relative to prior calendar quarter);
- Stable dose (same dose or dose increased or decreased by <10% relative to prior quarter);
- Taper ($\geq$10% dose decrease relative to prior quarter);
- Discontinuation (no opioids for at least the last 30 days of a quarter, or no prescription data); and
- Transition to MOUD.

Chronic opioid use was defined as receiving at least a 60-days supply of opioids in a calendar quarter. Non-chronic opioid use was defined as receiving between one and 59 days' supply of opioids in a calendar quarter. The average MEDD was calculated for each day that a worker received opioids in a quarter. If there were two or more prescriptions on a particular day, the MEDD for all prescriptions was combined. For each calendar quarter, opioid use for injured workers was categorized as:

- No opioids in a calendar quarter;
- Non-chronic opioids 1-29 days in a calendar quarter;
- Non-chronic opioids 30-59 days in a calendar quarter;
- Chronic opioids <50 MEDD;
- Chronic opioids 50-89 MEDD;

- Chronic opioids 90-119 MEDD; and
- Chronic opioids ≥120 MEDD.

The treatment pathways were analyzed from one calendar quarter to the next calendar quarter. For example, for workers with chronic opioids in the first quarter of 2018, opioid prescriptions were analyzed for the second quarter of 2018 to determine if the pattern of opioid prescription had changed. Prescription monitoring program (PMP) data was used to determine changes in days' supply and doses of opioids. L&I pharmacy billing data was used to determine if a worker received MOUD.

Results

The percentage of injured workers with at least one opioid prescription between 2018 and 2021 in each of the above categories is shown in **Figure 2**. **Table 3** shows the percentage of workers in each category for the first quarter of 2018. Among workers with any opioids between 2018 and 2021, about three-quarters had nonchronic or no opioid use in the first quarter of 2018, and about one-quarter received chronic opioids. (66% received nonchronic opioids; 11% did not receive any opioids; and 24% received chronic opioids that quarter.)

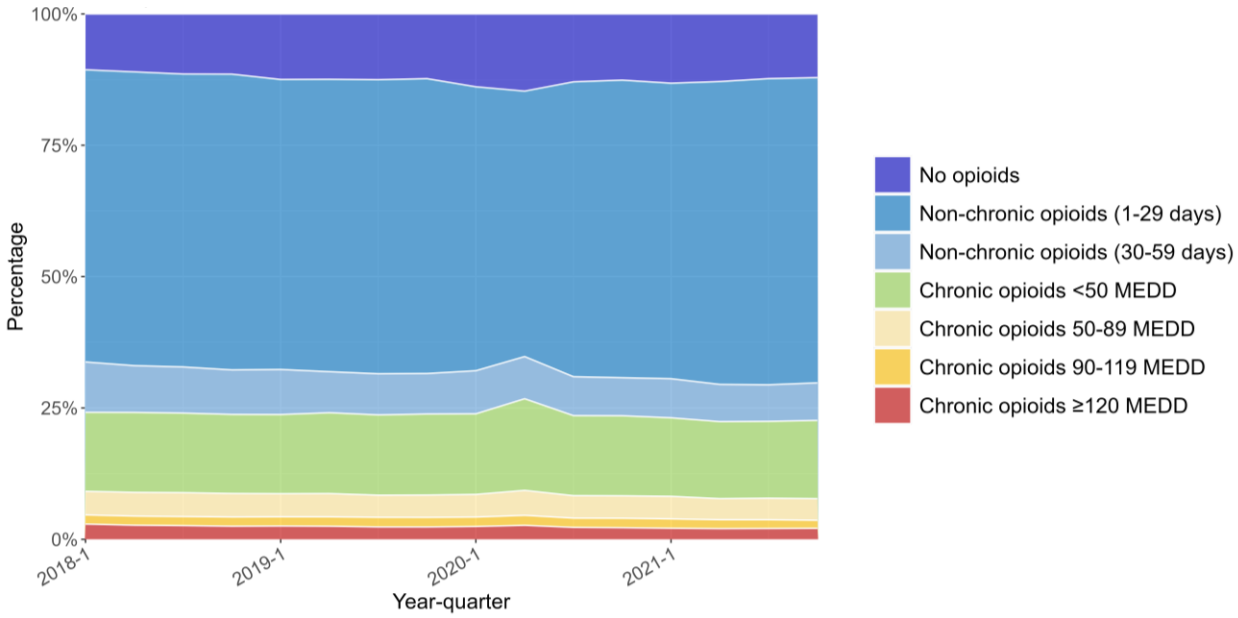

Figure 2. Percentage with chronic, nonchronic, or no opioids among workers with at least one prescription, 2018-2021.

