Performance Measures Coordinating Committee:

In response to the increased number of deaths from opioid overdoses, the medical directors of the Washington State Agencies developed Guidelines on Prescribing Opioids for Pain\(^1\) in 2007. These guidelines were revised in 2010 and again in 2015. The Centers for Disease Control and Prevention (CDC) developed and disseminated similar national guidelines in 2016.\(^2\) However, understanding opioid prescribing practices and the impact of the opioid epidemic on a population basis is necessary for a state, region, health plan, clinic, or provider to effectively implement the guidelines. The Dr. Robert Bree Collaborative (Bree Collaborative) convened a workgroup that developed metrics to help implement the guidelines and standardize comparisons between populations.

In 2011, the Washington State Legislature established the Dr. Robert Bree Collaborative so that public and private health care stakeholders would have the opportunity to identify specific ways to improve health care quality, outcomes, and affordability in Washington State. These stakeholders are appointed by the Governor as Collaborative members and represent public health care purchasers for Washington State, private health care purchasers (employers and union trusts), health plans, physicians and other health care providers, hospitals, and quality improvement organizations.

Each year, our members identify up to three health care services with high variation in the way that care is delivered, that are frequently used but do not lead to better care or patient health outcomes, or that have patient safety issues. For most topics, we form an expert workgroup to develop evidence-based recommendations. Recommendations take into account existing quality improvement programs and the work done by other organizations and are then sent to the Washington State Health Care Authority to guide the type of health care provided to Medicaid enrollees, state employees, and other groups.

In 2016, the Bree Collaborative endorsed the 2015 Agency Medical Directors Group Guidelines on Prescribing Opioids for Pain, convened a workgroup to develop implementation strategies, and elected to develop opioid prescribing metrics aligned with both the Washington State and CDC guidelines. The metrics were designed to be limited in number, have a strategic focus, and to be used for quality improvement. The first six metrics focus on guideline-concordant prescribing including chronic opioid use, opioid dose, concurrent chronic sedative use and transition from short-term to long-term opioid use. The last three metrics focus on mortality, overdose morbidity, and prevalence of opioid use disorder. The metrics were unanimously adopted by Bree Collaborative members at the July 19\(^{th}\) Bree Collaborative meeting following a 30 day public comment period.

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The Agency Medical Director’s Opioid Prescribing Guideline Implementation workgroup believes that the Performance Measures Coordinating Committee should adopt three of the opioid prescribing metrics to encourage actionable measurement of this epidemic throughout Washington State. These three metrics were preliminarily also vetted and recommended by the WA Health Care Alliance. These metrics are listed in order of priority as follows:

1. New opioid patients transitioning to chronic opioids (e.g., Among new opioid patients, percent who then transition to chronic opioids in the next quarter)
2. Patients prescribed high-dose chronic opioid therapy (e.g., Percent of patients at high doses among patients prescribed chronic opioids)
3. New opioid patients days supply of first opioid prescription (e.g., Among new opioid patients, distribution of days supply on first prescription)

Details about the metrics are listed on the following pages and are also available on our website here: [www.breecollaborative.org/topic-areas/opioid/](http://www.breecollaborative.org/topic-areas/opioid/). Thank you for your consideration.

Sincerely,

Gary M Franklin, MD, MPH
Chair, Bree Collaborative Agency Medical Director’s Opioid Prescribing Guideline Implementation workgroup

Ginny Weir, MPH
Director, Bree Collaborative
Members of the Agency Medical Director’s Opioid Prescribing Guideline Implementation Workgroup

- Chris Baumgartner, Director Prescription Monitoring Program, Washington State Department of Health
- David Buchholz, MD, Medical Director of Provider Engagement, Premera
- Charissa Fotinos, MD, Deputy Chief Medical Officer, Washington State Health Care Authority
- Gary Franklin,* MD, Medical Director, Washington State Department of Labor and Industries
- Deborah Fulton-Kehoe, PhD, MPH, Research Scientist, Department of Environmental and Occupational Health Sciences, School of Public Health, University of Washington
- Frances Gough, MD, Chief Medical Officer, Molina Healthcare
- Dan Kent, MD, Chief Medical Officer, UnitedHealthcare
- Kathy Lofy, MD, Chief Science Officer, Washington State Department of Health
- Jaymie Mai, PharmD, Pharmacy Manager, Washington State Department of Labor and Industries
- Shirley Reitz, PharmD, Clinical Pharmacist Client Manager, OmedaRx, Cambia
- Gregory Rudolph, MD, Addiction Medicine, Swedish Pain Services
- Michael Schiesser, MD, Addiction Medicine, EvergreenHealth Medical Center
- Mark Stephens, President, Change Management Consulting
- David Tauben, MD, Chief of Pain Medicine, University of Washington Medical Center
- Gregory Terman MD, PhD, Professor, Department of Anesthesiology and Pain Medicine and the Graduate Program in Neurobiology and Behavior, University of Washington
- Michael Von Korff, ScD, Senior Investigator, Kaiser Permanente Washington Research Institute

