Quality Improvement and Care Coordination:

Implementing the CDC Guideline for Prescribing Opioids for Chronic Pain

Centers for Disease Control and Prevention
National Center for Injury Prevention and Control

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Overview

The Centers for Disease Control and Prevention (CDC) aims to save lives and prevent prescription opioid misuse, opioid use disorder (OUD), and overdose by equipping providers with the knowledge, tools, and guidance they need. The purpose of this document is to encourage careful and selective use of opioid therapy in the context of managing chronic pain through (a) an evidence-based prescribing guideline, (b) quality improvement (QI) measures to advance the integration of the CDC *Guideline for Prescribing Opioids for Chronic Pain* (CDC *Prescribing Guideline*) into clinical practice, and (c) practice-level strategies to improve care coordination. These QI measures are intended to help incorporate the science contained in the CDC *Prescribing Guideline* in clinical workflow.

This QI framework is nimble and flexible so that healthcare systems and practice leaders can pick interventions that are responsive to the unique conditions in their practice and patient population.

This resource covers:

Chapter One summarizes the CDC *Guideline for Prescribing Opioids for Chronic Pain* in three conceptual areas:

- Determining when to initiate or continue opioids for chronic pain;
- Opioid selection, dosage, duration, follow-up, and discontinuation; and
- Assessing risk and addressing harms of opioid use.

Chapter Two offers 16 clinical QI opioid measures that align with the CDC *Prescribing Guideline* recommendation statements. Guidance on operationalzing each QI measure to monitor progress is contained in the **Appendix**.

Chapter Three describes practice-level strategies to organize and improve the management and coordination of long-term opioid therapy, such as:

- Using an interdisciplinary team approach
- Establishing practice policies and standards
- Using electronic health record (EHR) data to develop patient registries and track QI measures

The **Toolkit** contains examples of existing materials, tools, and resources developed and used by other practices, which have been found to be useful and readers can use or modify to their own needs. It also contains links to materials.

Audience for this resource:

- Primary care providers
- Primary care practices
- Healthcare systems
- Continuous QI programs

Purpose:

Offer healthcare systems and practices a provider-focused resource to help move the content of the CDC *Guideline for Prescribing Opioids for Chronic Pain* into clinical practice to support your providers as they provide the best possible healthcare to their patients.

Goal:

To ensure patients have access to safer, more effective chronic pain treatment by improving the way opioids are prescribed through an evidence-based clinical practice guideline, while reducing the number of people who misuse, abuse, or overdose from these drugs.

Chapter One

Evidence-based Opioid Prescribing

Centers for Disease Control and Prevention
National Center for Injury Prevention and Control

Introduction

CDC released the CDC *Guideline for Prescribing Opioids for Chronic Pain* (CDC *Prescribing Guideline*) in March 2016. The Guideline offers recommendations to primary care providers about the appropriate prescribing of opioids to ensure patients, 18 years and older, have access to safer, more effective treatment for chronic pain (pain lasting longer than three months or past the time of normal tissue healing) outside of active cancer treatment, palliative care, and end-of-life care. While prescription opioids can be an appropriate part of pain management, the CDC *Prescribing Guideline* aims to improve the safety of prescribing and reduce the harms associated with opioids, including opioid use disorder (OUD) and overdose.

The CDC *Prescribing Guideline* encourages providers and patients to consider all treatment options, particularly nonopioid and nonpharmacological therapies that can be used alone or in combination with opioids. The CDC *Prescribing Guideline* helps providers assess when it is appropriate to initiate opioid use for the treatment of chronic pain and how to safely maintain or discontinue use in patients who are currently on long-term opioid therapy.

PRESCRIBE WITH CONFIDENCE.

GUIDELINE FOR PRESCRIBING OPIOIDS FOR CHRONIC PAIN

www.cdc.gov

tip

Three principles that are especially important to improving patient care and safety:

1. Nonopioid and nonpharmacologic therapy is preferred for chronic pain outside of active cancer, palliative, and end-of-life care.
2. When opioids are used, the lowest possible effective dosage should be prescribed to reduce risks of opioid use disorder and overdose.
3. Providers should always exercise caution when prescribing opioids and monitor all patients closely.

CDC Guideline for Prescribing Opioids for Chronic Pain

This section summarizes the 12 recommendations contained in the CDC *Prescribing Guideline*. The recommendations are organized into three areas: (1) determining when to initiate or continue opioids for chronic pain; (2) opioid selection, dosage, duration, follow-up, and discontinuation; and (3) assessing risk and addressing harms of opioid use.

Providers are encouraged to read the full CDC *Prescribing Guideline* for additional information on improving patient outcomes, such as reduced pain and improved function. Within the CDC *Prescribing Guideline* there are recommendations that are tailored to specific populations (e.g., pregnant women, older adults) and additional guidance on opioid therapy and tapering. The additional details provided within the rationale statements will assist providers with improving the care and treatment of patients living with chronic pain. Patients should receive appropriate pain treatment based on a careful consideration of the benefits and risks of treatment options. In treating chronic pain, providers should continue to use their clinical judgment and base their treatment on what they know about their patients. Guidance provided within the rationale statements equips providers with both the information they need to empathically review and discuss benefits and risks of continued high-dosage opioid therapy and the ability to offer safer, more effective chronic pain treatment with patients.

DETERMINING WHEN TO INITIATE OR CONTINUE OPIOIDS FOR CHRONIC PAIN

1 Opioids are not first-line therapy.

Nonpharmacologic therapy and nonopioid 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 nonopioid pharmacologic therapy, as appropriate.

2 Establish goals for pain and function.

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.

3 Discuss risks and benefits.

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.

clinical reminders

- Establish and measure goals for improved pain and function.
- Discuss benefits, risks, and availability of nonopioid therapies with patient.
- Assess pain intensity, functional impairment, and quality of life.

OPIOID SELECTION, DOSAGE, DURATION, FOLLOW-UP, AND DISCONTINUATION

4 Use immediate-release opioids when starting.

When starting opioid therapy for chronic pain, clinicians should prescribe immediate-release opioids instead of extended-release/long-acting (ER/LA) opioids.

5 Use the lowest effective dose.

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) per day, and should avoid increasing dosage to ≥ 90 MME per day or carefully justify a decision to titrate dosage to ≥ 90 MME per day.

6 Prescribe short durations for acute pain.

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.

7 Evaluate benefits and harms frequently.

Clinicians should evaluate benefits and harms with patients within one to four weeks of starting opioid therapy for chronic pain or of dose escalation. Clinicians should evaluate benefits and harms of continued therapy with patients every three 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.

ASSESSING RISK AND ADDRESSING HARMS OF OPIOID USE

8 Use strategies to mitigate risk.

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 per day), or concurrent benzodiazepine use, are present.

clinical reminders

- Use immediate-release opioids when starting.
- Start low and go slow.
- When opioids are needed for acute pain, prescribe no more than needed.
- Do not prescribe ER/LA opioids for acute pain.
- Follow-up and re-evaluate risk of harm; reduce dose or taper if needed.

9 Review prescription drug monitoring program (PDMP) data.

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 three months.

10 Use urine drug testing.

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.

11 Avoid concurrent opioid and benzodiazepine prescribing.

Clinicians should avoid prescribing opioid pain medication and benzodiazepines concurrently whenever possible.

12 Offer treatment for opioid use disorder.

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.

clinical reminders

- Check PDMP for high dosages and prescriptions from other providers.
- Use urine drug testing to identify prescribed substances and undisclosed use.
- Avoid concurrent benzodiazepine and opioid prescribing.
- Arrange treatment for OUD if needed.

Chapter Two

Clinical Quality Improvement (QI) Opioid Measures and Protocols

Centers for Disease Control and Prevention
National Center for Injury Prevention and Control

Clinical Quality Improvement (QI) Opioid Measures and Protocols

This chapter describes the 16 clinical QI opioid measures that align with the CDC *Prescribing Guideline* recommendation statements. This chapter focuses on providing specifics for operationalizing each of the QI measures to monitor progress in implementing the CDC *Prescribing Guideline* recommendations.

Each measure has a table that provides details on calculating the numerator, denominator, measurement period, and ways to address potential challenges (**Appendix B**). In order to help facilitate uptake and use of the QI measures within clinical workflow, this chapter also describes five steps (**Exhibit 1**) that a healthcare system or practice can take.

QI Measures

Based on stakeholder input to support efforts to implement the CDC *Prescribing Guideline*, 16 clinical QI opioid measures were developed that align with the 12 Guideline recommendation statements. The measures most commonly draw from EHR data, and they are for QI purposes to support safe and effective opioid prescribing and pain management, rather than official performance measurement. **Exhibit 1** provides a list of the QI measures and the applicable Guideline recommendation number.

The QI measures are organized into two categories: new opioid prescriptions and long-term opioid therapy. The measures are meant to be flexible in terms of how your practice or system operationalizes or implements them. Your practice or system should use measures or refine measures to be consistent with your organization's internal policies on opioid prescribing and pain management, or reflect state laws or regulations (e.g., checking PDMP).

Refer to **Appendix B** for details on the method used to create these measures **Appendix B** also includes 16 tables to operationalize each of the 16 QI measures using EHR data.

▶ A note about effectiveness and time horizon

Several healthcare systems have implemented and evaluated risk reduction (Von Korff et al., 2016[1]) or QI initiatives (Anderson et al., 2016[2]; Dorflinger et al., 2014[3]) aimed at improving opioid prescribing, especially for patients on long-term opioid therapy (LTOT). As part of these initiatives, measures were captured and reported. Anderson et al.'s (2016) intervention consisted of provider education, electronic health record (EHR) pain templates, a chronic pain and opioid prescribing policy, an opioid management dashboard, onsite specialty resources and virtual access

to pain specialists via Project ECHO. They found an increase in provide knowledge and self-rated confidence from baseline and a statistically significant increase in urine drug screens and treatment agreements. There were also significant improvements in documentation of pain, pain treatment and follow-up. A significant increase in referral to behavioral health, but no significant change in opioid prescribing.

Further, Von Korff et al. (2016) evaluated the Group Health risk reduction initiatives (in their group practices and contracted care settings) which employed several implementation approaches including practice tools, patient education materials, a care plan template and an online calculator for Morphine Milligram Equivalents (MME), performance measures tracking the development of LTOT care plans in the EHR, medical staff leader advocacy, expert consultation for physicians, and financial incentives for completed LTOT care plans. They observed reductions in the percentage of patients on high MMEs and patients on excess opioid days supplied.

The U.S. Department of Veterans Affairs (VA) Stepped Care Model has demonstrated improvements, as well. Dorflinger et al. (2014) found the proportion of patient receiving high dose opioids decrease over four years, and the use of mitigation strategies increased. Referrals to physical therapy and chiropractic care and prescriptions for topical analgesic increased significantly, and referrals to pain medicine decreased.

[1] Von Korff, M., Dublin, S., Walker, R. L., Parchman, M., Shortreed, S. M., Hansen, R. N., & Saunders, K. (2016). The impact of opioid risk reduction initiatives on high-dose opioid prescribing for patients on chronic opioid therapy. The Journal of Pain, 17(1), 101-110.

[2] Anderson, D. R., Zlateva, I., Coman, E. N., Khatri, K., Tian, T., & Kerns, R. D. (2016). Improving pain care through implementation of the Stepped Care Model at a multisite community health center. Journal of pain research, 9, 1021.

[3] Dorflinger, L., Moore, B., Goulet, J., Becker, W., Heapy, A. A., Sellinger, J. J., & Kerns, R. D. (2014). A partnered approach to opioid management, guideline concordant care and the stepped care model of pain management. Journal of general internal medicine, 29(4), 870-876.

Exhibit 1: Clinical QI Opioid Measures

QI MEASURE DESCRIPTION
New Opioid Prescription Measures
1. The percentage of patients with a new opioid prescription for an immediate-release opioid.
2. The percentage of patients with a new opioid prescription for chronic pain with documentation that a PDMP was checked prior to prescribing.
3. The percentage of patients with a new opioid prescription for chronic pain with documentation that a urine drug test was performed prior to prescribing.
4. The percentage of patients with a follow-up visit within four weeks of starting an opioid for chronic pain.
5. The percentage of patients with a new opioid prescription for acute pain for a three days' supply or less.
Long-term Opioid Therapy Measures
6. The percentage of patients on long-term opioid therapy who are taking 50 MMEs or more per day.
7. The percentage of patients on long-term opioid therapy who are taking 90 MMEs or more per day.
8. The percentage of patients on long-term opioid therapy who received a prescription for a benzodiazepine.
9. The percentage of patients on long-term opioid therapy who had a follow-up visit at least quarterly.
10. The percentage of patients on long-term opioid therapy who had at least quarterly pain and functional assessments.
11. The percentage of patients on long-term opioid therapy who had documentation that a PDMP was checked at least quarterly.
12. The percentage of patients on long-term opioid therapy who the clinician counseled on the risks and benefits of opioids at least annually.
13. The percentage of patients on long-term opioid therapy with documentation that a urine drug test was performed at least annually.
14. The percentage of patients with chronic pain who had at least one referral or visit for nonpharmacologic therapy as a treatment for pain.
15. The percentage of patients on long-term opioid therapy who were counseled on the purpose and use of naloxone, and either prescribed or referred to obtain naloxone.
16. The percentage of patients with an opioid use disorder (OUD) who were referred to or prescribed medication-assisted treatment (MAT).