Table 2. Percentage with chronic, nonchronic, or no opioids in the first quarter of 2018 among workers with at least one prescription, 2018-2021.

2018 Q1	Percent
No opioids	11%
Non-chronic opioids (1-29 days)	56%
Non-chronic opioids (30-59 days)	10%
Chronic <50 MEDD	15%
Chronic 50-89 MEDD	4%
Chronic 90-119 MEDD	2%
Chronic ≥120 MEDD	3%

The number of workers receiving chronic opioids in a calendar quarter decreased substantially between 2018 and 2021 (**Figure 3**). In the first quarter of 2018, 5,892 injured workers met the definition for chronic opioids. By the fourth quarter of 2021, 2,585 met the definition for chronic opioids.

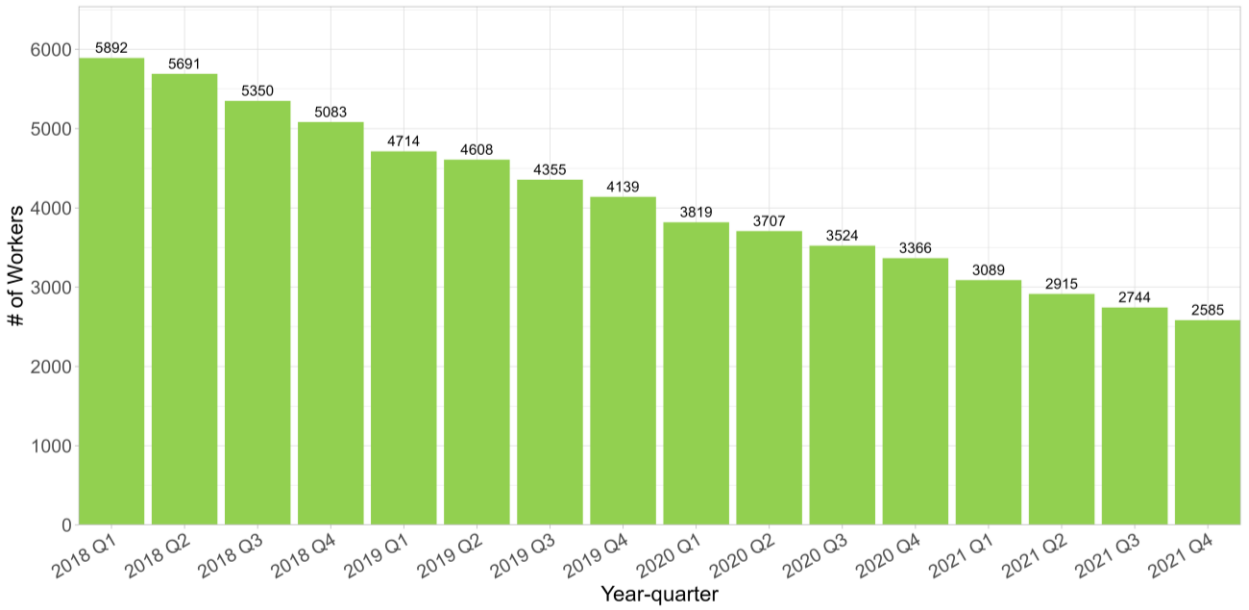

Figure 3. Number of workers with chronic opioids, 2018-2021.

Among workers receiving opioids chronically, the percentage in each dose category is shown in **Figure 4** and **Table 4**. In the first quarter of 2018, 62% had <50 MEDD, 19% had 50-89 MEDD, 7% had 90-119 MEDD, and 12% had ≥120 MEDD. From 2018 to 2021, the percentage in the lowest-dose category increased slightly, and the percentage in the highest category decreased slightly.

