Date started: August 2016
Date completed: December 2016

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Objective for the Review: To critically review the evidence on strategies for the prescribing of opioid pain medication for patients >/= 15 years with chronic, non-end-of-life pain

Inclusion Criteria: Adult and adolescent patients (>/= 15 years of age) being treated for chronic or non-end-of-life pain not related to an active malignancy with long-term opioid prescriptions in any clinical setting (i.e., Emergency Department, outpatient, inpatient) throughout OHSU Partners

Exclusion Criteria:
- pediatric patients (i.e., patients < 15 years of age)
- end-of-life patients
- patients with pain related to active malignancy

Definitions:
Long-term opioid use: use of opioids on most days for > 3 months
Chronic pain: pain conditions that typically last > 3 months or past the time of normal tissue healing
Non-cancer and Non-end-of-life pain: Pain caused by an entity that is not related to an active malignancy or a diagnosis that has resulted in a life expectancy less than 1 year
Opioids: Schedules II through V medications under the federal Controlled Substance Act, as modified by the Oregon State Board of Pharmacy (includes buprenorphine, codeine, hydrocodone, hydromorphone, fentanyl, methadone, morphine, oxycodone, oxymorphone, buprenorphine, tramadol and tapentadol)

**Target Guideline Users:** All clinicians caring for adults with chronic, non-end-of-life pain in any clinical setting throughout OHSU Partners (i.e., Emergency Department, outpatient, inpatient)
OHSU Partners
Office of Clinical Integration and Evidence-Based Practice
Adult Safe Opioid Prescribing for Chronic, Non-End-of-Life Pain

**Evidence Summary**

**Review Preparation:**

*In adult patients with chronic, non-end-of-life pain,*

1. What is the effectiveness of long-term opioid therapy versus placebo, no opioid therapy, or non-opioid therapy for long-term (≥1 year) outcomes related to pain, function, and quality of life, and how does effectiveness vary according to the type/cause of pain, patient demographics, and patient comorbidities?

2. What is the comparative effectiveness of opioid dosing strategies (different methods for initiating and titrating opioids; immediate-release versus ER/LA opioids; different ER/LA opioids; immediate-release plus ER/LA opioids versus ER/LA opioids alone; scheduled, continuous versus as-needed dosing; dose escalation versus dose maintenance; opioid rotation versus maintenance; different strategies for treating acute exacerbations of chronic pain; decreasing opioid doses or tapering off versus continuation; and different tapering protocols and strategies)?

3. What are the risks of opioids versus placebo or no opioids on abuse, addiction, overdose, and other harms, and how do harms vary according to the type/cause of pain, patient demographics, patient comorbidities, and dose?

4. What is the accuracy of instruments for predicting risk for opioid overdose, addiction, abuse, or misuse; the effectiveness of risk mitigation strategies (use of risk prediction instruments); effectiveness of risk mitigation strategies including opioid management plans, patient education, urine drug testing, prescription drug monitoring program (PDMP) data, monitoring instruments, monitoring intervals, pill counts, and abuse-deterrent formulations for reducing risk for opioid overdose, addiction, abuse, or misuse; and the comparative effectiveness of treatment strategies for managing patients with addiction?

5. What are the effects of prescribing opioid therapy versus not prescribing opioid therapy for acute pain on long-term use?

**Quality Measures:**

**Outcome**

- Patient satisfaction with pain management
- Patient functional status

**Process**

- Utilization of urine drug testing
- Percent of providers registered to use PDMP
- Utilization of PDMP
- Receipt of opioid agreement
- Prevalence of patients treated with opioids and mean dose
- Prevalence of concomitant use of opioids and benzodiazepines
- Referrals to IMPACT/Acute Pain Service/Comprehensive Pain Clinic/Addiction Medicine
- Utilization of naloxone in patients prescribed > 50mg MME/day
## Adult Safe Opioid Prescribing for Chronic, Non-End-of-Life Pain

### Evidence Summary

<table>
<thead>
<tr>
<th>External Guideline</th>
<th>Organization and Author</th>
<th>Last Update</th>
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<tbody>
<tr>
<td>Guideline for Prescribing Opioids for Chronic Pain</td>
<td>Centers for Disease Control and Prevention</td>
<td>2016</td>
</tr>
<tr>
<td>Management of Chronic Pain in Survivors of Adult Cancers</td>
<td>American Society of Clinical Oncology</td>
<td>2016</td>
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<tr>
<td>Managing Chronic Complications of Sickle Cell Disease: In Evidence-Based Management of Sickle Cell Disease</td>
<td>National Heart, Lung and Blood Institute</td>
<td>2014</td>
</tr>
<tr>
<td>Guidelines for Responsible Opioid Prescribing in Chronic Non-Cancer Pain: Part II</td>
<td>American Society of Interventional Pain Physicians</td>
<td>2012</td>
</tr>
<tr>
<td>Managing Chronic Pain in Adults with or in Recovery from Substance Use Disorders</td>
<td>Substance Abuse Mental Health Services Administration</td>
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The seven published clinical guidelines were evaluated for this review using the **University of Pennsylvania’s Center for Evidence-Based Practice Trustworthy Guideline rating scale**. The scale is based on the Institute of Medicine’s “Standards for Developing Trustworthy Clinical Practice Guidelines” (IOM), as well as a review of the AGREE Enterprise and Guidelines International Network domains.

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<td>2. Conflict of interest</td>
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<td>4. Systematic Review</td>
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**Adult Safe Opioid Prescribing for Chronic, Non-End-of-Life Pain Evidence Summary**

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<th>5. Supporting evidence</th>
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<td>8. Currency and updates</td>
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See appendix A for full description of the Trustworthy Guideline grading system.