▶ **Click on each measure to see details on operationalizing the measure using EHR data.**

QI Implementation Steps

To encourage the use of the QI measures, five Implementation Steps are outlined. These are steps providers in a practice or healthcare system can take to ensure buy-in, receptivity, and ultimately, use of the measures. Following the description of each step, there are self-assessment questions to facilitate your implementation team's reflection on your progress. The complete self-assessment questionnaire is available in **Appendix C**. Throughout this section, there are quotes from staff in other systems who have implemented similar changes that illustrate the importance of such changes.

Exhibit 2: Five Steps for Implementing an Opioid QI Effort in a Healthcare System or Practice

Step 1: Obtain Leadership Support and Identify a Champion(s)

- Obtain leadership support as a critical first step
- Identify a champion(s) to drive the change process
- Form a change team (if appropriate) or at least engage key staff
- Obtain needed resources and determine readiness

Step 2: Assess Current Approach to Opioids and Identify Areas for Improvement

- Assess current policies and practices
- Complete the self-assessment questionnaire
- Collect data on your patient population and opioid therapy
- Determine access to specialists and other resources
- Identify areas to improve upon

Step 3: Select and Prioritize Guideline Recommendations to Implement

- Determine which Guideline recommendations to implement
- Prioritize what will be implemented

Step 4: Define System Goals

- Set measurable goals

Step 5: Develop a Plan, Implement, and Monitor Progress

- Develop a plan for implementing selected Guideline recommendations
- Implement the changes
- Monitor progress using QI measures and other data

STEP 1

Obtain Leadership Support and Identify a Champion(s)

Obtain leadership support as a critical first step

Obtaining leadership support is a critical first step to pursuing any change initiative in a practice or system. You might obtain support by identifying key drivers for the change effort, such as aligning the effort with the mission of the practice, highlighting any effect opioid prescribing is having on staff satisfaction, or making financial arguments for the changes. Keeping leadership involved and informed throughout implementation is essential.

Identify a champion(s) to drive the change process

Champions support and drive the change process, even in the face of organizational stagnancy, indifference, or active resistance. Effective champions in primary care settings are likely to possess leadership qualities even if they are not in leadership positions, are good models for others, and are skilled in motivating others to work as a team. They typically have strong relationships with leadership, which is an important resource when changes in established policies, approach, and workflow are needed. A champion should be someone on-site where the changes are taking place.

Form a change team or at least engage key staff

If your practice or system has the resources and is able to create a change team, they can be responsible for the next steps, including implementing and monitoring the changes. The team should be interdisciplinary and should consist of leaders and staff. It is important to have clear roles for the champion and other change team members. Ideally, the team will include a range of roles, all of which will be involved in the change effort (e.g., medical directors, clinicians, nurses, medical assistants, pharmacists, behaviorists, clinical and/or front office staff managers, case workers). Consider representation from other key areas, such as IT, as many of the practice recommendations involve creating workflows within an EHR and pulling reports for clinical QI measures.

Obtain needed resources and determine readiness

Leadership should provide the necessary resources, both in terms of staff time and budget. Leadership should free up the champion's time for implementing the changes, since trying to change the practice in addition to carrying his/her normal load of patients or primary responsibilities is unlikely to produce positive results. Leadership should ensure the champion has the authority needed to make changes and hold the team accountable.

Also consider the readiness of your practice to implement the changes needed and potential barriers to implementation, such as competing demands, forthcoming EHR changes, and financial incentives (or lack thereof). Additionally, your practice should be cautious about tackling too much at once. Aim for small wins that can be built upon and which will encourage rather than discourage further engagement.

field notes

"If leadership does not think it is a priority, then the clinicians won't be given the resources they need. They also need to be very involved so that they can hold clinicians accountable."

"Once a practice realized they were the outliers in the community around not having patients do UDT and that it was one of the CDC *Prescribing Guideline* recommendations, they found a champion medical assistant (MA) to lead the charge and within a month had developed workflows for regular UDT for patients on long-term opioid therapy."

"I feel like [our practice] made more progress because of [our champion's] unrelenting focus to engage the medical staff. Because of their engagement, they were willing to try things."

Self-assessment for Step 1

Step 1: Obtain Leadership Support and Identify a Champion(s)					
1. Obtain leadership support	1	2	3	4	5
2. Identify a champion(s) to drive the change process	1	2	3	4	5
3. Identify and engage a change team or key staff	1	2	3	4	5
4. Allocate resources to support champion and/or change team	1	2	3	4	5
5. Consider the readiness of your system and potential barriers to implementing changes	1	2	3	4	5

Source: The self-assessment questionnaire was developed as part of a research project on team-based opioid management in rural clinics led by Dr. Michael Parchman (parchman.m@ghc.org), Director, MacColl Center for Innovation, Kaiser Permanente Washington Health Research Institute and funded by the U.S. DHHS AHRQ grant #R18HS023750. See: https://www.improvingopioidcare.org/6-building-blocks/.

self-assess

These are the self-assessment questions to facilitate your implementation team's reflection on your progress.

STEP 2

Assess Current Approach to Opioids and Identify Areas for Improvement

Assess current policies and practices

Begin by assessing your current policies and practices for opioid prescribing. Are your policies well documented? Do they cover all the key aspects of opioid use? How well are the policies communicated to prescribers and their team? To more systematically assess current practices, your system could survey or interview clinicians about gaps in care or issues they encounter, or even ask questions at a staff meeting. You might also convene clinicians to discuss and reflect on key questions (e.g., "Do our current policies adequately address the issues that come up with patients on opioids?"). Finally, sharing patient stories can illuminate the challenges with opioids and motivate staff for a QI effort.

Complete the self-assessment questionnaire

Complete the self-assessment questionnaire (Appendix C) to determine your system's current status on steps in the QI effort and with specific Guideline recommendations (Step 3). Ideally, the assessment should be completed as a team (i.e., implementation team including leadership) or at least by multiple individuals from across the healthcare system or practices that are involved in prescribing opioids. Additionally, it is important to include different members of the care team, since perspectives might differ depending on one's position. The self-assessment is also a useful tool for getting team members on the same page.

Collect data on your patient population and opioid therapy

Some basic patient population information is needed to help guide the QI implementation. How many patients are on long-term opioid therapy? How many patients are prescribed opioids? While it is not necessary at this stage to be exhaustive, you will want to collect sufficient data to help you decide on your system goals (Step 4). You might consider pulling the denominators for the QI measures (Step 5). For this QI initiative, your EHR will be an essential tool. As mentioned in Step 1, it is a good idea to include the EHR IT staff as members of your implementation team.

Determine access to specialists and other resources

Determine which specialists and other resources your practice does or does not have available within the system or in the community. This may include access to laboratory services, behavioral health specialists, pain management specialists, addiction specialists, interventionists, buprenorphine waivered clinicians, and the development of a registry for easy referral to these types of specialists and services.

Identify areas to improve upon

Based on your assessment results, you will likely identify areas for improvement in your policies, prescribing practices, workflows, and resources needed to support care of patients with chronic pain or on long-term opioid therapy. Additionally, the results of your assessment may highlight to clinicians and leaders alike the extent of unsafe practices with opioids (e.g., high dosages) in your system.

▶ Self-assessment for Step 2

Step 2: Assess Current Approach to Opioids and Identify Areas for Improvement					
6. Assess current policies and practices	1	2	3	4	5
7. Have key staff complete this self-assessment questionnaire	1	2	3	4	5
8. Collect data on your patient population on opioid therapy	1	2	3	4	5
9. Determine access to specialists and other needed resources	1	2	3	4	5
10. Identify areas of practice in need of improvement	1	2	3	4	5

Source: https://www.improvingopioidcare.org/6-building-blocks/

field notes

"[Registry Manager] did a list of patients for each clinician and calculated all of their morphine milligram equivalents (MMEs). She showed it to them, and the clinicians were very competitive."

self-assess

Complete these self-assessment questions to facilitate your implementation team's reflection on your progress.

STEP 3

Select and Prioritize Guideline Recommendations to Implement

Determine which Guideline recommendations to implement

Once your system understands your areas to improve upon (**Step 2**) and completes the self-assessment questionnaire (**Appendix C**), your system should decide which CDC *Prescribing Guideline* recommendations to pursue to address your needs and meet your goals. Each of the CDC *Prescribing Guideline* recommendations is provided below along with considerations for implementation based on the experiences of other systems and practices implementing these changes.

Exhibit 3 provides each of the 12 CDC *Prescribing Guideline* recommendations along with considerations for implementation based on other systems' and practices' experiences and the lessons they learned.

field notes

"We realized that if we added up all the time our clinic spent with patients who were not being managed effectively and safely on long-term opioid therapy (e.g., front office fielding phone calls, MA's calling patient back and 'getting the story,' setting up contracts with patients, etc.), it was less than the amount of time it took us to systematically develop workflows and follow them."

Exhibit 3: Considerations for Implementation (Organized by Recommendation Statement)

GUIDELINE RECOMMENDATION STATEMENT	CONSIDERATIONS FOR IMPLEMENTATION
1. Opioids should not be the first-line therapy.	• Access can be a big issue; determine the nonpharmacologic therapies your practice already can access, and which ones can be accessed in the community. For example, while a practice may not have integrated behavioral health specialists, there are often community therapists and psychologists who can co-treat. • Before referring to patients to specialists, indentify any challenges or barriers to receiving services due to insurance coverage. • Determine if low-cost options for nonpharmacologic therapies, such as behavioral health specialists, are available in community. • Consider focusing on chronic pain conditions that can benefit from a specific nonopioid or nonpharmacologic therapy and start there, such as low back pain patients being referred to physical therapy or given exercise/stretches handouts by clinicians.
2. Establish goals for pain and function.	• Discuss with your clinicians how treatment goals are currently captured and established in collaboration with patients. For example, is there a specific place within the EHR to capture treatment goals and record each visit? • Use the PEG to assess pain and functional improvement and teach clinicians how to use the results with patients.

GUIDELINE RECOMMENDATION STATEMENT	CONSIDERATIONS FOR IMPLEMENTATION
3. Discuss risks and benefits.	• Several clinics used their treatment agreements to drive home the risk of taking opioids long term. These agreements should be used to facilitate conversations, not solely for documentation purposes. • Make sure patients understand components of the treatment agreement and what is necessary for them to continue getting their medication(s). • If patients choose to self-taper, then clinicians should collaborate with the patient on a tapering plan. • Establish a process to document clearly that this has been done, either in agreement or in the EHR. This is critical for risk management.
4. Use immediate-release opioids when starting.	• Develop a policy to improve consistency across clinicians. • Provide education or training to clinicians.
5. Use the lowest effective dose.	• Develop a policy on threshold dosages. • Incorporate an alert in the e-prescribing system for clinicians to justify high dosages, when rendered appropriate for a specific patient. • Use a "dashboard" to show clinicians' current percentages or number of patients on high dosages. • Consider "case reviews" with higher MME patients so providers are held accountable and also given implementation strategies by the team. • Consider a practice-wide CME or training event detailing the CDC *Prescribing Guideline* with explanation and education on monitoring and protecting against unintended consequences (e.g., discontinuation, too-rapid tapering without true patient consent, discharge from practice).
6. Prescribe short durations for acute pain.	• Develop a policy for new opioid prescriptions for acute pain. • Keep abreast of relevant policies and changes in policy and regulation at the state level. Consider doing risk assessment with patients asking for refills of opioid prescriptions that are for acute pain.
7. Evaluate benefits and harms frequently.	• Develop workflow to ensure patients are scheduled for a follow-up visit before leaving with a new opioid prescription for long-term opioid therapy. • Establish a policy and train staff to refuse authorization of a first refill of a new opioid prescription until the patient has been in for a follow-up visit. • Develop a policy that new prescriptions for opioids will be written with no refills until after the patient has had a follow-up visit. • Provide a practice-wide training event detailing the CDC *Prescribing Guideline* with explanation and education on monitoring and protecting against unintended consequences (e.g., discontinuation, too-rapid tapering without true patient consent, discharge from practice).