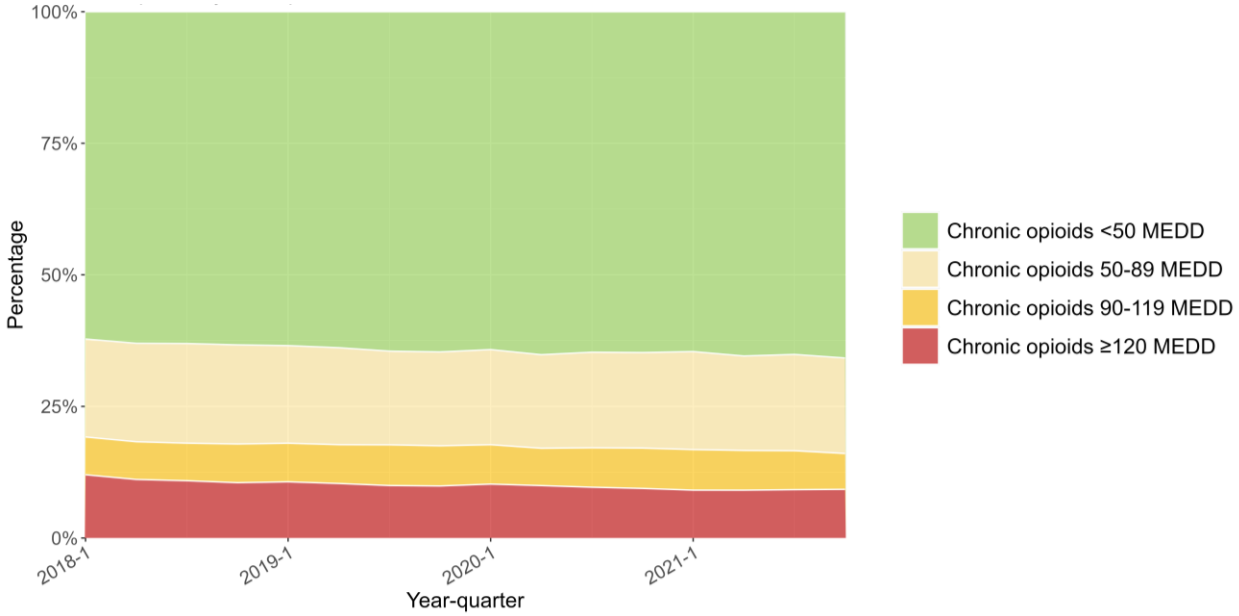

Figure 4. Dose categories among workers with chronic opioids.

Table 4. Dose categories among workers with chronic opioids.

Dose	First quarter 2018 percentage	First quarter 2021 percentage
<50 MEDD	62%	65%
50-89 MEDD	19%	19%
90-119 MEDD	7%	8%
≥120 MEDD	12%	9%

Trends in treatment pathways are shown in **Figure 5** and **Table 5**. In the first quarter of 2018, of workers with chronic opioids in the prior quarter, 7% discontinued opioids, 16% tapered the opioid dose, 60% were on a stable dose, 17% had an increased dose, and 0% transitioned to MOUD (in the available data). Measurement of MOUD will be discussed in more detail in the limitations. The percentage in each treatment pathway remained relatively constant between 2018 and 2021.