### Guideline Evidence Evaluation Systems

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<tbody>
<tr>
<td><strong>Recommendation</strong></td>
<td><strong>Category A recommendation:</strong> Applies to all persons; most patients should receive the recommended course of action. <strong>Category B recommendation:</strong> Individual decision making needed; different choices will be appropriate for different patients. Clinicians help patients arrive at a decision consistent with patient values and preferences and specific clinical situations. <strong>Evidence Type:</strong> Type 1 evidence: Randomized clinical trials or overwhelming evidence from observational studies.</td>
<td><strong>Level A recommendations:</strong> Generally accepted principles for patient management that reflect a high degree of clinical certainty (i.e., based on strength of evidence Class I or overwhelming evidence from strength of evidence Class II studies that directly address all of the issues). <strong>Level B recommendations:</strong> Recommendations for patient management that may identify a particular strategy or range of management strategies that reflect moderate clinical certainty (i.e., based on strength of evidence Class II studies that directly address the issue, decision analysis that directly addresses the issue, or strong consensus of strength of evidence Class III studies).</td>
<td><strong>No formal evidence evaluation methodology was used.</strong></td>
<td><strong>Used GRADE methodology: Quality of Evidence:</strong> <strong>High:</strong> Consistent evidence from well-performed randomized controlled trials (RCTs) or exceptionally strong evidence from unbiased observational studies. <strong>Moderate:</strong> Evidence from RCTs with important limitations (inconsistent results, methodological flaws, indirect or imprecise evidence), or unusually strong evidence from unbiased observational studies. <strong>Low:</strong> Evidence for at least one critical outcome from observational studies, from RCTs with serious flaws, or indirect evidence. <strong>Very Low:</strong> Evidence for at least one of the critical outcomes from unsystematic clinical observations or very indirect evidence. <strong>Strength of Recommendation:</strong></td>
<td><strong>Used GuideLines Into DEcision Support (GLIDES) methodology</strong></td>
<td><strong>No formal evidence evaluation methodology was used.</strong></td>
<td></td>
</tr>
</tbody>
</table>

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### Level C recommendations:
Other strategies for patient management that are based on Class III studies, or in the absence of any adequate published literature, based on panel consensus.

### Strong:
Benefits clearly outweigh harms and burdens, or vice versa.

### Weak:
Benefits closely balanced with harms and burdens.

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#### Review of Relevant Evidence: Search Strategies and Databases Reviewed

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<thead>
<tr>
<th>Search Strategies</th>
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<td><strong>Language</strong></td>
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<tr>
<td><strong>Age of Subjects</strong></td>
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#### Evidence Found with Searches

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</thead>
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<td>Systematic reviews/Meta-analysis</td>
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</tr>
<tr>
<td>☐</td>
<td>Randomized controlled trials</td>
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<tr>
<td>☐</td>
<td>Non-randomized studies</td>
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February 2017
Question #1. In adult patients with chronic, non-end-of-life care pain, what is the effectiveness of long-term opioid therapy versus placebo, no opioid therapy, or non-opioid therapy for long-term (≥1 year) outcomes related to pain, function, and quality of life, and how does effectiveness vary according to the type/cause of pain, patient demographics, and patient comorbidities?

OHSU Partners Clinical Practice Recommendation(s):
Non-pharmacologic therapy and non-opioid pharmacologic therapy are preferred for chronic pain. Clinicians should consider opioid therapy only if expected benefits for both pain and function are anticipated to outweigh risks to the patient. If opioids are used, they should be combined with non-pharmacologic therapy and non-opioid pharmacologic therapy, as appropriate. *(Dowell, Haegerich, & Chou, 2016)*

- **Strong Recommendation; Low Quality Evidence**

Before starting opioid therapy for chronic pain, clinicians should establish treatment goals with all patients, including realistic goals for pain and function, and should consider how opioid therapy will be discontinued if benefits do not outweigh risks. Clinicians should continue opioid therapy only if there is clinically meaningful improvement in pain and function that outweighs risks to patient safety. *(Dowell et al., 2016)*

- **Strong Recommendation; Very Low Quality Evidence**

Before starting and periodically during opioid therapy, clinicians should discuss with patients known risks and realistic benefits of opioid therapy and patient and clinician responsibilities for managing therapy. *(Dowell et al., 2016)*

- **Strong Recommendation; Low Quality Evidence**

Non-opioid pharmacological and non-pharmacological therapies, including CAM, should be considered routine before opioid treatment is initiated. Opioids may be necessary and should not be ruled out based on an individual's having a SUD history.

- **Consensus Statement**

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At admission, check the PDMP to confirm opioid dosing and prior prescriber.

If opioids are prescribed at discharge:
   a. The prescription should be for the lowest practical dose for a limited duration (3-5 days), and the prescriber should consider the patient’s risk for opioid misuse, abuse, or diversion
   b. The clinician should honor existing patient-physician pain contracts/treatment agreements and consider past prescription patterns from information sources such as prescription drug monitoring programs
   c. Establish if the patient has an opioid agreement with his or her primary care provider or other provider
   d. Avoid concomitant prescription of benzodiazepines or sedative hypnotics

-Consensus Statements

Alternatives to opioid prescribing should be considered in the management of patients with non-end-of-life pain, including: non-opioid medications (e.g., NSAIDS, TCAs, SNRIs, anti-convulsants), physical treatments (e.g., exercise therapy, weight loss), behavioral treatment (e.g., CBT, mindfulness exercises), complementary and alternative medicine (CAM) (e.g., chiropractic, acupuncture, massage), and procedures. [10] (See APPENDIX A for additional resources.)

-Consensus Statement

Guideline Recommendations:

**General Population:**
The Centers for Disease Control and Prevention 2016 guideline states that non-pharmacologic therapy and non-opioid pharmacologic therapy are preferred for chronic pain. Clinicians should consider opioid therapy only if expected benefits for both pain and function are anticipated to outweigh risks to the patient. If opioids are used, they should be combined with nonpharmacologic therapy and non-opioid pharmacologic therapy, as appropriate (recommendation category: A, evidence type: 3). Before starting opioid therapy for chronic pain, clinicians should establish treatment goals with all patients, including realistic goals for pain and function, and should consider how opioid therapy will be discontinued if benefits do not outweigh risks. Clinicians should continue opioid therapy only if there is clinically meaningful improvement in pain and function that outweighs risks to patient safety (recommendation category: A, evidence type: 4). Before starting and periodically during opioid therapy, clinicians should discuss with patients known risks and realistic benefits of opioid therapy and patient and clinician responsibilities for managing therapy (recommendation category: A, evidence type: 3).