GUIDELINE RECOMMENDATION STATEMENT	CONSIDERATIONS FOR IMPLEMENTATION
8. Use strategies to mitigate risk.	• Develop a policy of prescribing naloxone for high-risk patients on long-term opioids. • Train clinicians and staff on use of naloxone. • Consider using pharmacist, nurse, nurse practitioner, medical assistant, or physician assistant to train patients and their loved ones on when and how to use naloxone. • Identify behavioral health specialists for collaboration, communication, and referral. • Determine if there are any challenges or barriers to receiving nonpharmacologic therapies due to insurance coverage, and identify any low-cost options for nonpharmacologic therapies, such as behavioral health specialists, available in community.
9. Review PDMP data.	• Develop a policy on the frequency of checking the PDMP. • Keep abreast of relevant policies and changes in policy and regulation at the state level. • Consider using pharmacist, nurse, nurse practitioner, medical assistant or physician assistant to check PDMP in states that allow delegate access.
10. Use urine drug testing.	• Determine the feasibility for your practice setting to implement urine drug testing. • Determine the level of verification needed for your practice setting and implement an appropriate process; some clinics may choose higher levels of verification, such as using temperature sensitive UDT or direct observation of urine sample collection. • Provide a quick link from the EHR for the specific UDT.
11. Avoid concurrent opioid and benzodiazepine prescribing.	• Use clinical decision support (CDS) reminders to ensure clinicians avoid co-prescribing, whenever possible. • Facilitate clinicians checking the PDMP for prescriptions of benzodiazepines by integrating the PDMP into the EHR, as feasible. • Track and monitor co-prescribing and provide clinicians with feedback. • Clinicians should collaborate on a tapering plan with existing patients who are receiving benzodiazepines. • Involve the mental health professionals managing the patient to discuss the patient's needs, prioritize patient goals, weigh risks of concurrent benzodiazepine and opioid exposure, and coordinate care.
12. Offer treatment for opioid use disorder.	• Identify available clinicians to prescribe MAT for patient referrals. • Help clinicians in your practice obtain buprenorphine waivers (see: https://www.samhsa.gov/medication-assisted-treatment/buprenorphine-waiver-management). • Provide training on diagnosing OUD.

Prioritize what will be implemented

Once you have decided what to implement, consider what your system might prioritize if there are too many changes to undertake all at once and be successful. You might prioritize the changes that are most needed based on findings from your assessment (**Step 2**). Or you might consider not selecting the hardest changes first but go for an early win to build momentum before progressing to a more involved change in practice.

▶ Self-assessment for Step 3

Step 3: Progress Towards Implementation of Guideline Recommendations					
11. Consider practice-level changes	1	2	3	4	5
12. Decide which Guideline recommendations to implement	1	2	3	4	5
13. Prioritize what will be implemented	1	2	3	4	5

Source: https://www.improvingopioidcare.org/6-building-blocks/

self-assess

Complete these self-assessment questions to facilitate your implementation team's reflection on your progress.

STEP 4

Define System Goals

Once you have assessed your current approach and identified areas for improvement, the next step is to define the specific goals your practice aims to achieve. The change team should determine the goals with input from key stakeholders (e.g., clinicians, leadership).

The following are some examples of goals:

- Policies on opioid prescribing will be reviewed and revised within X months.
- At least two clinicians will become buprenorphine-waivered (or have a list of community providers available who are waivered) within X months.
- Number of patients prescribed opioids and benzodiazepines concurrently will be reduced by X% within Y months.
- Number of patients prescribed opioids at ≥ 50 MMEs will be reduced by X% within Y months.

▶ Self-assessment for Step 4

Step 4: Define System Goals					
14. Set measurable goals	1	2	3	4	5

Source: https://www.improvingopioidcare.org/6-building-blocks/

self-assess

Complete these self-assessment questions to facilitate your implementation team's reflection on your progress.

STEP 5

Develop a Plan, Implement, and Monitor Progress

Develop a plan for implementing selected Guideline recommendations

Once your practice has defined your goals and selected the relevant recommendations, the next step is to develop an implementation plan—ideally focusing on initial implementation, then go through a Plan-Do-Study-Act (PSDA) cycle (i.e., tool for improving QI). If your practice has an established, structured improvement approach, you should use that approach.

Develop a plan that outlines the following:

- Who will spearhead changes (**Step 1**)?
- What are the areas for your system to improve upon (**Step 2**)?
- What are the CDC *Prescribing Guideline* recommendations to be implemented (**Step 3**)?
- When and how will the necessary components be implemented (**Step 3**)?
    - EHR changes?
    - Changes in workflow?
    - New tasks for specific staff?
    - Communication to staff?
    - Training of staff?
- What are the goals (**Step 4**)?
- How will progress be monitored (**Step 5**)?

Implement the changes

Difficulties in implementing practice changes can be minimized by thoughtful planning and by understanding in advance the concerns of stakeholders whose interests and work will be affected.

(See **Toolkit Part F** for a list of potential challenges or barriers to implementing long-term opioid management strategies and potential solutions.)

Monitor progress using QI measures and other data

An essential element of any practice improvement effort is monitoring progress towards the goals outlined. Your system should monitor progress using existing data and approaches outlined in **Step 2**. For example, complete the self-assessment questionnaire (**Appendix C**) to assess your practice before you implement changes and periodically reflect on progress on each step and selected change. Your system should select the QI measures to assess your system's baseline and monitor progress on a quarterly basis on any of the 16 measures that align to the CDC *Prescribing Guideline* recommendations your system has decided to pursue. See **Appendix B** to operationalize each measure.

The results of monitoring should be reported on a regular basis by the champion or change team to leadership and other stakeholders. These results can be discussed with the change team to identify any mid-course adjustments that may be needed.

Self-assessment for Step 5

Step 5: Develop a Plan, Implement, and Monitor Progress					
15. Develop a plan for implementing selected Guideline recommendations	1	2	3	4	5
16. Implement selected Guideline recommendations	1	2	3	4	5
17. Monitor progress using the QI measures and other data	1	2	3	4	5

Source: https://www.improvingopioidcare.org/6-building-blocks/

self-assess

Complete these self-assessment questions to facilitate your implementation team's reflection on your progress.

Chapter Three

Practice-level Strategies for Care Coordination

Centers for Disease Control and Prevention
National Center for Injury Prevention and Control

Practice-level Strategies for Care Coordiation

Improving management and coordination of long-term opioid therapy requires not only a refined approach to the clinical care of patients but also strategies that can be deployed at the practice- and system-level of care delivery.

These strategies include establishing or revising internal opioid policies, developing registries and using panel management, employing team-based approaches, and effectively using technology, each of which is briefly described below. All of these strategies can be used together to have a comprehensive approach. Throughout this chapter, tips for specific strategies are provided that are based on the experience of a healthcare system aimed to implement this plan into its primary care practices. Toolkit Part A provides links to examples of comprehensive management and coordination approaches.

STRATEGY

Use an Interdisciplinary Team-based Approach

- **Use an interdisciplinary, team-based approach to managing and coordinating long-term opioid therapy to the extent possible (e.g., have a medical assistant manage opioid refill requests or schedule UDTs).**
- **Determine which specialists are available within the practice or need to be identified for referrals (e.g., psychologists, psychiatrists, clinical pharmacists, addiction specialists, social workers, rehabilitation medicine, physical therapists, chiropractors, anesthesiologists, occupational therapists, and acupuncturists or other providers of complementary and alternative medicine).**
- **Determine if patients with an opioid use disorder have sufficient access to providers of MAT. If availability is inadequate, strongly consider having one or more providers seek a waiver to provide buprenorphine to these patients. (For waivers, see http://www.samhsa.gov/medication-assisted-treatment/buprenorphine-waiver-management.)**
- **If needed, use telemedicine consultations (e.g., Project Extension for Community Healthcare Outcomes [ECHO]) to obtain advice from pain specialists via videoconference. (See Toolkit Part D for more details.)**
- **Identify workflow modifications that may be necessary to support selected strategies.**

tip

Managing long-term opioid therapy successfully is not something one provider can easily manage alone.

STRATEGY

Establish Opioid Policies and Standards

▶ Develop and implement policies or standards to promote consistency in long-term opioid therapy management and coordination.

Practice-wide policies and standards both support providers in making clinical decisions that protect patient safety (e.g., decisions to avoid inappropriate dose escalation)[1] and promote consistency in long-term opioid therapy management and coordination. (See **Toolkit Part B** for a list of potential policies.) Examples of policies include:

- All patients receiving long-term opioid therapy must sign or review an opioid treatment agreement and informed-consent form;
- All patients receiving long-term opioid therapy must notify the practice three or four days prior to receiving an opioid refill; and
- Providers check the PDMP data periodically for patients receiving long-term opioid therapy, no less often than every three months. PDMPs are state-based databases that collect information on controlled prescription drugs dispensed by pharmacies in most states and, in some select states, by dispensing physicians as well.

The following are policies the practice could consider developing, establishing, or updating. Internal policies should allow for some flexibility and discretion to be consistent with the spirit of the CDC *Prescribing Guideline*. Clinical decision-making should be based on a relationship between the clinician and patient, and an understanding of the patient's clinical situation, functioning, and life context. Clinicians should consider the circumstances and unique needs of each patient when providing care, and policies should allow for this as well.

Standard treatment agreement for all providers to use

Treatment agreements are useful for defining the responsibilities of the patient and provider, creating a structure to guide and evaluate opioid use, reducing opioid misuse, enhancing adherence to opioid therapy as prescribed, reducing providers' legal risk, and improving practice efficiency.[2] It is important to emphasize the treatment agreement is not just about getting a form signed but is a tool for facilitating a conversation between the provider and patient.

▶ Develop treatment agreements that include the following information:

- Potential risks and benefits of opioid therapy;
- Clinical guidance that opioids may not improve pain or function;
- Prescribing and/or practice policies (e.g., dose limits, only one prescriber, only one pharmacy, refill policy);
- Methods of monitoring opioid use (e.g., urine drug tests, periodic visits, checking PDMPs); and
- Behaviors expected of the patient.

tip

Terminology is important

Treatment agreements are sometimes called "treatment contracts." Use of the term "contract" may have legal and punitive connotations to some, suggesting mistrust, whereas the use of "agreement" implies that parties have reached a mutually acceptable arrangement. When developing a treatment agreement, practices should be cautious with the use of adversarial or intimidating language. In discussing the agreement, emphasis should be placed on how its provisions are intended to protect patient safety. This may enable the patient and physician to find common ground on potentially contentious issues. Ensuring patient safety provides a rationale for erring on the side of caution when considering opioids for chronic pain.

[1] Kilaru AS, Gadsden SM, Perrone J, Paciotti B, Barg FK, Meisel ZF. How do physicians adopt and apply opioid prescription guidelines in the emergency department? A qualitative study. *Annals of emergency medicine*. 2014;64(5):482-489. e481.

[2] Chou R, Fanciullo GJ, Fine PG, et al. Clinical Guidelines for the Use of Chronic Opioid Therapy in Chronic Noncancer Pain. *The journal of pain: official journal of the American Pain Society*. 2009;10(2):113-130.

Examples of treatment agreements are provided in **Toolkit Part C**. More guidance on how the provider can address this with individual patients is provided in **Chapter 1**.

Policy on the threshold dosage levels for the patient population

Research has found that patients who receive high MME dosages have significantly increased risks of overdose compared with patients receiving low dosages (**Exhibit 3**).[3-6] (Even at low dosages, opioids present risk of overdose.) Establishing a practice-wide policy on dosage levels may assist prescribers in making evidence-based decisions and minimizing risks of adverse outcomes.

▶ **Consider implementing CDC's guidance on dosing:**[7]

- Use caution when prescribing opioids at any dosage and prescribe the lowest effective dose.
- Use extra precautions when increasing to ≥ 50 MME per day, such as:
  - Monitor and assess pain and function more frequently.
  - Discuss reducing dose or tapering and discontinuing opioids if benefits do not outweigh harms.
  - Consider offering naloxone.
- Avoid or carefully justify increasing dosage to ≥ 90 MME per day.

▶ **Patients already at high levels may be willing to try reducing the dosage.**

The practice should consider advising prescribers, as a matter of policy, to discuss this with their patients who are taking more than 50 MME per day. (See **Chapter 1** for discussions of opioid dosage for individual patients.)