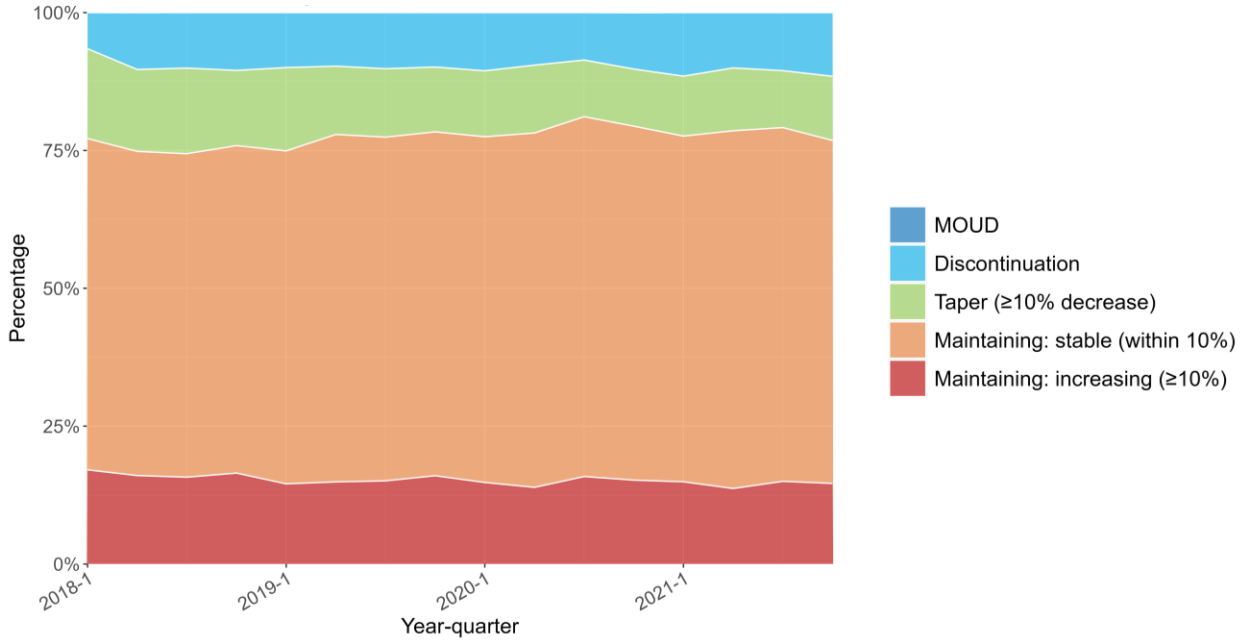

Figure 5. Treatment pathways among workers with chronic opioids.

Table 5. Treatment pathways among workers with chronic opioids.

Pathway	First quarter 2018 percent	First quarter 2021 percent
Discontinuation	7%	12%
Taper >10%	16%	11%
Maintain stable	60%	63%
Increasing >10%	17%	15%
MOUD	0%	0%

Discussion

The UW evaluation team was able to examine changes in opioid treatment pathways from one calendar quarter to the next quarter in workers with chronic opioids between 2018 and 2021. In the first quarter of 2021, 12% of injured workers on chronic opioids had discontinued opioids, and for 11% their dose decreased by more than 10%. For most (63%) workers on chronic opioids, the dose remained stable (did not increase or decrease by more than 10%). MOUD treatment was rarely billed to and paid for by L&I. Some workers may have received MOUD treatment outside of the workers' compensation system for opioid use disorders that started before the work injury.

Limitations

One limitation of this analysis was that MOUD medications were not available in the PMP data that L&I supplied. The UW evaluation team was able to use L&I pharmacy billing data to assess MOUD, but billing data may underestimate the total amount of MOUD treatment. A second limitation is that the current analysis only examines changes from one calendar quarter to the next quarter. It is difficult to assess the treatment pathways over a longer period of time because of the large number of variations in potential outcomes from quarter to quarter.

Patients' comparative risks and benefits of different opioid treatment pathways

The risks and benefits to chronic opioid patients for each opioid treatment pathway are in **Table 6**. This is a high-level summary of the scientific literature. Other factors may influence the benefit/risk profile for individual patients. For example, more rapid tapering, compared with a slower rate of tapering, is associated with a greater likelihood of opioid-related adverse events.[1]

Table 6. Patients' comparative risks and benefits of opioid treatment pathways

	Benefits	Risks
Treatment with MOUD	• Most effective and evidence-based treatment for OUD[2,3] • Significantly reduce opioid and all-cause mortality[4,5]	• None of note
Tapering of opioids	• Reduced risk of opioid use disorder and continued opioid therapy[6] • Preventing sustained opioid exposure[7] • Preventing long-term risks of OUD, overdose, and death[7] • May improve function, pain severity, and quality of life[7]	• Risk of ER or hospitalization for overdose, withdrawal, and mental health crises, particularly if taper is rapid[1,11,12] • Increased risk of care termination, care disengagement, changing providers, changing insurance plans[6,13,14]
Discontinuation of opioids	• Reduced risk of opioid use disorder and continued opioid therapy[6] • Preventing sustained opioid exposure[7] • Preventing long-term risks of OUD, overdose, and death[7] • May improve function and quality of life[7]	• Risk of ER or hospitalization for overdose or substance use disorder, particularly if taper is rapid[1] • Increased risk of heroin use[8] • Increased risk of overdose (for example, if patients seek new opioid sources to treat their pain or withdrawal symptoms) or suicide deaths, particularly among patients treated with opioids longer[9,10]
Maintaining – stable dose	• Continued care engagement[6]	• Risk of opioid-related adverse event[15-17]