The 2015 Washington State Interagency Guideline on Prescribing Opioids for Pain states: Prescribe COAT only if there is sustained clinically meaningful improvement in function and no serious adverse outcomes or contraindications. When to Reduce, Taper, or Discontinue COAT:
   - Patient requests opioid taper.
   - Patient is maintained on opioids for at least 3 months, and there is no sustained clinically meaningful improvement in function (CMIF), as measured by validated instruments
   - Patient’s risk from continued treatment outweighs the benefit (e.g. decreased function and increased risk for opioid-related toxicity from concurrent drug therapy or comorbid medical conditions)
   - Patient has experienced a severe adverse outcome or overdose event
   - Patient has a substance use disorder (except tobacco)
   - Use of opioids is not in compliance with DOH’s pain management rules or consistent with the AMDG Guideline
   - Patient exhibits aberrant behaviors

(Levels of Evidence not provided)

For Patients in the Emergency Department:
The 2012 American College of Emergency Physicians Opioid guideline states: For the patient being discharged from the ED with acute low back pain, the emergency physician should ascertain whether non-opioid analgesics and non-pharmacologic therapies will be adequate for initial pain management. Given a lack of demonstrated evidence of superior efficacy of either opioid or non-opioid analgesics and the individual and community risks associated with opioid February 2017
use, misuse, and abuse, opioids should be reserved for more severe pain or pain refractory to other analgesics rather than routinely prescribed. If opioids are indicated, the prescription should be for the lowest practical dose for a limited duration (eg, 1 week), and the prescriber should consider the patient’s risk for opioid misuse, abuse, or diversion (Level C recommendations). Physicians should avoid the routine prescribing of outpatient opioids for a patient with an acute exacerbation of chronic non-cancer pain seen in the ED. If opioids are prescribed on discharge, the prescription should be for the lowest practical dose for a limited duration (eg, 1 week), and the prescriber should consider the patient’s risk for opioid misuse, abuse, or diversion. The clinician should, if practicable, honor existing patient-physician pain contracts/treatment agreements and consider past prescription patterns from information sources such as prescription drug monitoring programs (Level C recommendations).

For Cancer Survivors:
The American Society of Clinical Oncology 2016 guideline states: Clinicians may prescribe a trial of opioids in carefully selected cancer survivors with chronic pain who do not respond to more conservative management and who continue to experience pain-related distress or functional impairment. Nonopioid analgesics and/or adjuvants can be added as clinically necessary. (Evidence-based; benefits outweigh harms; evidence quality: intermediate; strength of recommendation: moderate) Clinicians should assess the potential risks and benefits when initiating treatment that will incorporate long-term use of opioids. (Informal consensus; benefits outweigh harms; evidence quality: insufficient; strength of recommendation: moderate) Clinicians should clearly understand terminology such as tolerance, dependence, abuse, and addiction as it relates to the use of opioids for pain control. (Informal consensus; benefits outweigh harms; evidence quality: insufficient; strength of recommendation: moderate) Clinicians should incorporate a universal precautions approach to minimize abuse, addiction, and adverse consequences of opioid use such as opioid-related deaths. Clinicians should be cautious in coprescribing other centrally acting drugs, particularly benzodiazepines (Evidence-based and informal consensus; benefits outweigh harms; evidence quality: intermediate; strength of recommendation: moderate) If opioids are no longer warranted, clinicians should taper the dose to avoid abstinence syndrome. The rate of tapering and the use of other therapies to reduce adverse effects should be individualized for each patient. (Evidence-based and informal consensus; benefits outweigh harms; evidence quality: intermediate; strength of recommendation: moderate)

For Patients with Sickle Cell Disease:
The National Heart, Lung and Blood Institute 2014 guideline states: Use a combination of the patient’s response to treatment—including pain relief, side effects, and functional outcomes—to guide the long-term use of opioids. (Consensus—Adapted)

For Patients with or in Recovery from Substance Abuse Disorders:
The Substance Abuse and Mental Health Services Administration 2011 guideline states: Non-opioid pharmacological and nonpharmacological therapies, including complementary and alternative medicine (CAM), should be considered routine before opioid treatment is initiated. Opioids may be necessary and should not be ruled out based on an individual’s having an SUD history. The decision to treat pain with opioids should be based on a careful consideration of benefits and risks. Addiction specialists should be part of the treatment team and should be consulted in the development of the pain treatment plan, when possible. A substantial percentage of patients with and without SUDs will fail to benefit from prolonged opioid therapy, in which case it should be discontinued, as with any other failed treatment. (Levels of Evidence not provided)

References:
Question #2. In adult patients with chronic, non-end-of-life pain, what is the comparative effectiveness of opioid dosing strategies (different methods for initiating and titrating opioids; immediate-release versus ER/LA opioids; different ER/LA opioids; immediate-release plus ER/LA opioids versus ER/LA opioids alone; scheduled, continuous versus as-needed dosing; dose escalation versus dose maintenance; opioid rotation versus maintenance; different strategies for treating acute exacerbations of chronic pain; decreasing opioid doses or tapering off versus continuation; and different tapering protocols and strategies)?

OHSU Partners Clinical Practice Recommendation(s):
When starting opioid therapy for chronic pain, clinicians should prescribe immediate-release opioids instead of extended-release/long-acting (ER/LA) opioids. (Dowell et al., 2016)

-Strong Recommendation; Very Low Quality Evidence

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 \( \geq 50 \) morphine milligram equivalents (MME)/day, and should avoid increasing dosage to \( \geq 90 \) MME/day or carefully justify a decision to titrate dosage to \( \geq 90 \) MME/day.