- Providers are encouraged to read the full **CDC *Prescribing Guideline*** for additional information on improving patient outcomes, such as reduced pain and improved function. Within the CDC *Prescribing Guideline* there are recommendations that are tailored to specific populations (e.g., pregnant women, older adults) and additional guidance on opioid therapy and tapering. The additional details provided within the rationale statements, will assist providers with improving the care and treatment of patients living with chronic pain. Patients should receive appropriate pain treatment based on a careful consideration of the benefits and risks of treatment options. In treating chronic pain, providers should continue to use their clinical judgment and base their treatment on what they know about their patients. Clinicians should empathically review benefits and risks of continued high-dosage opioid therapy and should offer to work with the patient to taper opioids to safer dosages. For patients who agree to taper opioids to lower dosages, clinicians should collaborate with the patient on a tapering plan.

tip

Treatment agreement

Determine where within the EHR the treatment agreement should be saved and how it should be labeled to ensure easy searching and retrieval for a provider to determine if a patient has a treatment agreement and when it was last reviewed and signed.

[3] Dunn KM, Saunders KW, Rutter CM, et al. Opioid Prescriptions for Chronic Pain and Overdose. *Annals of internal medicine.* 2010;152(2):85.

[4] Bohnert AS, Valenstein M, Bair MJ, et al. Association between opioid prescribing patterns and opioid overdose-related deaths. *JAMA.* 2011;305(13):1315-1321.

[5] Gomes T, Mamdani MM, Dhalla IA, Paterson JM, Juurlink DN. Opioid dose and drug-related mortality in patients with nonmalignant pain. *Archives of Internal Medicine.* 2011;171(7):686-691.

[6] Zedler B, Xie L, Wang L, et al. Risk factors for serious prescription opioid-related toxicity or overdose among Veterans Health Administration patients. *Pain Med.* 2014;15(11):1911-1929.

[7] Centers for Disease Control and Prevention. Calculating total daily dose for opioids for safer dosage. https://www.cdc.gov/drugoverdose/pdf/calculating_total_daily_dose-a.pdf

Prescription refill or renewal policy

- **Include any prescription renewal/refill policies in the treatment agreement.**

Examples of prescription refill or renewal policies are: limiting supply to 28 days; not allowing early refills; and requiring three business days advance notice for refills.

Policy for frequency of monitoring patients on long-term opioid therapy

Because most risk-assessment instruments are unable to predict future behavior with a high degree of accuracy,[8] a universal precautions approach to all patients on long-term opioid therapy is appropriate. That is, opioid use by *all* patients on long-term therapy should be monitored periodically. The frequency and intensity of monitoring individual patients, however, should be greater for those who are taking high dosages of opioids, who have other conditions that put them at higher risk (e.g., hepatic deficiency or sleep disordered breathing), whose behavior shows them to be at higher risk (e.g., frequent requests for early refills), or who report indicators of OUD when asked. How these decisions are made for individual patients is discussed in Chapter 1.

- **Establish policies for how monitoring should be calibrated to perceived risk.**

Policy for frequency of urine drug testing

UDTs are useful for determining if patients are taking their opioid medications as prescribed or are using other licit or illicit substances. UDTs should be supplemented by careful, non-judgmental interviewing by clinicians in the practice and patient observation to identify indicators of OUD or potentially hazardous opioid misuse.

There are two main types of UDT—immunoassay drug-testing conducted at a laboratory or at the point of care in a provider's office, and laboratory-based chromatography/mass spectrometry. (See Exhibit 4 for a description of the main differences in these two types of tests and further information regarding conducting UDT as part of monitoring and risk management.

tip

Urine drug testing

It can be helpful to determine the specific, urine drug test that should be used to capture all of the relevant licit and illicit drugs. Make this specific test readily apparent within the EHR order system for providers to choose.

[8] Chou R, Deyo R, Devine B, Hansen R, Sullivan S, Jarvik Jea. The Effectiveness and Risks of Long-term Opioid Treatment of Chronic Pain. Evidence Report/Technology Assessment No. 218. Rockville, MD: Agency for Healthcare Research and Quality; 2014.

Exhibit 4: Differences in Types of Urine Drug Tests

IMMUNOASSAY	GAS CHROMATOGRAPHY, MASS SPECTROMETRY
Less expensive, fast, easy to use.	More expensive, labor intensive.
Most frequently used technique in all settings, including hospital labs.	Requires advanced laboratory services.
Used commonly as screening test.	Used primarily to confirm positive immunoassay result.
Engineered antibodies bind to drug metabolites.	Measures drugs and drug metabolites directly.
Qualitative testing—positive or negative only.	Quantitative testing.
Screens for presence of drugs or a panel of drugs: amphetamine, marijuana, PCP, cocaine, natural opiates (morphine/codeine/thebaine but without differentiation). Heroin is metabolized to morphine and can therefore be detected.	Identifies specific drugs and their metabolites.
Does not differentiate various natural opiates.	Differentiates all opioids.
Typically misses semi-synthetic and synthetic opioids.	More accurate for semi-synthetic and synthetic opioids—methadone, propoxyphene, fentanyl, meperidine, hydrocodone, oxycodone, hydromorphone, oxymorphone, buprenorphine, heroin.
Often has high cut-off levels, giving false negative results.	Very sensitive, detects low levels of drug, minimizes false negatives.
Will show false positives: poppy seeds, quinolone antibiotics, over-the-counter medications.	Very specific, less cross-reactivity, minimizes false positives.

Source: Adapted from "Urine Drug Testing in the Management of Chronic Pain," at https://www.drugabuse.gov/sites/default/files/files/UrineDrugTesting.pdf

- **Establish a policy specifying how often UDTs should be given to patients at different levels of perceived risk.**

The practice should also consider whether tests are to be done at random or on a particular schedule. The cost of testing should be factored into this decision. As discussed in Chapter 1, the frequency of testing may be increased if results are inappropriate or unexplained, due to risk level, or following each dosage increase.

Policies and procedures for checking the prescription drug monitoring program

Periodic checks of the PDMP provide a direct means of monitoring the patient's use of multiple prescribers or multiple pharmacies as well as the frequency and amounts of controlled substances prescribed and purchased.

- **Providers in the practice should register to access the PDMP data.**
- **Check PDMP data frequently.**
- **Consider efficient procedures for integrating PDMP checks into the practice (e.g., delegating a medical assistant to obtain the patient's prescription history).**
- **Establish procedures for providers or their delegates, if applicable, to obtain PDMP data on their long-term opioid therapy patients periodically, in accord with the practice's policy.**

tip

PDMP

Create a single sign-on link to the PDMP to facilitate checking the PDMP into the clinicial workflow. Ensure all providers are registered with the PDMP, and if allowable, utilize delegates to access the PDMP data and give that to providers before a clinical encounter or refill authorization.

[9] Anderson D, Zlateva I, Khatri K, Ciaburri N. Using health information technology to improve adherence to opioid prescribing guidelines in primary care. *The Clinical Journal of Pain.* 2014.

In most states, providers may delegate their authority to access the PDMP data, although the procedures for doing so vary by state. Some state laws allow one provider in a practice to register for access and delegate to an assistant who can obtain PDMP information for all providers in the group. Information about state PDMPs and associated regulations for use is available at The National Alliance for Model State Drug Laws (**http://www.namsdl.org/prescription-monitoring-programs.cfm**).

STRATEGY

Use EHR Data to Develop Patient Registries and Track QI Measures

EHRs are critical sources of information for managing and monitoring the extent to which the long-term opioid therapy procedures are being implemented by the care teams.

- **Develop a clinical dashboard, so providers can see how their patients and their implementation of specific clinical practices compare to their colleagues.**
- **Use dashboards to measure the extent to which providers adhere to the practice's policies or for monitoring improvements.[9]**
- **Implement QI measures using EHR data (as described in Chapter 2).**

Registries are used to identify patients to target for specific interventions—in this case, for management and coordination of long-term opioid therapy. They are also used to generate quality measures and to monitor progress at the provider and practice levels. Consider:

- **A registry of patients on long-term opioid therapy to measure progress toward practice goals and to support providers in managing their panel of patients on long-term opioid therapy.**
- **A registry to identify patients who may be transitioning from short-term use for acute pain to long-term opioid use for chronic pain and may need to be evaluated prior to making the decision to use prescription opioids long term.**
- **A written procedure that specifies who is responsible for entering the data and when, who manages the data, and when and how reports are produced and distributed to providers and to the leadership team.**

tip

EHRs

Ensure that any EHR templates and fields are incorporated into the clinical workflow of providers and auto-populated to the extent possible to facilitate use.

tip

Registry

It is important to not just develop a registry as data for management or monitoring but also to feed back the information to providers to motivate prescribing behavior changes and ideally pair report results with accountability or incentives.

References

[1] Kilaru AS, Gadsden SM, Perrone J, Paciotti B, Barg FK, Meisel ZF. How do physicians adopt and apply opioid prescription guidelines in the emergency department? A qualitative study. Annals of emergency medicine. 2014;64(5):482-489. e481.

[2] Chou R, Fanciullo GJ, Fine PG, et al. Clinical Guidelines for the Use of Chronic Opioid Therapy in Chronic Noncancer Pain. *The journal of pain: official journal of the American Pain Society*. 2009;10(2):113-130.

[3] Dunn KM, Saunders KW, Rutter CM, et al. Opioid Prescriptions for Chronic Pain and Overdose. Annals of internal medicine. 2010;152(2):85.

[4] Bohnert AS, Valenstein M, Bair MJ, et al. Association between opioid prescribing patterns and opioid overdose-related deaths. JAMA. 2011;305(13):1315-1321.

[5] Gomes T, Mamdani MM, Dhalla IA, Paterson JM, Juurlink DN. Opioid dose and drug-related mortality in patients with nonmalignant pain. Archives of Internal Medicine. 2011;171(7):686-691.

[6] Zedler B, Xie L, Wang L, et al. Risk factors for serious prescription opioid-related toxicity or overdose among Veterans Health Administration patients. Pain Med. 2014;15(11):1911-1929.

[7] Centers for Disease Control and Prevention. Calculating total daily dose for opioids for safer dosage. https://www.cdc.gov/drugoverdose/pdf/calculating_total_daily_dose-a.pdf

[8] Chou R, Deyo R, Devine B, Hansen R, Sullivan S, Jarvik Jea. The Effectiveness and Risks of Long-term Opioid Treatment of Chronic Pain. Evidence Report/Technology Assessment No. 218. Rockville, MD: Agency for Healthcare Research and Quality; 2014.

[9] Anderson D, Zlateva I, Khatri K, Ciaburri N. Using health information technology to improve adherence to opioid prescribing guidelines in primary care. The Clinical Journal of Pain. 2014.

Appendix A

Methods Used to Develop Clinical Quality Improvement Opioid (QI) Measures and Practice-level Strategies

Centers for Disease Control and Prevention
National Center for Injury Prevention and Control

Please note that the CDC does not endorse the resources and websites cited throughout this document. Further, those included here do not present an exhaustive list of references, but rather are those taken into consideration by CDC scientists in developing this document.

Methods Used to Develop Clinical QI Opioid Measures

The clinical QI opioid measures were developed to align with each of the 12 recommendation statements contained in the CDC *Guideline for Prescribing Opioids for Chronic Pain*. The measures were refined based on multiple stages of external stakeholder feedback conducted under contract to Abt Associates (Contract No. 200-2016-F-92356.)

Individual input was sought from stakeholders external to CDC to develop the QI measures. Stakeholders had either clinical or research expertise in the topic of opioids, quality improvement, or direct experience implementing QI for opioids. Stakeholders represented physicians, nurses, physician assistants, researchers, IT specialists, and healthcare system quality managers.

The stakeholders provided individual input via a survey, interviews, and discussion. The stakeholders evaluated each measure on six dimensions (importance, face-validity, timeliness, acceptability, usability, feasibility) and provided an overall rating using a five-point Likert scale. They then selected the ten measures most needed for improving opioid safety, and of those, the five easiest to produce. Responses on each dimension were averaged; other data (i.e., open-ended survey items, interviews/ discussion) were qualitatively synthesized. The list of 16 QI measures reflects input from this stakeholder engagement process.