Maintaining – increasing dose	• Continued care engagement[6]	• Increased risk of opioid-related overdose and adverse events[15-17] • Increased risk of death and OUD[6]

Update on interviews with health systems

The UW evaluation team conducted interviews to learn about implementing the Bree Collaborative Long-Term Opioid Therapy Report and Recommendations. The team interviewed three physicians at three large healthcare systems in Washington with expertise in chronic pain management and who specialize in:

- Psychiatry
- Physical medicine and rehabilitation

These are the views from our interviewees. They do not reflect a representative sample of Washington providers who treat chronic pain patients.

Takeaways:

- There is awareness of the 2020 Bree Collaborative Long-Term Opioid Therapy Report and Recommendations.
    - The physicians interviewed were familiar with this guideline.
- Two physicians were unaware of any implementation specific to the 2020 Bree guideline at their facilities. One physician noted implementation efforts for the guideline:
    - The guideline was reviewed as part of Grand Rounds and by their primary care controlled substance group. There is a strong emphasis at this facility on the three pathways outlined in the guideline (although there is no tracking mechanism for this).
- There has been implementation of opioid guidelines more generally (2015 AMDG, 2016 CDC, 2019 pain rules, etc.) in at least two of the facilities, using a variety of interventions:
    - Electronic medical record (EMR):
        - Popups for annual evaluation, dose alert, co-prescribing, etc.
        - Risk stratification protocol built into EMR
    - Work flows
    - Primary care champions
    - Targeted education – grand rounds, conferences, etc.
- Guideline and rule implementation is time-consuming and requires multiple points of intervention.
    - One healthcare system spent about two years implementing the 2019 pain rules (and at the same time were still educating on 2016 CDC guidelines).
    - Opioid guideline implementation was described as an iterative process at another facility, with implementation efforts continually updated as new guidelines are published.
- Reported facilitators to implementing opioid guidelines were:
    - Physician champions who are able to provide feedback on the individual performance of prescribers.

    - The availability of technology (such as EMRs). This makes it easier to create tools to aid in guideline implementation.
- Reported challenges to implementing opioid guidelines were:
    - Operationalizing clinical guidelines
        - One physician noted that it is important to keep it simple, and that prescribers do not want another complicated tool. It was suggested to highlight three points and create one or two tools, then check the PMP for every patient.
    - There are limitations to tools integrated into EMRs:
        - Difficult to track self-reported data (e.g., pain, function, etc.) longitudinally in an effective way that can be correlated with treatment.
        - MEDD calculations can be inaccurate.
        - The tool is limited by what data can be pulled by the EMR.
        - There are a small number of patients for whom the EMR cannot match PMP data.
    - Younger physicians have less interest in attending CMEs.
    - The high turnover rate of clinicians.

Potential best practices for addressing the clinical needs of patients on chronic opioid therapy

Major themes that emerged from the issues identified by the ORT include:

- missing documentation;
- best practices either not utilized or documented by the attending provider (AP);
- gaps in care coordination;
- high-risk opioid prescribing or high-risk for opioid misuse; and
- medical complexity of workers.

The UW evaluation team discussed potential best practices for addressing the clinical needs of patients on chronic opioid therapy with L&I subject matter experts.

Potential best practices for AP's office:

- Send all worker medical records to L&I in a timely manner.
- For workers receiving a prescription outside of L&I, request records from their prescriber for care coordination.

Potential best practices for L&I:

- Enhance records management system (e.g., medical records searchable by date of service) to improve efficiency and thoroughness of information gathering.
- Educate AP on billing for care coordination.
- Assign nurse case managers to patients with complex medical issues.
- Increase utilization of health services coordinators.
- Ensure all records are requested from AP (e.g., PT, MRIs, ER).

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