-Strong Recommendation; Low Quality Evidence

Clinicians should evaluate benefits and harms with patients within 1 to 4 weeks of starting opioid therapy for chronic pain or of dose escalation. Clinicians should evaluate benefits and harms of continued therapy with patients every 3 months or more frequently. If benefits do not outweigh the risks of continued opioid therapy, clinicians should optimize other therapies and work with patients to taper opioids to lower dosages or to taper and discontinue opioids.

-Strong Recommendation; Very Low Quality

Guideline Recommendations:

General Population:
The Centers for Disease Control and Prevention 2016 guideline states when starting opioid therapy for chronic pain, clinicians should prescribe immediate-release opioids instead of extended-release/long-acting (ER/LA) opioids (recommendation category: A, evidence type: 4). 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 \( \geq 50 \) morphine milligram equivalents (MME)/day, and should avoid increasing dosage to \( \geq 90 \) MME/day (recommendation category: A, evidence type: 3). Clinicians should evaluate benefits and harms with patients within 1 to 4 weeks of starting opioid therapy for chronic pain or of dose escalation. Clinicians should evaluate benefits and harms of continued therapy with patients every 3 months or more frequently. If benefits do not outweigh harms of continued opioid therapy, clinicians should optimize other therapies and work with patients to taper opioids to lower dosages or to taper and discontinue opioids (recommendation category: A, evidence type: 4).

The 2015 Washington State Interagency Guideline on Prescribing Opioids for Pain states: Prescribe opioids at the lowest possible effective dose. If the dose is increased but does not result in CMIF, then significant tolerance or adverse effects to opioids may be developing and opioids should be tapered back to the previous dose or possibly discontinued. Prescribe opioids in multiples of a 7-day supply to reduce the incidence of the supply ending on a weekend.
Adult Safe Opioid Prescribing for Chronic, Non-End-of-Life Pain Evidence Summary

Initiate a bowel regimen to prevent opioid-induced constipation, especially in older adults. Prescribe regularly scheduled laxatives, such as senna, polyethylene glycol, lactulose, sorbitol, milk of magnesia or magnesium citrate (caution in patients with kidney failure). Do not combine opioids with benzodiazepines, sedative-hypnotics or barbiturates. Do not prescribe methadone for chronic pain unless you are knowledgeable of methadone’s non-linear pharmacokinetics, unpredictable plateau, multiple drug-to-drug interactions and additional monitoring requirements.

For pregnant women: Use caution when initiating short-acting opioids for treatment of pain during pregnancy and limit it to women with severe pain for whom other medical treatments have failed.

For aging adults: Use opioids with short half-lives, as they are usually the best choices for older adults. Drugs with a long half-life can readily accumulate in older adults and result in toxicity (e.g. respiratory depression, sedation). Weigh the individual patient’s needs and clinical presentation with known risk factors when deciding whether short or long acting opioids are best. Avoid the use of agonist-antagonist opioids in older adults as their psychomimetic side effects can be pronounced. Be vigilant when treating patients over 65 to adequately relieve pain while minimizing the risk of delirium and other opioid-related adverse drug events. Use the least invasive method of drug administration (e.g. oral). Initiate opioid therapy at a 25% to 50% lower dose than that recommended for younger adults, and slowly and carefully titrate dosage by 25% increments on an individual basis, balancing pain relief, physical function, and side effects. Have a plan for addressing constipation from the start of opioid therapy. Prophylaxis and/or treatment can include hydration, bulk fiber (only if hydration is maintained), activity, senna, and sorbitol (20 ml of 70% taken twice daily for 3 days per week). Recognize and manage all potential causes of side effects, taking into consideration medications that potentiate opioid side effects:

a. Sedatives, tranquilizers, and anti-emetics can cause sedation.
b. Antihypertensives and tricyclics can cause postural hypotension.
c. Antihistamines, phenothiazines, tricyclics, and anticholinergics can cause confusion and urinary retention.

Avoid using more than one opioid at the same time. This makes it easier to identify the cause of an adverse effect or toxic reaction. The incidence of delirium and other adverse reactions increases with the number of prescription drugs taken. Avoid the following drugs:

a. Codeine: the doses required for effective pain relief in older adults are associated with an increased incidence of side effects (e.g. constipation, nausea and sedation).
b. Meperidine: the metabolite, normeperidine, is toxic to the CNS and can cause seizures, mood alterations and confusion; more so in older patients, especially if the patient has renal impairment.
c. Methadone: has a high drug-drug interaction potential and is associated with prolongation of the QT interval and a potential risk of accumulation due to a long elimination half-life. In addition, methadone is difficult to titrate because of its large inter-individual variability in pharmacokinetics, particularly in the frail elderly.

For Cancer Survivors: Follow the recommendations for treating chronic non-cancer pain once cancer recurrence has been ruled out as the source of pain. This includes using multimodal and interdisciplinary approaches and reducing the opioid dose (if indicated) to the lowest effective levels for pain complaints that remain stable (Reducing or Discontinuing COAT).

(Levels of Evidence not provided)

The American Society of Interventional Pain Physicians 2012 guideline states: Clinicians must understand the effectiveness and adverse consequences of long-term opioid therapy in chronic non-cancer pain and its limitations. (Evidence: fair for short-term, limited for long-term) The long-acting opioids in high doses are recommended only in specific circumstances with severe intractable pain that is not amenable to short-acting or moderate doses of long-acting opioids, as there is no significant difference between long-acting and short-acting opioids for their effectiveness or adverse effects. (Evidence: fair) A trial of opioid rotation may be considered for patients requiring escalating doses. (Evidence: limited) Once medical necessity is established, opioid therapy may be initiated with low doses and short-acting drugs with appropriate monitoring to provide effective relief and avoid side effects. (Evidence: fair for short-term effectiveness, limited for long-term effectiveness) Up to 40 mg of morphine equivalent doses are being recommended as low dose, 41 to 90 mg of morphine equivalent dose as a moderate dose, and greater than 91 mg of morphine equivalence as high doses. (Evidence: fair) In reference to long-acting opioids, titration must be carried out with caution and overdose and misuse must be avoided. (Evidence: good) Methadone is recommended for use in late stages after failure of other opioid therapy and only by clinicians with specific training in the risks and uses. (Evidence: limited)