Key definitions for operationalizing the QI measures

These definitions of key terms may be helpful to providers in a practice or healthcare system that are taking steps to integrate these measures into EHRs:

- **Data sources:** Measures can be based on electronic health record (EHR) data, e-prescribing data, chart reviews, or other health systems/practice data. The data source for some measures may require systems to create a structured field, whether via a note template, checkbox, registry, or other means in which clinicians or staff can attest to having completed a task that could otherwise not be captured. As data and systems evolve, there may be opportunities to use additional data from these systems (e.g., Prescription Drug Monitoring Program, e-prescribing).
- **Denominator exclusions:** active cancer, palliative, and end-of-life care (define by ICD-10 codes)
- **Long-term opioid therapy:** ≥ 60 days' supply of opioids within a quarter. (Note: If determining days is too difficult, an alternative is to define it as at least two consecutive opioid prescriptions in a quarter.)
- **New opioid prescription:** prescribed an opioid with no other opioid prescription in the previous 45 days.
- **Population:** outpatient setting and patients 18 years or older. While these Guideline recommendations also primarily focus on patients with chronic pain, we do not always encourage chronic pain to be the denominator given the complexities of capturing those ICD-10 codes.
- **Time periods:**
  - The ***measurement period*** is the time period within which the clinical activity specified (numerator) should take place (e.g., one year, 90 days, one week, or any period of time).
  - The ***frequency of measurement*** is the frequency with which the measures will be produced by a healthcare system or practice (e.g., quarterly). Your practice should determine the frequency that fits its needs or aligns with its other QI efforts. Recommend 90-day/quarterly intervals.

Methods Used to Develop Practice-level Strategies for Care Coordination

The three practice-level strategies were developed to provide practical guidance for specific strategies to improve the coordination of long-term opioid therapy at the healthcare system and practice level. This project was completed under contract to Abt Associates (Contract No. 200-2011-42071.)

The practice level strategies featured in **Chapter 3** were developed by synthesizing elements from (1) the CDC *Prescribing Guideline*; (2) reliance on care coordination plans developed by Kaiser Permanente Washington (formally Group Health) in Washington State and the VA; (3) findings of relevant scientific studies of opioid management, treatment, and associated risks; (4) informational calls with representatives of healthcare systems that have implemented opioid prescribing guidelines, policies, and/or practices; and (5) the results from a healthcare system that assessed the feasibility of implementing the practices recommended in the document also informed development of this plan.

The practice level strategies for care coordination that were developed based on the above sources are:

- **Use an interdisciplinary team-based approach**
  - Using a team-based approach across multiple disciplines and specialties improves the management and coordination of care.
- **Establish opioid policies and standards**
  - Developing and implementing practice-wide policies or standards to support and encourage consistent long-term opioid therapy management and coordination.
- **Use EHR data to develop patient registries and track QI measures**
  - EHRs are critical sources of information for managing and monitoring implementation by care teams and registries are useful to identify patients to target for specific interventions and care coordination.

Appendix B

Operational Clinical Quality Improvement (QI) Opioid Measures

Centers for Disease Control and Prevention
National Center for Injury Prevention and Control

Short-term Opioid Therapy Measures

MEASURE 1: USE IMMEDIATE-RELEASE OPIOIDS	
CDC Prescribing Guideline Recommendation 4	When starting opioid therapy for chronic pain, clinicians should prescribe immediate-release opioids instead of extended-release/long-acting (ER/LA) opioids.
Description	The percentage of patients with a new opioid prescription for an immediate-release opioid.
Numerator	The number of patients with a prescription for an immediate-release opioid only, and no concurrent prescription for an extended-release or long-acting opioid.
Denominator	The number of patients in an outpatient panel of patients 18 years of age or older prescribed an opioid who had no opioid prescription in the previous 45 days.
Measurement period	Practice may determine the period of time.
Exclusions	Exclusion criteria include cancer patients (ICD-10 codes C00-D09 are "cancers," malignant neoplasms; ICD-10 codes D10-D3A are benign neoplasms; ICD-10 codes D37-D48 are neoplasms of uncertain behavior; and ICD-10 code D49 is a neoplasm of unspecified behavior—could be malignant, but not known [**Appendix D**]), palliative care, and end-of-life care. Palliative care is identified with a principal ICD-10 code of terminal condition with (Z51.5), and end-of-life care patients would be identified using a procedure or CPT code. Note: identifying end-of-life care patients may be difficult to systematically capture; palliative care may be a sufficient proxy for end-of-life care. Additional exclusion criteria are: (1) drugs not typically used in outpatient settings, such as cough and cold formulations including elixirs, and combination products containing antitussives, decongestants, antihistamines, and expectorants (see the CDC's morphine milligram equivalent file for up-to-date list of opioids and exclusions. Available at: **https://www.cdc.gov/drugoverdose/resources/data.html**); (2) buprenorphine products indicated for medication-assisted treatment (MAT) to treat opioid use disorder, identified by ICD-10 codes. Patients who transfer into the practice may be excluded from the measure.
Data sources	Prescription data from the practice EHR.
Guidance for producing the measure and potential challenges	• **Identifying opioid medications:** EHRs may not be able to identify all opioid medications reliably. CDC annually updates a list of all opioids, with associated National Drug Code (NDC), generic name, and product name, which may be used to match with EHR records. The file also indicates which opioids are immediate-release (i.e., short-acting or SA in the file), and which are extended-release/long-acting (i.e., long-acting or LA in the file). See the CDC's morphine milligram equivalent (MME) file referenced above. • If there are challenges in the EHR to secure these data, a practice may wish to measure the percentage of prescriptions that are for immediate-release opioids, instead of at patient level.

MEASURE 2: CHECK PRESCRIPTION DRUG MONITORING PROGRAM (PDMP) BEFORE PRESCRIBING OPIOIDS

CDC Prescribing Guideline Recommendation 9	Clinicians should review the patient's history of controlled substance prescriptions using state PDMP data to determine whether the patient is receiving opioid dosages or dangerous combinations that put him or her at high risk for overdose. They should also assess whether the use of multiple prescribers and/or pharmacies suggests uncoordinated or insufficiently coordinated care. 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 three months.
Description	The percentage of patients with a new opioid prescription for chronic pain with documentation that a PDMP was checked prior to prescribing.
Numerator	The number of patients with a new opioid prescription for chronic pain with documentation that a PDMP was checked prior to prescribing.
Denominator	The number of patients in an outpatient panel of patients 18 years of age or older prescribed an opioid for chronic pain (see Appendix D for ICD-10 codes) who had no opioid prescription in the previous 45 days.
Measurement period	One week (day of or within the week prior to prescribing).
Exclusions	Exclusion criteria include cancer patients (ICD-10 codes C00-D09 are "cancers," malignant neoplasms; ICD-10 codes D10-D3A are benign neoplasms; ICD-10 codes D37-D48 are neoplasms of uncertain behavior; and ICD-10 code D49 is a neoplasm of unspecified behavior—could be malignant, but not known [**Appendix D**]), palliative care and end-of-life care. Palliative care is identified with a principal ICD-10 code of terminal condition with (Z51.5), and end-of-life care patients would be identified using a procedure or CPT code. Note: identifying end-of-life care patients may be difficult to systematically capture; palliative care may be a sufficient proxy for end-of-life care. Additional exclusion criteria are: (1) drugs not typically used in outpatient settings, such as cough and cold formulations including elixirs, and combination products containing antitussives, decongestants, antihistamines, and expectorants (see the CDC's MME file for up-to-date list of opioids and exclusions. Available at: **https://www.cdc.gov/drugoverdose/resources/data.html**); (2) buprenorphine products indicated for medication-assisted treatment (MAT) to treat opioid use disorder, identified by ICD-10 codes. Patients who transfer into the practice may be excluded from the measure.
Data sources	Prescription data from the practice EHR. Access to state PDMP data. A structured field in the EHR to capture that the PDMP was checked.
Guidance for producing the measure and potential challenges	• **Identifying opioid medications:** EHRs may not be able to identify all opioid medications reliably. CDC annually updates a list of all opioids, with associated National Drug Code (NDC), generic name, and product name, which may be used to match with EHR records. See the CDC's MME file referenced above. • Not all clinicians may be registered with the PDMP and practices' access to the PDMP embedded within an EHR may not always work. While EHRs can sometimes have a hyperlink to the PDMP or a "single sign-on" access from the EHR, an indication that the PDMP was checked for a specific patient is not captured. Practices may need to create a structured field or checkbox for clinicians to indicate the PDMP was checked. Clinicians should remember to look for benzodiazepine prescriptions from other clinicians, as well as opioids.

MEASURE 3: URINE DRUG TESTING BEFORE PRESCRIBING OPIOIDS

CDC Prescribing Guideline Recommendation 10	When prescribing opioids for chronic pain, clinicians should administer urine drug tests before starting opioid therapy and at least annually to assess presence of prescribed opioids as well as other controlled prescription drugs and illicit drugs.
Description	The percentage of patients with a new opioid prescription for chronic pain with documentation that a urine drug test was performed prior to prescribing.
Numerator	The number of patients with a new opioid prescription for chronic pain with documentation of a urine drug test.
Denominator	The number of patients in an outpatient panel of patients 18 years of age or older prescribed an opioid for chronic pain (see Appendix D for ICD-10 codes) who had no opioid prescription in the previous 45 days.
Measurement period	One week (day of or within the week prior to prescribing).
Exclusions	Exclusion criteria include cancer patients (ICD-10 codes C00-D09 are "cancers," malignant neoplasms; ICD-10 codes D10-D3A are benign neoplasms; ICD-10 codes D37-D48 are neoplasms of uncertain behavior; and ICD-10 code D49 is a neoplasm of unspecified behavior—could be malignant, but not known [**Appendix D**]), palliative care and end-of-life care. Palliative care is identified with a principal ICD-10 code of terminal condition with (Z51.5), and end-of-life care patients would be identified using a procedure or CPT code. Note: identifying end-of-life care patients may be difficult to systematically capture; palliative care may be a sufficient proxy for end-of-life care. Additional exclusion criteria are: (1) drugs not typically used in outpatient settings, such as cough and cold formulations including elixirs, and combination products containing antitussives, decongestants, antihistamines, and expectorants (see the CDC's MME file for up-to-date list of opioids and exclusions. Available at: **https://www.cdc.gov/drugoverdose/resources/data.html**); (2) buprenorphine products indicated for medication-assisted treatment (MAT) to treat opioid use disorder, identified by ICD-10 codes. Patients who transfer into the practice may be excluded from the measure.
Data sources	Prescription data from the practice EHR. Urine drug testing data in EHR and/or medical chart.
Guidance for producing the measure and potential challenges	• **Identifying opioid medications:** EHRs may not be able to identify all opioid medications reliably. CDC annually updates a list of all opioids, with associated National Drug Code (NDC), generic name, and product name, which may be used to match with EHR records. See the CDC's MME file referenced above. • Some systems may not have access to laboratory services in house or the results in a structured field. It is not only important to determine whether a patient is taking other controlled or illicit substances; it is also important to determine whether the patient is taking the medication to help prevent opioid diversion. Practices should check with the labs they use, since mass spectrometry is usually required to test for the absence of a prescribed medication. A separate order may be required for this confirmation.

MEASURE 4: EVALUATE WITHIN FOUR WEEKS OF STARTING OPIOIDS	
CDC Prescribing Guideline Recommendation 7	Clinicians should evaluate benefits and harms to patients within one to four weeks of starting opioid therapy for chronic pain or of dose escalation. Clinicians should evaluate benefits and harms of continued therapy to patients every three 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.
Description	The percentage of patients with a follow-up visit within four weeks of starting an opioid for chronic pain.
Numerator	The number of patients with a new opioid prescription for chronic pain with an in-person follow-up visit with the prescribing clinician within four weeks.
Denominator	The number of patients in an outpatient panel of patients 18 years of age or older prescribed an opioid for chronic pain (see Appendix C for ICD-10 codes) who had no opioid prescription in the previous 45 days.
Measurement period	Four weeks (within four weeks of starting opioids).
Exclusions	Exclusion criteria include cancer patients (ICD-10 codes C00-D09 are "cancers," malignant neoplasms; ICD-10 codes D10-D3A are benign neoplasms; ICD-10 codes D37-D48 are neoplasms of uncertain behavior; and ICD-10 code D49 is a neoplasm of unspecified behavior—could be malignant, but not known [**Appendix D**]), palliative care and end-of-life care. Palliative care is identified with a principal ICD-10 code of terminal condition with (Z51.5), and end-of-life care patients would be identified using a procedure or CPT code. Note: identifying end-of-life care patients may be difficult to systematically capture; palliative care may be a sufficient proxy for end-of-life care. Additional exclusion criteria are: (1) drugs not typically used in outpatient settings, such as cough and cold formulations including elixirs, and combination products containing antitussives, decongestants, antihistamines, and expectorants (see the CDC's MME file for up-to-date list of opioids and exclusions. Available at: **https://www.cdc.gov/drugoverdose/resources/data.html**); (2) buprenorphine products indicated for medication-assisted treatment (MAT) to treat opioid use disorder, identified by ICD-10 codes. Patients who transfer into the practice may be excluded from the measure.
Data sources	Prescription data from the practice EHR. Patient follow-up visit data from the EHR or the medical chart.
Guidance for producing the measure and potential challenges	• **Identifying opioid medications** EHRs may not be able to identify all opioid medications reliably. CDC annually updates a list of all opioids, with associated National Drug Code (NDC), generic name, and product name, which may be used to match with EHR records. See the CDC's MME file referenced above. • In-person follow-ups should be conducted by the prescribing clinician. However, if it is not feasible to require that patients would have their follow-up with the prescribing clinician because of staffing, they may consider revising the measure accordingly (to indicate any clinician). • Telemedicine or virtual visits are considered "in-person" visits when they are already considered a part of standard care in a practice.