*Bree Collaborative member
**First Priority**  
New opioid patients subsequently prescribed chronic opioids  
Metric 6A: Among new opioid patients, percent who then transition to chronic opioids in the next quarter  
Metric 6B: Rate of new opioid users transitioning to chronic opioid use in the current quarter (optional)

**Rationale**  
To track the transition from new to chronic opioid prescription

**AMDG 2015 Guideline:** *Because there is little evidence to support long term efficacy of chronic opioid analgesic therapy in improving function and pain, and there is ample evidence of its risk for harm, prescribers should proceed with caution when considering whether to initiate opioids or transition to chronic opioid analgesic therapy.* (Page 7)  
*Patients who used opioids for at least 90 days were greater than 60% more likely to still be on chronic opioids in 5 years.* (Page 11)  
*Do not discharge the patient with more than a two week supply of opioids, and many surgeries may require less. Continued opioid therapy will require appropriate reevaluation by the surgeon.* (Page 28)

**CDC 2016 Guideline:** *Long-term opioid use often begins with treatment of acute pain. When opioids are used for acute pain, clinicians should prescribe the lowest effective dose of immediate-release opioids and should prescribe no greater quantity than needed for the expected duration of pain severe enough to require opioids. Three days or less will often be sufficient; more than seven days will rarely be needed (recommendation category: A, evidence type: 4).* (Page 24)

<table>
<thead>
<tr>
<th>Number of Quarters of Data Needed</th>
<th>Three subsequent quarters (e.g., current calendar quarter (Oct-Dec) and the two subsequent previous calendar quarters (April-June, July-Sep))</th>
</tr>
</thead>
<tbody>
<tr>
<td>Numerator</td>
<td>Number of patients who are prescribed ≥60 days supply of opioids in the current calendar quarter (e.g., Oct-Dec) with at least one opioid prescription in the previous quarter (e.g., Jul-Sep) and no opioid prescription in the prior quarter (e.g., Apr-June)</td>
</tr>
</tbody>
</table>
| Denominator                      | A: Number of patients with at least one opioid prescription in the previous quarter (e.g., July-Sep), who have no opioids prescribed in the prior quarter (e.g., April-June)  
  B: Number of patients in the population in the calendar quarter (e.g., health plan population, Washington State population) |
| Frequency                        | Quarterly |
| Level of Analysis                | State/Region  
  System/Health Plan  
  Clinic/Provider |

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<table>
<thead>
<tr>
<th><strong>Definition of new opioid patient</strong></th>
<th>Patients with at least one opioid prescription in the current quarter (e.g., Oct-Dec), who have no opioids prescribed in the prior quarter (e.g., July-Sep) among patients in the population during both quarters.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Inclusions</strong></td>
<td>Opioid prescription data for all patients in the population pulled in three subsequent calendar quarters (e.g., Apr-June, Jul-Sep, Oct-Dec). See Appendix C for full list of included and excluded opioids</td>
</tr>
<tr>
<td><strong>Exclusions</strong></td>
<td>All patients with a cancer diagnosis or those who are on hospice, if possible All prescriptions for buprenorphine Prescriptions for opioid not typically used in outpatient settings or when used as part of cough and cold formulations including elixirs, and combination products containing antitussives, decongestants, antihistamines, and expectorants</td>
</tr>
</tbody>
</table>

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<table>
<thead>
<tr>
<th>Second Priority</th>
<th>Patients prescribed high-dose chronic opioid therapy</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Metric 3A: Percent of patients at high doses among patients prescribed chronic opioids</td>
</tr>
<tr>
<td></td>
<td>Metric 3B: Prevalence of patients prescribed opioids at high doses (optional)</td>
</tr>
</tbody>
</table>

**Rationale**

To track trends in high-dose opioid prescribing (e.g., ≥50 mg/day MED, ≥90 mg/day MED) among those being prescribed chronic opioid therapy and among the population (state, county, health plan, etc.)