For Cancer Survivors:
The American Society of Clinical Oncology 2016 guideline states: Clinicians should assess risks of adverse effects of opioids used for pain management. (Evidence-based and informal consensus; benefits outweigh harms; evidence quality: intermediate strength of recommendation: moderate) Qualifying statement: Although there is literature describing dysimmune effects and tumor proliferative effects from opioid drugs (both of which may be of particular concern in the cancer survivor population), there is insufficient evidence to determine whether there are clinically important risks. The expert panel believes that further clinical investigation is required to assess these concerns. In the absence of actionable data, physicians should be made aware of these evolving questions, and patients and their families may be informed about them as part of a discussion of the potential harms of long-term opioid therapy.

For Patients with Sickle Cell Disease:
The National Heart, Lung and Blood Institute 2014 guideline states: Use long- and short-acting opioids to manage chronic pain that is not relieved by nonopioids. (Consensus–Adapted)

References:


February 2017
Adult Safe Opioid Prescribing for Chronic, Non-End-of-Life Pain Evidence Summary


Question #3. In adult patients with chronic, non-end-of-life pain, what are the risks of opioids versus placebo or no opioids on abuse, addiction, overdose, and other harms, and how do harms vary according to the type/cause of pain, patient demographics, patient comorbidities, and dose?

OHSU Clinical Practice Recommendation(s):
Clinicians should offer or arrange evidence-based treatment (usually medication-assisted treatment with buprenorphine or methadone in combination with behavioral therapies) for patients with opioid use disorder. (Dowell et al., 2016)

Strong Recommendation; Moderate Quality Evidence

Guideline Recommendations:

General Population:
The Centers for Disease Control and Prevention 2016 guideline states that clinicians should offer or arrange evidence-based treatment (usually medication-assisted treatment with buprenorphine or methadone in combination with behavioral therapies) for patients with opioid use disorder (recommendation category: A, evidence type: 2).

The 2015 Washington State Interagency Guideline on Prescribing Opioids for Pain states: Use extreme caution and consider consultation before prescribing COAT in patients with comorbid mental health disorders (especially PTSD and major depressive disorder), family or personal history of substance use disorder, concurrent use of benzodiazepines or sedative-hypnotics, or medical conditions that could increase sensitivity to opioid-related side effects (e.g. COPD, CHF, sleep apnea, advanced age, or renal or hepatic dysfunction). (Levels of Evidence not provided)

The American Society of Interventional Pain Physicians 2012 guideline states: It is recommended that contraindications to opioid use in chronic non-cancer pain must be evaluated including respiratory instability, acute psychiatric instability, uncontrolled suicide risk, active or history of alcohol or substance abuse, confirmed allergy to opioid agents, coadministration of drugs capable of inducing life-limiting drug interaction, concomitant use of benzodiazepines, active diversion of controlled substances, and concomitant use of heavy doses of central nervous system depressants, such as benzodiazepines. (Evidence: fair to limited) Monitoring recommendation for methadone prescription is that an electrocardiogram should be obtained prior to initiation, at 30 days and yearly thereafter. (Evidence: fair) In order to reduce prescription drug abuse and doctor shopping, adherence monitoring by urine drug testing and PMDPs provide evidence that is essential to the identification of those patients who are non-compliant or abusing prescription drugs or illicit drugs. (Evidence: fair) It is essential to monitor for side effects and manage them appropriately including discontinuation of opioids if indicated. (Evidence: fair)

For Patients with or in Recovery from Substance Abuse Disorders:
Substance Abuse and Mental Health Services Administration 2011 guideline states: Patients on chronic opioid therapy should be monitored closely for signs of benefit, harm, and aberrant drug-related behaviors (ADRBs). All ADRBs should be documented, investigated, and acted on. Difficult conversations should be managed with compassion and empathy. Clinicians should establish and respectfully maintain strict limits with patients who insist on opioids. Clinicians should establish relationships with drug-testing laboratory staff and addiction specialists. When it is necessary to discontinue chronic opioid therapy, a conscientious tapering plan should be provided. (Levels of Evidence not provided)

References:

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Question #4. In adult patients with chronic, non-end-of-life pain, what is the accuracy of instruments for predicting risk for opioid overdose, addiction, abuse, or misuse; the effectiveness of risk mitigation strategies (use of risk prediction instruments); effectiveness of risk mitigation strategies including opioid management plans, patient education, urine drug testing, prescription drug monitoring program (PDMP) data, monitoring instruments, monitoring intervals, pill counts, and abuse-deterrent formulations for reducing risk for opioid overdose, addiction, abuse, or misuse; and the comparative effectiveness of treatment strategies for managing patients with addiction?

OHSU Clinical Practice Recommendation(s):

Before starting and periodically during continuation of opioid therapy, clinicians should evaluate risk factors for opioid-related harms. Clinicians should complete the Opioid Risk Tool or another related risk assessment tool. (See APPENDIX A for Opioid Risk Tool (ORT).) Clinicians should incorporate into the management plan strategies to mitigate risk, including considering offering naloxone when factors that increase risk for opioid overdose, such as history of overdose, history of substance use disorder, higher opioid dosages (> 50 MME/day), or concurrent benzodiazepine use, are present. (Dowell et al., 2016)

-Strong Recommendation; Very Low Quality Evidence

Clinicians should review the patient’s history of controlled substance prescriptions using state prescription drug monitoring program (PDMP) data to determine whether the patient is receiving opioid dosages or dangerous combinations that put him or her at high risk for opioid overdose. Clinicians should review PDMP data when:

a. starting opioid therapy for chronic pain,

b. periodically ranging from every prescription to every three months for higher risk or new patients, and

c. at minimum once per year during opioid therapy for chronic pain. (Dowell et al., 2016)