MEASURE 5: THREE DAYS' SUPPLY FOR ACUTE PAIN

CDC Prescribing Guideline Recommendation 6	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.
Description	The percentage of patients with a new opioid prescription for acute pain for three days' supply or less.
Numerator	The number of patients with a new opioid prescription for acute pain for three days' supply or less.
Denominator	The number of patients prescribed an opioid for acute pain who had no opioid prescription in the previous 45 days. **The following is a list of potential acute pain codes, though not exhaustive:** **F45.4** Pain disorders related to psychological factors **G44.** Headache syndromes **G50.1** Atypical face pain **G43-G44** Migraine and other headache syndromes **G54.6** Phantom limb syndrome with pain **G89.0** Central pain syndrome **G89.1** Acute pain, not elsewhere classified **H92.0** Ear pain **H57.1** Eye pain **K08.8** Tooth pain **M25.5** Joint pain **M25.51** Shoulder pain **M54.** Spine pain **M54.9** Back pain **M79.1** Myalgia **M79.6** Limb pain **N64.4** Breast pain **R07.0** Throat pain **R07.1** Chest pain on breathing **R07.9** Chest pain unspecified **R10.** Abdomen pain **R10.2** Pelvic and perineal pain **R30.9** Painful urination **R51** Headache **R52** Generalized pain NOS
Measurement period	Practice may determine the period of time.

Exclusions	Exclusion criteria include cancer patients (ICD-10 codes C00-D09 are "cancers," malignant neoplasms; ICD-10 codes D10-D3A are benign neoplasms; ICD-10 codes D37-D48 are neoplasms of uncertain behavior; and ICD-10 code D49 is a neoplasm of unspecified behavior—could be malignant, but not known [**Appendix D**]), palliative care and end-of-life care. Palliative care is identified with a principal ICD-10 code of terminal condition with (Z51.5), and end-of-life care patients would be identified using a procedure or CPT code. Note: identifying end-of-life care patients may be difficult to systematically capture; palliative care may be a sufficient proxy for end-of-life care. Additional exclusion criteria are: (1) drugs not typically used in outpatient settings, such as cough and cold formulations including elixirs, and combination products containing antitussives, decongestants, antihistamines, and expectorants (see the CDC's MME file for up-to-date list of opioids and exclusions. Available at: **https://www.cdc.gov/drugoverdose/resources/data.html**); (2) buprenorphine products indicated for medication-assisted treatment (MAT) to treat opioid use disorder, identified by ICD-10 codes. Patients who transfer into the practice may be excluded from the measure.
Data sources	Prescription data from the practice EHR.
Guidance for producing the measure and potential challenges	• **Identifying opioid medications:** EHRs may not be able to identify all opioid medications reliably. CDC annually updates a list of all opioids, with associated National Drug Code (NDC), generic name, and product name, which may be used to match with EHR records. The file also indicates which opioids are immediate-release (i.e., short-acting or SA in the file), and which are extended-release/long-acting (i.e., long-acting or LA in the file). See the CDC's MME file referenced above.

Long-term Opioid Therapy Measures

MEASURE 6: DOSAGE OF ≥ 50 MMEs	
CDC Prescribing Guideline Recommendation 5	When opioids are started, clinicians should prescribe the lowest effective dosage. Clinicians should use caution when prescribing opioids at any dosage, carefully reassess evidence of individual benefits and risks when considering increasing dosage to 50 morphine milligram equivalents (MME) or more per day, and avoid increasing dosage to 90 MME or more per day or carefully justify a decision to titrate dosage to 90 MME or more per day.
Description	The percentage of patients on long-term opioid therapy who are taking 50 MMEs or more per day.
Numerator	The number of patients taking ≥ 50 MMEs per day.
Denominator	The number of patients in an outpatient panel of patients 18 years of age or older with ≥ 60 days' supply of opioids within a quarter.
Measurement period	Practice may determine the period of time.
Exclusions	Exclusion criteria include cancer patients (ICD-10 codes C00-D09 are "cancers," malignant neoplasms; ICD-10 codes D10-D3A are benign neoplasms; ICD-10 codes D37-D48 are neoplasms of uncertain behavior; and ICD-10 code D49 is a neoplasm of unspecified behavior—could be malignant, but not known [**Appendix D**]), palliative care and end-of-life care. Palliative care is identified with a principal ICD-10 code of terminal condition with (Z51.5), and end-of-life care patients would be identified using a procedure or CPT code. Note: identifying end-of-life care patients may be difficult to systematically capture; palliative care may be a sufficient proxy for end-of-life care. Additional exclusion criteria are: (1) drugs not typically used in outpatient settings, such as cough and cold formulations including elixirs, and combination products containing antitussives, decongestants, antihistamines, and expectorants (see the CDC's MME file for up-to-date list of opioids and exclusions. Available at: **https://www.cdc.gov/drugoverdose/resources/data.html**); (2) buprenorphine products indicated for medication-assisted treatment (MAT) to treat opioid use disorder, identified by ICD-10 codes. Patients who transfer into the practice may be excluded from the measure.
Data sources	Prescription data from the practice EHR..
Guidance for producing the measure and potential challenges	• **Identifying opioid medications:** EHRs may not be able to identify all opioid medications reliably. CDC annually updates a list of all opioids, with associated National Drug Code (NDC), generic name, and product name, which may be used to match with EHR records. See the CDC's MME file referenced above. • **Unknown days' supply in EHRs**: Practices lacking information about days' supply could calculate the days' supply by dividing the prescription quantity by the maximum use per the Sig and add up the MMEs of all opioid prescriptions. • Practice could obtain baseline data and then monitor the trend to identify patterns of patients being potentially escalated from lower doses crossing into the ≥ 50 MMEs per day group.

MEASURE 7: DOSAGE OF ≥ 90 MMEs	
CDC Prescribing Guideline Recommendation 5	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) or more per day, and should avoid increasing dosage to 90 MME or more per day or carefully justify a decision to titrate dosage to 90 MME or more per day.
Description	The percentage of patients on long-term opioid therapy who are taking 90 MMEs or more per day.
Numerator	The number of patients taking ≥ 90 MMEs per day.
Denominator	The number of patients in an outpatient panel of patients 18 years of age or older with ≥ 60 days' supply of opioids within a quarter.
Measurement period	Practice may determine the period of time.
Exclusions	Exclusion criteria include cancer patients (ICD-10 codes C00-D09 are "cancers," malignant neoplasms; ICD-10 codes D10-D3A are benign neoplasms; ICD-10 codes D37-D48 are neoplasms of uncertain behavior; and ICD-10 code D49 is a neoplasm of unspecified behavior—could be malignant, but not known [**Appendix D**]), palliative care and end-of-life care. Palliative care is identified with a principal ICD-10 code of terminal condition with (Z51.5), and end-of-life care patients would be identified using a procedure or CPT code. Note: identifying end-of-life care patients may be difficult to systematically capture; palliative care may be a sufficient proxy for end-of-life care. Additional exclusion criteria are: (1) drugs not typically used in outpatient settings, such as cough and cold formulations including elixirs, and combination products containing antitussives, decongestants, antihistamines, and expectorants (see the CDC's MME file for up-to-date list of opioids and exclusions. Available at: **https://www.cdc.gov/drugoverdose/resources/data.html**); (2) buprenorphine products indicated for medication-assisted treatment (MAT) to treat opioid use disorder, identified by ICD-10 codes. Patients who transfer into the practice may be excluded from the measure.
Data sources	Prescription data from the practice EHR.
Guidance for producing the measure and potential challenges	• **Identifying opioid medications:** EHRs may not be able to identify all opioid medications reliably. CDC annually updates a list of all opioids, with associated National Drug Code (NDC), generic name, and product name, which may be used to match with EHR records. See the CDC's MME file referenced above. • **Unknown days' supply in EHRs:** Practices lacking information about days' supply could calculate the days' supply by dividing the prescription quantity by the maximum use per the Sig and add up the MMEs of all opioid prescriptions.

MEASURE 8: CONCURRENT PRESCRIBING OF OPIOIDS AND BENZODIAZEPINES

CDC Prescribing Guideline Recommendation 11	Clinicians should avoid prescribing opioid pain medication and benzodiazepines concurrently whenever possible.
Description	The percentage of patients on long-term opioid therapy who received a prescription for a benzodiazepine.
Numerator	The number of patients prescribed an opioid and a benzodiazepine.
Denominator	The number of patients in an outpatient panel of patients 18 years of age or older with ≥ 60 days' supply of opioids within a quarter.
Measurement period	Practice may determine the period of time.
Exclusions	Exclusion criteria include cancer patients (ICD-10 codes C00-D09 are "cancers," malignant neoplasms; ICD-10 codes D10-D3A are benign neoplasms; ICD-10 codes D37-D48 are neoplasms of uncertain behavior; and ICD-10 code D49 is a neoplasm of unspecified behavior—could be malignant, but not known [**Appendix D**]), palliative care and end-of-life care. Palliative care is identified with a principal ICD-10 code of terminal condition with (Z51.5), and end-of-life care patients would be identified using a procedure or CPT code. Note: identifying end-of-life care patients may be difficult to systematically capture; palliative care may be a sufficient proxy for end-of-life care. Additional exclusion criteria are: (1) drugs not typically used in outpatient settings, such as cough and cold formulations including elixirs, and combination products containing antitussives, decongestants, antihistamines, and expectorants (see the CDC's MME file for up-to-date list of opioids and exclusions. Available at: **https://www.cdc.gov/drugoverdose/resources/data.html**); (2) buprenorphine products indicated for medication-assisted treatment (MAT) to treat opioid use disorder, identified by ICD-10 codes. Patients who transfer into the practice may be excluded from the measure.
Data Sources	Prescription data from the practice EHR.
Guidance for producing the measure and potential challenges	• **Identifying opioid medications:** EHRs may not be able to identify all opioid medications reliably. CDC annually updates a list of all opioids and benzodiazepines, with associated National Drug Code (NDC), generic name, and product name, which may be used to match with EHR records. See the CDC's MME file referenced above for a list of both opioids and benzodiazepines. • **Unknown days' supply in EHRs:** Practices lacking information about days' supply could calculate the days' supply by dividing the prescription quantity by the maximum use per the sig and add up the MMEs of all opioid prescriptions. • Identifying benzodiazepines prescribed to patients in opioid therapy by prescribers in other practices or healthcare systems will be difficult without accessing the state's PDMP. PDMP data are not universally integrated into EHRs, so that may require an additional step. • If there are challenges in securing these data, a practice may wish to assess whether patients receiving long-term opioid therapy are also being prescribed benzodiazepines long-term. This can be done by assessing whether the person received at least 45 days' supply of benzodiazepines in the quarter, using the same methods employed for opioids.