AMDG 2016 Guideline: *There is no completely safe opioid dose. Chronic opioid analgesic therapy patients should be routinely assessed for risk as medical conditions and life circumstances may change during treatment.* (Page 12)  
Prescribe opioids at the lowest possible effective dose. If the dose is increased but does not result in clinically meaningful improvement in function, then significant tolerance or adverse effects to opioids may be developing and opioids should be tapered back to the previous dose or possibly discontinued. (Page 32)

CDC 2016 Guideline: *When opioids are started, clinicians should prescribe the lowest effective dosage. Clinicians should use caution when prescribing opioids at any dosage, should carefully reassess evidence of individual benefits and risks when considering increasing dosage to ≥50 morphine milligram equivalents (MME)/day, and should avoid increasing dosage to ≥90 MME/day or carefully justify a decision to titrate dosage to ≥90 MME/day (recommendation category: A, evidence type: 3).* (Page 22)

<table>
<thead>
<tr>
<th>Number of Quarters of Data Needed</th>
<th>One calendar quarter (e.g., current (Oct-Dec)).</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Numerator</strong></td>
<td>Number of patients in the population prescribed ≥60 days supply of opioids at ≥50 mg/day MED in the calendar quarter</td>
</tr>
<tr>
<td></td>
<td>Number of patients in the population prescribed ≥60 days supply of opioids at ≥90 mg/day MED in the calendar quarter</td>
</tr>
<tr>
<td><strong>Denominator</strong></td>
<td>A: Number of patients in the population prescribed ≥60 days supply of opioids in the calendar quarter</td>
</tr>
<tr>
<td></td>
<td>B: Number of patients in the population in the calendar quarter (e.g., health plan population, Washington State population)</td>
</tr>
<tr>
<td><strong>Days Supply</strong></td>
<td>The total days supply is the sum of the days supply from all opioid prescriptions prescribed during the calendar quarter, including overlapping prescriptions (and includes days that may extend into the next calendar quarter). Divide the number of units (e.g., tablets, capsules, patches) dispensed by the maximum number of units to be used in one day.</td>
</tr>
<tr>
<td><strong>Frequency</strong></td>
<td>Quarterly</td>
</tr>
</tbody>
</table>

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Level of Analysis
State/Region
System/Health Plan
Clinic/Provider

Inclusions
Opioid prescription data for all patients in the population pulled the calendar quarter (e.g., Oct-Dec)

See Appendix C for full list of included and excluded opioids

Exclusions
All patients with a cancer diagnosis or those who are on hospice, if possible

All prescriptions for buprenorphine

Prescriptions for opioid not typically used in outpatient settings or when used as part of cough and cold formulations including elixirs, and combination products containing antitussives, decongestants, antihistamines, and expectorants

<table>
<thead>
<tr>
<th>Conversion Factors for Commonly Prescribed Opioids</th>
<th>Non-Parenteral Opioid</th>
<th>Conversion factor*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Codeine</td>
<td>0.15</td>
<td></td>
</tr>
<tr>
<td>Dihydrocodeine</td>
<td>0.25</td>
<td></td>
</tr>
<tr>
<td>Fentanyl buccal, sublingual or lozenge/</td>
<td>0.13</td>
<td></td>
</tr>
<tr>
<td>Fentanyl film or oral spray</td>
<td>0.18</td>
<td></td>
</tr>
<tr>
<td>Fentanyl nasal spray</td>
<td>0.16</td>
<td></td>
</tr>
<tr>
<td>Fentanyl transdermal</td>
<td>2.4</td>
<td></td>
</tr>
<tr>
<td>Hydrocodone</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Hydromorphone</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Levorphanol tartrate</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>Meperidine hydrochloride</td>
<td>0.1</td>
<td></td>
</tr>
<tr>
<td>Methadone</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1–20 mg/day</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>21–40 mg/day</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>41–60 mg/day</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>≥61–80 mg/day</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>Morphine</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Oxycodone</td>
<td>1.5</td>
<td></td>
</tr>
<tr>
<td>Oxymorphone</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Pentazocine</td>
<td>0.37</td>
<td></td>
</tr>
<tr>
<td>Propoxyphene</td>
<td>0.23</td>
<td></td>
</tr>
<tr>
<td>Tapentadol</td>
<td>0.4</td>
<td></td>
</tr>
<tr>
<td>Tramadol</td>
<td>0.1</td>
<td></td>
</tr>
</tbody>
</table>