-Strong Recommendation; Very Low Quality Evidence

When prescribing opioids for chronic pain, clinicians should use urine drug testing before starting opioid therapy and urine drug testing annually to assess for prescribed medications as well as other controlled prescription drugs and illicit drugs. (Dowell et al., 2016)

-Weak Recommendation; Very Low Quality Evidence

Clinicians should avoid prescribing opioid pain medication and benzodiazepines concurrently whenever possible. (Dowell et al., 2016)

- Strong Recommendation; Low Quality Evidence
In the hospital at OHSU, consider Acute Pain Service consultation if patient’s pain is difficult to manage or if opioid dose is > 90 mg of morphine equivalents per 24 hours. Consider consulting OHSU Improving Addiction Care Team (IMPACT) if there is concern for an active substance use disorder that is complicating care in the hospital.

-Consensus Statement

Consider specialty referral to internal opioid review process, pain specialist, or addiction medicine if:

- The patient has ongoing severe pain with no significant improvement in pain and/or function despite opioid treatment
- Presence of significant psychological and addiction issues
- The provider is considering prescribing opiates in combination with other psychoactive drugs (i.e. benzodiazepines) with potential for abuse
- There is aberrant drug-related patient behavior

-Consensus Statement

At admission check the PDMP to confirm opioid dosing and prior opioid prescriber.

During the course of hospitalization to guide inpatient pain management, do the following:

- Establish if the patient has an opioid agreement with his or her primary care provider or other provider
- Contact the patient’s primary care provider

Prior to hospital discharge, do the following:

- If prescribing opioids at discharge, prescribe only the amount appropriate to manage the acute pain episode with no refills. Chronic pain should be managed by the patient’s primary care provider. Prepare tapering protocol prior to discharge
- Avoid concomitant prescription of benzodiazepines or other sedating medications at discharge
- Obtain Pain Service Consultation at OHSU or need info for Tuality and Salem if the patient’s pain is difficult to manage or if opioid dose is > 90 MME/day

-Consensus Statements

Guideline Recommendations:

**General Population:**
The CDC 2016 guideline states: Before starting and periodically during continuation of opioid therapy, clinicians should evaluate risk factors for opioid-related harms. Clinicians should incorporate into the management plan strategies to mitigate risk, including considering offering naloxone when factors that increase risk for opioid overdose, such as history of overdose, history of substance use disorder, higher opioid dosages (≥50 MME/day), or concurrent benzodiazepine use, are present (recommendation category: A, evidence type: 4). Clinicians should review the patient’s history of controlled substance prescriptions using state prescription drug monitoring program (PDMP) data to determine whether the patient is receiving opioid dosages or dangerous combinations that put him or her at high risk for overdose. Clinicians should review PDMP data when starting opioid therapy for chronic pain and periodically during opioid therapy for chronic pain, ranging from every prescription to every 3 months (recommendation category: A, evidence type: 4). When prescribing opioids for chronic pain, clinicians should use urine drug testing before starting opioid therapy and consider urine drug testing at least annually to assess for prescribed medications as well as other controlled prescription drugs and illicit drugs (recommendation category: B, evidence type: 4).
should avoid prescribing opioid pain medication and benzodiazepines concurrently whenever possible (recommendation category: A, evidence type: 3). Clinicians should offer or arrange evidence-based treatment (usually medication-assisted treatment with buprenorphine or methadone in combination with behavioral therapies) for patients with opioid use disorder (recommendation category: A, evidence type: 2).

The 2015 Washington State Interagency Guideline on Prescribing Opioids for Pain states: Reassess the need for COAT in transferred patients who are already using opioids. If current treatment is not benefiting the patient, a dose reduction or discontinuation is warranted. Consider non-opioid options for pain treatment (Recommendations for All Pain Phases and Non-opioid Options). Discuss the potential benefits and risks associated with COAT including addiction and overdose. Have a signed opioid treatment agreement to document this discussion and set behavioral expectations including the use of a single prescriber and pharmacy. Assess and document function and pain status using validated tools at each visit where opioids are prescribed (Recommendations for All Pain Phases and CMIF). This is critical in determining the patient’s ongoing response to opioids and to measure effects from any dose changes. Check the state’s PMP at the frequency determined by the patient’s risk category to ensure controlled substance history is consistent with prescribing record. Prescribers may delegate the ability to query the PMP database to any licensed health care professional. Repeat random UDTs at the frequency determined by the patient’s risk category to identify aberrant behavior; undisclosed drug use and/or abuse and verify compliance with treatment. Monitor for opioid-related adverse outcomes such as central sleep apnea, endocrine dysfunction, opioid-induced hyperalgesia, opioid use disorder or signs of acute toxicity. Be especially cautious with comorbid conditions that may increase risk for adverse outcomes (including COPD, CHF, obstructive sleep apnea, history of alcohol or substance use disorder, advanced age, or renal or hepatic dysfunction). Monitor for medication misuse, aberrant drug-related behaviors or diversion. Consult with a pain management specialist before exceeding 120 mg/day MED. If the pain management specialist endorses high dose COAT, consider prescribing naloxone as a preventive rescue medication. Counsel family member or other personal contacts in a position to assist the patient at risk of opioid-related overdose.

For pregnant women: Assess pregnant women taking opioids for opioid use disorder. If present, refer to a qualified specialist for methadone or buprenorphine treatment for pregnant women. Buprenorphine may have improved neonatal outcomes, but availability may be limited due to provider or geographic access. Monitor fetal growth for women on opioids, using fundal height or ultrasound surveillance, given the risk of intrauterine growth restriction. Consider a perinatal pediatric consultation for pregnant women on opioids to better prepare them for risks of NAS and possible increased hospital stay for the newborn. Use the Finnegan score to assess neonates during the immediate postnatal period if they were exposed to opioids in utero. Weigh carefully the risks/benefits of opioid detoxification during pregnancy, when making the decision to go forward with treatment; and closely monitor the treatment plan for symptoms of withdrawal and risk of relapse (Levels of Evidence not provided).