MEASURE 9: FOLLOW-UP VISIT QUARTERLY

CDC Prescribing Guideline Recommendation 7	Clinicians should evaluate benefits and harms with patients within one to four weeks of starting opioid therapy for chronic pain or of dose escalation. Clinicians should evaluate benefits and harms of continued therapy with patients every three 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.
Description	The percentage of patients on long-term opioid therapy who have a follow-up visit at least quarterly.
Numerator	The number of patients who had at least one in-person follow-up visit with the prescribing clinician at least quarterly.
Denominator	The number of patients in an outpatient panel of patients 18 years of age or older with ≥ 60 days' supply of opioids within a quarter.
Measurement period	Ninety (90) days.
Exclusions	Exclusion criteria include cancer patients (ICD-10 codes C00-D09 are "cancers," malignant neoplasms; ICD-10 codes D10-D3A are benign neoplasms; ICD-10 codes D37-D48 are neoplasms of uncertain behavior; and ICD-10 code D49 is a neoplasm of unspecified behavior—could be malignant, but not known [**Appendix D**]), palliative care and end-of-life care. Palliative care is identified with a principal ICD-10 code of terminal condition with (Z51.5), and end of life care patients would be identified using a procedure or CPT code. Note: identifying end-of-life care patients may be difficult to systematically capture; palliative care may be a sufficient proxy for end-of-life care. Additional exclusion criteria are: (1) drugs not typically used in outpatient settings, such as cough and cold formulations including elixirs, and combination products containing antitussives, decongestants, antihistamines, and expectorants (see the CDC's MME file for up-to-date list of opioids and exclusions. Available at: **https://www.cdc.gov/drugoverdose/resources/data.html**); (2) buprenorphine products indicated for medication-assisted treatment (MAT) to treat opioid use disorder, identified by ICD-10 codes. Patients who transfer into the practice may be excluded from the measure.
Data sources	Prescription data from the practice EHR. Patient follow-up visit data from the EHR or the medical chart.
Guidance for producing the measure and potential challenges	• **Identifying opioid medications:** EHRs may not be able to identify all opioid medications reliably. CDC annually updates a list of all opioids, with associated National Drug Code (NDC), generic name, and product name, which may be used to match with EHR records. See the CDC's MME file referenced above. • **Unknown days' supply in EHRs:** Practices lacking information about days' supply could calculate the days' supply by dividing the prescription quantity by the maximum use per the sig and add up the MMEs of all opioid prescriptions. • It will be challenging to determine whether a visit was related to following-up on long-term opioid therapy without a chart. A practice should consider the best way to capture visits related to opioids (e.g., create a structured field, create a registry to track last visits). • If it is unreasonable to require that patients would have their follow-up with the prescribing clinician because of staffing, they may consider revising the measure accordingly (to indicate any clinician). • If there are challenges in securing these data, a practice may wish to look at a six-month interval, and limit the analyses to persons who were receiving long-term opioid therapy consistently over that time period. Then one could count the number of visits to the prescribing physician. The simplest metric would be the percent of long-term opioid therapy patients who have at least one follow-up visit to the clinician in a six-month period. o Another option would be to report the percentage of long-term opioid therapy patients with at least two follow-up visits. However, it would then probably be necessary to extend the time period from six months to nine months to provide leeway for follow-up visits that fell slightly outside the 6-month time window.

MEASURE 10: QUARTERLY PAIN AND FUNCTIONAL ASSESSMENTS

CDC Prescribing Guideline Recommendation 2	Before starting opioid therapy for chronic pain, clinicians should establish treatment goals with all patients, including realistic goals for pain and function, and 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.
Description	The percentage of patients on long-term opioid therapy who had at least quarterly pain and functional assessments.
Numerator	The number of patients with documented pain and functional assessments using a validated clinical assessment tool (e.g., PEG) at least quarterly.
Denominator	The number of patients in an outpatient panel of patients 18 years of age or older with ≥ 60 days' supply of opioids within a quarter.
Numerator	The number of patients with documented pain and functional assessments using a validated clinical assessment tool (e.g., PEG) at least quarterly.
Exclusions	Exclusion criteria include cancer patients (ICD-10 codes C00-D09 are "cancers," malignant neoplasms; ICD-10 codes D10-D3A are benign neoplasms; ICD-10 codes D37-D48 are neoplasms of uncertain behavior; and ICD-10 code D49 is a neoplasm of unspecified behavior—could be malignant, but not known [**Appendix D**]), palliative care and end-of-life care. Palliative care is identified with a principal ICD-10 code of terminal condition with (Z51.5), and end-of-life care patients would be identified using a procedure or CPT code. Note: identifying end-of-life care patients may be difficult to systematically capture; palliative care may be a sufficient proxy for end-of-life care. Additional exclusion criteria are: (1) drugs not typically used in outpatient settings, such as cough and cold formulations including elixirs, and combination products containing antitussives, decongestants, antihistamines, and expectorants (see the CDC's MME file for up-to-date list of opioids and exclusions. Available at: **https://www.cdc.gov/drugoverdose/resources/data.html**); (2) buprenorphine products indicated for medication-assisted treatment (MAT) to treat opioid use disorder, identified by ICD-10 codes. Patients who transfer into the practice may be excluded from the measure.
Data sources	Prescription data from the practice EHR. PEG assessment scale data captured outside and recorded in the EHR or a structured version of the PEG available in the EHR.
Guidance for producing the measure and potential challenges	• **Identifying opioid medications:** EHRs may not be able to identify all opioid medications reliably. CDC annually updates a list of all opioids, with associated National Drug Code (NDC), generic name, and product name, which may be used to match with EHR records. See the CDC's MME file referenced above. • **Unknown days' supply in EHRs**: Practices lacking information about days' supply could calculate the days' supply by dividing the prescription quantity by the maximum use per the sig and add up the MMEs of all opioid prescriptions. • Would need to create a structured field to capture when assessments were done and, optimally, the ratings on the PEG each time.

MEASURE 11: CHECK PDMP QUARTERLY	
CDC Prescribing Guideline Recommendation 9	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 three months.
Description	The percentage of patients on long-term opioid therapy who had documentation that a PDMP was checked at least quarterly.
Numerator	The number of patients who had documentation that a PDMP was checked at least quarterly.
Denominator	The number of patients in an outpatient panel of patients 18 years of age or older with ≥ 60 days' supply of opioids within a quarter.
Measurement period	Ninety (90) days.
Exclusions	Exclusion criteria include cancer patients (ICD-10 codes C00-D09 are "cancers," malignant neoplasms; ICD-10 codes D10-D3A are benign neoplasms; ICD-10 codes D37-D48 are neoplasms of uncertain behavior; and ICD-10 code D49 is a neoplasm of unspecified behavior—could be malignant, but not known [**Appendix D**]), palliative care and end-of-life care. Palliative care is identified with a principal ICD-10 code of terminal condition with (Z51.5), and end-of-life care patients would be identified using a procedure or CPT code. Note: identifying end-of-life care patients may be difficult to systematically capture; palliative care may be a sufficient proxy for end-of-life care. Additional exclusion criteria are: (1) drugs not typically used in outpatient settings, such as cough and cold formulations including elixirs, and combination products containing antitussives, decongestants, antihistamines, and expectorants (see the CDC's MME file for up-to-date list of opioids and exclusions. Available at: **https://www.cdc.gov/drugoverdose/resources/data.html**); (2) buprenorphine products indicated for medication-assisted treatment (MAT) to treat opioid use disorder, identified by ICD-10 codes. Patients who transfer into the practice may be excluded from the measure.
Data sources	Prescription data from the practice EHR. Access to state PDMP data. A structured field in the EHR to capture that the PDMP was checked.
Guidance for producing the measure and potential challenges	• **Identifying opioid medications:** EHRs may not be able to identify all opioid medications reliably. CDC annually updates a list of all opioids, with associated National Drug Code (NDC), generic name, and product name, which may be used to match with EHR records. See the CDC's MME file referenced above. • **Unknown days' supply in EHRs:** Practices lacking information about days' supply could calculate the days' supply by dividing the prescription quantity by the maximum use per the sig and add up the MMEs of all opioid prescriptions. • Not all clinicians may be registered with the PDMP and practices' access to the PDMP embedded within an EHR may not always work. While EHRs can sometimes have a hyperlink to the PDMP or a "single sign-on" access from the EHR, an indication that the PDMP was checked for a specific patient is not captured. Practices may need to create a structured field or checkbox for clinicians to indicate the PDMP was checked. Clinicians should remember to look for benzodiazepine prescriptions from other clinicians, as well as opioids.

MEASURE 12: COUNSEL ON RISKS AND BENEFITS ANNUALLY	
CDC Prescribing Guideline Recommendation 3	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.
Description	The percentage of patients on long-term opioid therapy for whom the clinician counseled the patient on the risks and benefits of opioids at least annually.
Numerator	The number of patients the clinician counseled on the risks and benefits of opioids at least annually.
Denominator	The number of patients in an outpatient panel of patients 18 years of age or older with ≥ 60 days' supply of opioids within a quarter.
Measurement period	One year.
Exclusions	Exclusion criteria include cancer patients (ICD-10 codes C00-D09 are "cancers," malignant neoplasms; ICD-10 codes D10-D3A are benign neoplasms; ICD-10 codes D37-D48 are neoplasms of uncertain behavior; and ICD-10 code D49 is a neoplasm of unspecified behavior—could be malignant, but not known [**Appendix D**]), palliative care and end-of-life care. Palliative care is identified with a principal ICD-10 code of terminal condition with (Z51.5), and end-of-life care patients would be identified using a procedure or CPT code. Note: identifying end-of-life care patients may be difficult to systematically capture; palliative care may be a sufficient proxy for end-of-life care. Additional exclusion criteria are: (1) drugs not typically used in outpatient settings, such as cough and cold formulations including elixirs, and combination products containing antitussives, decongestants, antihistamines, and expectorants (see the CDC's MME file for up-to-date list of opioids and exclusions. Available at: **https://www.cdc.gov/drugoverdose/resources/data.html**); (2) buprenorphine products indicated for medication-assisted treatment (MAT) to treat opioid use disorder, identified by ICD-10 codes. Patients who transfer into the practice may be excluded from the measure.
Data sources	Prescription data from the practice EHR. Structured field indicating that counseling was provided or a signed treatment agreement housed in the EHR or the medical chart.
Guidance for producing the measure and potential challenges	• **Identifying opioid medications:** EHRs may not be able to identify all opioid medications reliably. CDC annually updates a list of all opioids, with associated National Drug Code (NDC), generic name, and product name, which may be used to match with EHR records. See the CDC's MME file referenced above. • **Unknown days' supply in EHRs:** Practices lacking information about days' supply could calculate the days' supply by dividing the prescription quantity by the maximum use per the sig and add up the MMEs of all opioid prescriptions. • Data that indicate that counseling was provided would potentially be captured in a clinical note, from which data is challenging to pull for measurement purposes. A practice may want to create a structured field or note template to allow this information to be readily queried from an EHR. • If a practice uses treatment agreements that address risks and benefits and instructs clinicians to counsel, a practice may wish to use a treatment agreement as an indicator that the patient was counseled on risks and benefits.

MEASURE 13: ANNUAL URINE DRUG TEST	
CDC Prescribing Guideline Recommendation 10	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.
Description	The percentage of patients on long-term opioid therapy with documentation that a urine drug test was performed at least annually.
Numerator	The number of patients with documentation of a urine drug test.
Denominator	The number of patients in an outpatient panel of patients 18 years of age or older with ≥ 60 days' supply of opioids within a quarter.
Measurement period	One year.
Exclusions	Exclusion criteria include cancer patients (ICD-10 codes C00-D09 are "cancers," malignant neoplasms; ICD-10 codes D10-D3A are benign neoplasms; ICD-10 codes D37-D48 are neoplasms of uncertain behavior; and ICD-10 code D49 is a neoplasm of unspecified behavior—could be malignant, but not known [**See Appendix D**]), palliative care and end-of-life care. Palliative care is identified with a principal ICD-10 code of terminal condition with (Z51.5), and end-of-life care patients would be identified using a procedure or CPT code. Note: identifying end-of-life care patients may be difficult to systematically capture; palliative care may be a sufficient proxy for end-of-life care. Additional exclusion criteria are: (1) drugs not typically used in outpatient settings, such as cough and cold formulations including elixirs, and combination products containing antitussives, decongestants, antihistamines, and expectorants (see the CDC's MME file for up-to-date list of opioids and exclusions. Available at: **https://www.cdc.gov/drugoverdose/resources/data.html**); (2) buprenorphine products indicated for medication-assisted treatment (MAT) to treat opioid use disorder, identified by ICD-10 codes. Patients who transfer into the practice may be excluded from the measure.
Data sources	Prescription data from the practice EHR. Urine drug testing data in EHR and/or medical chart.
Guidance for producing the measure and potential challenges	• **Identifying opioid medications:** EHRs may not be able to identify all opioid medications reliably. CDC annually updates a list of all opioids, with associated National Drug Code (NDC), generic name, and product name, which may be used to match with EHR records. See the CDC's MME file referenced above. • **Unknown days' supply in EHRs:** Practices lacking information about days' supply could calculate the days' supply by dividing the prescription quantity by the maximum use per the sig and add up the MMEs of all opioid prescriptions. • Some systems may not have access to laboratory services in house or the results in a structured field. It is not only important to determine whether a patient is taking other controlled or illicit substances; it is also important to determine whether the patient is taking the medication to help prevent opioid diversion. Practices should check with the labs they use, since mass spectrometry is usually required to test for the absence of a prescribed medication. A separate order may be required for this confirmation.