Calculation of Average MED per Day
The MED for each prescription is calculated by multiplying the number of units prescribed by the strength per unit and then multiplying by the conversion factor. The total MED is the sum of the MED from all opioid prescriptions prescribed during the calendar quarter, including overlapping prescriptions (and includes MED that may extend into the next calendar quarter). The total MED of all opioids is divided by 90 days.

Note: Some guidelines refer to MED as morphine milligram equivalent or MME.
Morphine Equivalent Dose Calculation

For example, if a patient filled 180 tablets of hydrocodone 5 mg / acetaminophen 500 mg and 180 tablets of oxycodone extended release 20mg during the calendar quarter, the average MED per day is calculated as follows:

1. Find hydrocodone dose for prescription: Hydrocodone 5 mg x 180 tablets = 900 mg
2. Convert hydrocodone dose to MED: 900 mg hydrocodone x 1 (conversion factor in Metric 3) = 900 mg MED
3. Find oxycodone dose for prescription: Oxycodone 20 mg x 180 tablets = 3600 mg
4. Convert oxycodone dose to MED: 3600 mg oxycodone x 1.5 (conversion factor in Metric 3) = 5400 mg MED
5. Add MEDs from all prescriptions: 900 mg + 5400 mg = 6300 mg total MED
6. Calculate average MED per day: 6300 mg MED ÷ 90 days = 70 mg per day MED
## Third Priority

**New opioid patients days supply of first opioid prescription**  
Among new opioid patients, distribution of days supply on first prescription

### Rationale

CDC guidelines recommend initial opioid prescriptions should generally be for 3 days or less. Among new opioid patients in a quarter this metric tracks the percent of first prescriptions with days supply of ≤3, 4-7, 8-13, and ≥14.

**AMDG 2015 Guideline:** *If opioids are prescribed, it should be at the lowest necessary dose and for the shortest duration (usually less than 14 days).* (Page 22)

**CDC 2016 Guideline:** *Long-term opioid use often begins with treatment of acute pain. When opioids are used for acute pain, clinicians should prescribe the lowest effective dose of immediate-release opioids and should prescribe no greater quantity than needed for the expected duration of pain severe enough to require opioids. Three days or less will often be sufficient; more than seven days will rarely be needed (recommendation category: A, evidence type: 4).* (Page 24)

### Number of Quarters of Data Needed

Two subsequent calendar quarters (e.g., current (Oct-Dec) and previous (July-Sep)).

### Numerator

Number of patients with at least one opioid prescription in the current quarter (e.g., Oct-Dec), who have no opioids prescribed in the prior quarter (e.g., July-Sep) among patients in the population during both quarters by days supply (i.e., ≤3, 4-7, 8-13, and ≥14) in the current quarter.

### Denominator

Patients with at least one opioid prescription in the current quarter (e.g., Oct-Dec), who have no opioids prescribed in the prior quarter (e.g., July-Sep) in the population during both quarters.

### Frequency

Quarterly

### Level of Analysis

Region/State  
System/Health Plan  
Clinic/Provider

### Definition of new opioid patient

Patients with at least one opioid prescription in the current quarter (e.g., Oct-Dec), who have no opioids prescribed in the prior quarter (e.g., July-Sep) among patients in the population during both quarters.

### Inclusions

Opioid prescription data for all patients in the population pulled in two subsequent calendar quarters (e.g., Jul-Sep, Oct-Dec).

See **Appendix C** for full list of included and excluded opioids

### Exclusions

All patients with a cancer diagnosis or those who are on hospice, if possible

All prescriptions for buprenorphine
Prescriptions for opioid not typically used in outpatient settings or when used as part of cough and cold formulations including elixirs, and combination products containing antitussives, decongestants, antihistamines, and expectorants