The American Society of Interventional Pain Physicians 2012 guideline states: Comprehensive assessment and documentation is recommended before initiating opioid therapy, including documentation of comprehensive history, general medical condition, psychosocial history, psychiatric status, and substance use history. (Evidence: good) Despite limited evidence for reliability and accuracy, screening for opioid use is recommended, as it will identify opioid abusers and reduce opioid abuse. (Evidence: limited) Prescription monitoring programs must be implemented due to regulations, as they provide data on patterns of prescription usage, reduce prescription drug abuse or doctor shopping, and prescription drug monitoring programs (PDMPs) may reduce emergency room visits, drug overdoses, or deaths. (Evidence: good to fair) Urine drug testing (UDT) must be implemented from initiation along with subsequent adherence monitoring, in an in office setting with immunoassay and confirmation for accuracy with chromatography in select cases, to identify patients who are non-compliant or abusing prescription drugs or illicit drugs, and urine drug testing may decrease prescription drug abuse or illicit drug use when patients are in chronic pain management therapy. (Evidence: good)

For Patients in the ED:
The 2012 American College of Emergency Physicians Opioid Guideline states: the use of state prescription monitoring program may help identify patients who are at high risk for prescription opioid diversion or doctor shopping (Level 3 Recommendation).

For Patients with Sickle Cell Disease:
The National Heart, Lung and Blood Institute 2014 guideline states: Assess all people with SCD for chronic pain annually or more often as needed. This assessment should include descriptors of the pain; its severity on a numerical scale; its location; factors that precipitate or relieve it, including biopsychosocial factors; and its effect on the patient’s mood, activity, employment, quality of life, and vital signs. (Consensus–Adapted) Use a partnership agreement leading to a written, individualized treatment plan (to include risks, benefits, and side effects) with the patient if long-term opioids are indicated. The partnership agreement should list the patient’s rights and responsibilities, and the treatment plan should list the type, amount, and route of administration of the opioid in question, including random drug urine testing. (Consensus–Adapted) Appoint one physician or other clinician to write the biweekly to monthly prescriptions for long-term opioids. Refills without seeing the patient should be kept to a minimum, and people on chronic opioid therapy must be evaluated in person every 2~3 months. (Consensus–Adapted) Document all encounters with a patient, including medical history, physical exam, diagnosis, plan of management, type and amount of opioids prescribed and their side effects, if any, and lab data as needed. (Consensus–Adapted) Refer patients for evaluation by a mental health professional such as a psychiatrist, social worker, or addiction specialist as needed. (Consensus–Adapted)
Adult Safe Opioid Prescribing for Chronic, Non-End-of-Life Pain Evidence Summary

For Patients with or in Recovery from Substance Abuse Disorders:
The Substance Abuse and Mental Health Services Administration 2011 guideline states: Patients should receive a comprehensive initial assessment. It is important to discover the cause of a patient’s chronic pain; however, clinicians should not assume a patient is disingenuous if the cause is not discovered. The patient’s personal and family substance use histories and current substance use patterns should be assessed. It is crucial to obtain collateral information on the patient’s pain level and functioning, as well as substance use disorder (SUD) status. Comorbid psychological disorders should be assessed and treated. Assessment of the patient with co-occurring chronic pain and SUD or other behavioral health disorders should be ongoing. *(Levels of Evidence not provided)*

**References:**

**Question #5.** In adult patients with chronic, non-end-of-life pain, what are the effects of prescribing opioid therapy versus not prescribing opioid therapy for acute pain on long-term use?

**OHSU Clinical Practice Recommendation(s):**
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. *(Dowell et al., 2016)*

*Strong Recommendation; Very Low Quality Evidence*

**Guideline Recommendations:**

**General Population:**
The Centers for Disease Control and Prevention 2016 guideline states that 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)*.

**For Patients in the Emergency Department:**
The 2012 American College of Emergency Physicians Opioid guideline states: For the short-term relief of acute musculoskeletal pain, emergency physicians may prescribe short-acting opioids such as oxycodone or hydrocodone products while considering the benefits and risks for the individual patient *(Level B recommendation)*. Research evidence to support superior pain relief for short-acting schedule II over schedule III opioids is inadequate *(Level C recommendation)*.

**References:**

February 2017
Appendix A. Trustworthy Guideline rating scale

The University of Pennsylvania’s Center for Evidence-Based Practice Trustworthy Guideline rating scale is based on the Institute of Medicine’s “Standards for Developing Trustworthy Clinical Practice Guidelines” (IOM), as well as a review of the AGREE Enterprise and Guidelines International Network domains.

The purpose of this scale is to focus on the weaknesses of a guideline that may reduce the trust a clinical user can have in the guideline, and distinguish weaknesses in documentation (e.g. guideline does not have a documented updating process) from weaknesses in the guidance itself (e.g. recommendations are outdated). Current quality scales like AGREE emphasize documentation. They are important checklists for developers of new guidelines, but are less useful for grading existing guidelines. These scales also are harder for clinicians and other persons who are not methodology experts to apply, and their length discourages their use outside formal technology assessment reports. This new scale is brief, balanced, and easy and consistent to apply.

We do not attempt to convert the results of this assessment into a numeric score. Instead we present a table listing the guidelines and how they are rated on each standard. This facilitates qualitative understanding by the reader, who can see for what areas the guideline base as a whole is weak or strong as well as which guidelines are weaker or stronger.

1. Transparency

A Guideline development methods are fully disclosed.
B Guideline development methods are partially disclosed.
C Guideline development methods are not disclosed.

The grader must refer to any cited methods supplements or other supporting material when evaluating the guideline. Methods should include:
- Who wrote the initial draft
- How the committee voted on or otherwise approved recommendations
- Evidence review, external review and methods used for updating are not addressed in this standard.

2. Conflict of interest

A Funding of the guideline project is disclosed, disclosures are made for each individual panelist, and financial or other conflicts do not apply to key authors of the guideline or to more than 1 in 10 panel members.
B Guideline states that there were no conflicts (or fewer than 1 in 10 panel members), but does not disclose funding source.
C Lead author, senior author, or guideline panel members (at least 1 in 10) have conflict of interest, or guideline project was funded by industry sponsor with no assurance of independence.
NR Guideline does not report on potential conflict of interests.

For purposes of this checklist, conflicts of interest include employment by, consulting for, or holding stock in companies doing business in fields affected by the guideline, as well as related financial conflicts. This definition should not be considered exclusive. As much as anything, this is a
surrogate marker for thorough reporting, since it may be assumed that guideline projects are funded by the sponsoring organization and many authors think it unnecessary to report a non-conflict.

3. Guideline development group

<table>
<thead>
<tr>
<th></th>
<th>Guideline development group includes 1) methodological experts and clinicians and 2) representatives of multiple specialties.</th>
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</thead>
<tbody>
<tr>
<td>A</td>
<td>Guideline development group includes one of the above, but not both.</td>
</tr>
<tr>
<td>B</td>
<td>Guideline developers all from one specialty or organization, and no methodologists.</td>
</tr>
<tr>
<td>NR</td>
<td>Affiliations of guideline developers not reported</td>
</tr>
</tbody>
</table>

The purpose of this standard is to ensure that supporters of competing procedures, or clinicians with no vested interest in utilization of one procedure or another, are involved in development of the guideline. Both AGREE II and IOM call for patient or public involvement: very few guideline panels have done so to date, so this is not necessary for guidelines to be rated A. Involvement of methodologists or HTA specialists in the systematic review is sufficient involvement in the guideline development group for our purposes. In the absence of any description of the guideline group, assume the named authors are the guideline group.

4. Systematic review

<table>
<thead>
<tr>
<th></th>
<th>Guideline includes a systematic review of the evidence or links to a current review.</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Guideline is based on a review which may or may not meet systematic review criteria.</td>
</tr>
<tr>
<td>C</td>
<td>Guideline is not based on a review of the evidence.</td>
</tr>
</tbody>
</table>

In order to qualify as a systematic review, the review must do all of the following:
Describe itself as systematic or report search strategies using multiple databases
Define the scope of the review (including key questions and the applicable population)
Either include quantitative or qualitative synthesis of the data or explain why it is not indicated

Note: this element does not address the quality of the systematic review: simply whether or not it exists. Concerns about quality or bias of the review will be discussed in text, where the analyst will explain whether the weaknesses of the review weaken the validity or reliability of the guideline.

Note: a guideline may be rated B on this domain even if the review on which it is based is not available to us. This potential weakness of the guideline should be discussed in text of the report.

5. Grading the supporting evidence

<table>
<thead>
<tr>
<th></th>
<th>Specific supporting evidence (or lack thereof) for each recommendation is cited and graded</th>
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</thead>
<tbody>
<tr>
<td>A</td>
<td>Specific supporting evidence (or lack thereof) for each recommendation is cited but the recommendation is not graded.</td>
</tr>
<tr>
<td>C</td>
<td>Recommendations are not supported by specific evidence.</td>
</tr>
</tbody>
</table>
To score a B on this domain there should be specific citations to evidence tables or individual references for each relevant recommendation in the guideline, or an indication that no evidence was available. Any standardized grading system is acceptable for purposes of this rating. If a guideline reports that there is no evidence available despite a thorough literature search, it may be scored B on this domain, or even A if evidence for other recommendations is cited and graded.

### 6. Recommendations

<table>
<thead>
<tr>
<th>Grade</th>
<th>Criteria</th>
</tr>
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<tbody>
<tr>
<td>A</td>
<td>Considerations for each recommendation are documented (i.e. benefits and harms of a particular action, and/or strength of the evidence); and recommendations are presented in an actionable form.</td>
</tr>
<tr>
<td>B</td>
<td>Either one or the other of the above criteria is met.</td>
</tr>
<tr>
<td>C</td>
<td>Neither of the above criteria are met</td>
</tr>
</tbody>
</table>

In order to be actionable, the guideline should specify the specific population to which the guideline applies, the specific intervention in question, and the circumstances under which it should be carried out (or not carried out). The language used in the recommendations should also be consistent with the strength of the recommendation (e.g. directive and active language like “should” or “should not” for strong recommendations, and passive language like “consider” for weak recommendations). A figure or algorithm is considered actionable as long as it is complete enough to incorporate all the applicable patients and interventions. Please see the forthcoming NICE manual (24) for a good discussion of actionability in guidelines.

### 7. External review

<table>
<thead>
<tr>
<th>Grade</th>
<th>Criteria</th>
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</thead>
<tbody>
<tr>
<td>A</td>
<td>Guideline was made available to external groups for review.</td>
</tr>
<tr>
<td>B</td>
<td>Guideline was reviewed by members of the sponsoring body only.</td>
</tr>
<tr>
<td>C</td>
<td>Guideline was not externally reviewed.</td>
</tr>
<tr>
<td>NR</td>
<td>No external review process is described.</td>
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</table>

### 8. Updating and currency of guideline

<table>
<thead>
<tr>
<th>Grade</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Guideline is current and an expiration date or update process is specified.</td>
</tr>
<tr>
<td>B</td>
<td>Guideline is current but no expiration date or update process is specified.</td>
</tr>
<tr>
<td>C</td>
<td>Guideline is outdated.</td>
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</table>

A guideline is considered current if it is within the developers’ stated validity period, or if no period or expiration data is stated, the guideline was published in the past three years (NOTE: the specific period may be changed at the analyst’s discretion, based on whether the technology is mature and whether there is a significant amount of recent evidence). A guideline must address new evidence when it is updated. A guideline which is simply re-endorsed by the panel without searching for new evidence must be considered outdated.

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