MEASURE 14: REFERRAL FOR NONPHARMACOLOGICAL THERAPY

CDC Prescribing Guideline Recommendation 1	Nonpharmacological 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 nonpharmacological therapy and non-opioid pharmacologic therapy, as appropriate.
Description	The percentage of patients with chronic pain who had at least one referral or visit to nonpharmacologic therapy as a treatment for pain.
Numerator	The number of patients who had at least one referral to nonpharmacologic therapy (e.g., physical therapy, exercise therapy, cognitive behavioral therapy, weight loss). Current Procedural Terminology (CPT) codes cover procedures. Therapies are procedures, so the Z51.89 ICD-10 code is under a broad code for "Encounter for other specified aftercare." All outpatient clinicians use CPT codes to bill insurance along with ICD diagnoses codes. CPT codes were added for the therapies below when appropriate codes could be determined. The Healthcare Common Procedure Coding System (HCPCS) is a set of health care procedure codes based on the American Medical Association's (AMA) Current Procedural Terminology. Level I codes consist of the AMA CPT code and are numeric. Level II codes are alphanumeric and primarily include non-physician services such as ambulance services and prosthetic devices, and represent items and supplies and non-physician services, not covered by CPT-4 codes (Level I). **Some of these non-physician services may use HCPCS codes. Some of these codes include;** • physical therapy (ICD-10: Z51.89); CPT: 97001-97039, but could also include areas noted in interventional procedure codes below), • exercise therapy (ICD-10: Z51.89) (CPT: 97110 = therapeutic exercises, but could add aquatic therapy, etc.), • cognitive behavioral therapy, • weight loss HCPCS/CPT Codes G0447— face-to-face behavioral counseling for obesity, 15 minutes G0473—face-to-face behavioral counseling for obesity, group (2–10), 30 minutes. The related diagnoses are: ICD-10 Codes Z68.30, Z68.31, Z68.32, Z68.33, Z68.34, Z68.35, Z68.36, Z68.37, Z68.38, Z68.39, Z68.41, Z68.42, Z68.43, Z68.44, or Z68.45, and • non-invasive therapies could include CPT: Therapeutic Procedures 97110 -97546, or more broadly to include Medical Nutritional Therapy, Wound Care, Acupuncture, Osteopathic Manipulations and Chiropractic care, through 98943, and more.
Denominator	The number of patients in an outpatient panel of patients 18 years of age or older with chronic pain (see Appendix C for ICD-10 codes).
Measurement period	Practice may determine the period of time.
Exclusions	Exclusion criteria include cancer patients (ICD-10 codes C00-D09 are "cancers," malignant neoplasms; ICD-10 codes D10-D3A are benign neoplasms; ICD-10 codes D37-D48 are neoplasms of uncertain behavior; and ICD-10 code D49 is a neoplasm of unspecified behavior—could be malignant, but not known [**Appendix D**]), palliative care and end-of-life care. Palliative care is identified with a principal ICD-10 code of terminal condition with (Z51.5), and end-of-life care patients would be identified using a procedure or CPT code. **Note:** identifying end-of-life care patients may be difficult to systematically capture; palliative care may be a sufficient proxy for end-of-life care. Patients who transfer into the practice may be excluded from the measure.
Data sources	Prescription data from the practice EHR. Diagnosis code data from the practice EHR and procedural code data for the non-pharmacological therapy.

Guidance for producing the measure and potential challenges	• **Capturing referrals:** There can be challenges measuring referrals in EHRs. Some EHRs may capture in a structured field whether a patient has been referred within the same health care system. However, if a patient is referred to a professional outside of the system, it may not be captured as a structured field. Some types of referrals may not be captured via anything other than a recommendation in the clinical note. • A practice should consider focusing on a specific chronic condition to make it easier to operationalize this measure, such as the percentage of patients with chronic low back pain who had at least one referral to physical therapy. Alternatively, focus on osteoarthritis, given how common it is. • Another challenge may be that patients who have had a chronic condition for several years may have been referred to nonpharmacological therapy years ago, which would be difficult to capture. • If there are challenges in securing these data, a practice may wish to focus on patients on long-term opioid therapy (as the denominator), although the measure could worsen over time if patients are being put on nonpharmacologic therapy instead of opioids. o Or, a practice could calculate the percentage of patients with chronic low back pain who had at least one referral to physical therapy. • If a practice wants to define appropriate nonpharmacologic pain treatments for a particular condition and develop an operational definition of the initiation of an episode of care, they could track the percent of patients who received an appropriate nonpharmacologic treatment.

MEASURE 15: NALOXONE COUNSELING AND PRESCRIBED OR REFERRED

CDC Prescribing Guideline Recommendation 8	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 (≥50MME/d), or concurrent benzodiazepine use, are present.
Description	The percentage of patients on long-term opioid therapy who were counseled on the purpose and use of naloxone, and either prescribed or referred to obtain naloxone.
Numerator	The number of patients counseled on the purpose and use of naloxone, and either prescribed or referred to obtain naloxone.
Denominator	The number of patients in an outpatient panel of patients 18 years of age or older with ≥ 60 days' supply of opioids within a quarter AND on ≥ 50 MMEs per day, OR diagnosis of opioid use disorder (OUD), OR diagnosis of substance abuse, OR taking benzodiazepines concurrently, OR a diagnosis of restrictive or obstructive lung disease, and/or sleep apnea.
Measurement period	Practice may determine the period of time.
Exclusions	Exclusion criteria include cancer patients (ICD-10 codes C00-D09 are "cancers," malignant neoplasms; ICD-10 codes D10-D3A are benign neoplasms; ICD-10 codes D37-D48 are neoplasms of uncertain behavior; and ICD-10 code D49 is a neoplasm of unspecified behavior—could be malignant, but not known [**Appendix D**), palliative care and end-of-life care. Palliative care is identified with a principal ICD-10 code of terminal condition with (Z51.5), and end-of-life care patients would be identified using a procedure or CPT code. Note: identifying end-of-life care patients may be difficult to systematically capture; palliative care may be a sufficient proxy for end-of-life care. Additional exclusion criteria are: (1) drugs not typically used in outpatient settings, such as cough and cold formulations including elixirs, and combination products containing antitussives, decongestants, antihistamines, and expectorants (see the CDC's MME file for up-to-date list of opioids and exclusions. Available at: **https://www.cdc.gov/drugoverdose/resources/data.html**); (2) buprenorphine products indicated for medication-assisted treatment (MAT) to treat opioid use disorder, identified by ICD-10 codes. Patients who transfer into the practice may be excluded from the measure.
Data sources	Prescription data from the practice EHR. Naloxone counseling and referral data from the EHR or medical chart review.
Guidance for producing the measure and potential challenges	• **Identifying opioid medications:** EHRs may not be able to identify all opioid medications reliably. CDC annually updates a list of all opioids, with associated National Drug Code (NDC), generic name, and product name, which may be used to match with EHR records. See the CDC's MME file referenced above. • **Unknown days' supply in EHRs:** Practices lacking information about days' supply could calculate the days' supply by dividing the prescription quantity by the maximum use per the sig and add up the MMEs of all opioid prescriptions. • **Capturing referrals:** There can be challenges measuring referrals in EHRs. Some EHRs may capture in a structured field whether a patient has been referred within the same health care system. If a patient is referred to a professional outside of the system, it may not be captured as a structured field. Some types of referrals may not be captured via anything other than a recommendation in the clinical note. • Counseling is not captured as a structured field in EHRs. Practices may have to create a field or check-box to indicate counseling was provided.
Alternatives for the Measure	If a practice is unable to identify patients in ALL risk categories, an alternative is to identify those in risk categories that are feasible (e.g., ≥ 50 MMEs or concurrent use of benzodiazepines). Practices may want to examine the percentage who received a naloxone prescription, separately from whether counseling was provided. The former may be more readily available in most practices' existing data, and separating these two may facilitate better clarity on what to target for improvement.

MEASURE 16: MEDICATION-ASSISTED TREATMENT (MAT)	
CDC Prescribing Guideline Recommendation 12	Clinicians should offer or arrange evidence-based treatment (usually medication-assisted treatment with naltrexone, buprenorphine, or methadone in combination with behavioral therapies) for patients with opioid use disorder.
Description	The percentage of patients with an opioid use disorder who were referred to or prescribed medication assisted treatment.
Numerator	The number of patients who were referred to a methadone treatment program, or were prescribed/ referred for treatment with naltrexone, buprenorphine, or buprenorphine/naloxone.
Denominator	The number of patients in an outpatient panel of patients 18 years of age or older with a diagnosis of opioid use disorder (OUD).
Measurement period	Practice may determine the period of time.
Exclusions	N/A
Data sources	Prescription data from the practice EHR. Diagnosis data for OUD in EHR. Referral data in EHR or medical chart for medication-assisted treatment (MAT), or prescription data for naltrexone or buprenorphine/naloxone.
Guidance for producing the measure and potential challenges	• Since some formulations of buprenorphine (e.g, belbuca, butrans) are prescribed for pain, these would need to be excluded. CDC annually updates a list of all opioids, with associated National Drug Code (NDC), generic name, and product name, which may be used to match with EHR records. See the **CDC's MME file** for a list of all opioids, including buprenorphine. Instructions on how to exclude buprenorphine for opioid use disorders from the full list of opioids is also provided in the file. • **Capturing referrals:** There can be challenges measuring referrals in EHRs. Some EHRs may capture in a structured field whether a patient has been referred within the same health care system. If a patient is referred to a professional outside of the system, it will not be captured as a structured field. Some types of referrals may not be captured via anything other than a recommendation in the clinical note. • Practices may need to create a field in the EHR to capture referrals for MAT, since methadone clinics are often separate entities.
Alternatives for the measure	• Practices could focus on measuring specific MAT, based on what your patient panel has access to or where your practice is aiming to improve access. • The simplest measure would be the percentage of the adult population (or the number per 1,000 population) using buprenorphine. Tracking this over time would be useful for tracking whether these drugs were being prescribed more frequently. • In order to link prescribing of buprenorphine to patients who have received opioids for chronic pain, one option might be to measure the percentage of persons who received long-term opioid therapy at any time in a year who also received buprenorphine in the same year. This would provide a rough indication of the rate of transition from prescription opioids to MAT.

Appendix C

Self-assessment Questionaire

Centers for Disease Control and Prevention
National Center for Injury Prevention and Control

Self-assessment Questionnaire for Health Systems

This self-assessment questionnaire is for health systems pursuing an opioid quality improvement (QI) initiative to improve their opioid prescribing practices. The questionnaire serves two purposes—as a tool for reflecting on progress implementing the "five-steps" (**Exhibit 2**) at baseline and periodically throughout the QI initiative. Secondly, it includes questions to ascertain the extent to which care provided is consistent with the CDC *Prescribing Guideline*. The questionnaire is based on the prior work of several individuals.[4]

- **Part I is for the QI effort lead(s) to reflect on and indicate their system's status in progressing through the five steps to implementing the CDC *Guideline for Prescribing Opioids for Chronic Pain* recommendations and using the quality improvement (QI) measures.**
- **Part II of the self-assessment questionnaire asks systems to indicate the extent to which clinicians in their system provide care consistent with each of the CDC *Prescribing Guideline* recommendations. Ideally, the clinical QI opioid measures (Exhibit 1) would be used to measure the extent to which care is concordant with CDC *Prescribing Guideline*, but in the absence of the measures this questionnaire may serve as a helpful assessment.**

This survey can be completed by a single individual leading the QI effort or by several people involved in the initiative and serve as a point of feedback if people have different assessments on the status of implementation, or the extent to which clinicians are providing care consistent with the CDC *Prescribing Guideline* recommendations.

When the survey is completed by multiple individuals, you can calculate an average on each of the steps in Part I. For Part II you can sum the responses by category, or even combine the top two categories if "very often" or "always" are sufficient targets for your system on the CDC *Prescribing Guideline* recommendations.

[4] The self-assessment questionnaire is loosely based on the 6 Building Blocks self-assessment questionnaire, and its various iterations, developed by Michael Parchman, Mark Stephens and Laura Heesacker.

PART I: Status of Implementation Steps

On a scale from 1 to 5, with 1 being you have not begun to 5 being you are done (for now), please indicate your health system's current status with the tasks/activities within each of the five steps. Circle the response that best represents where your system is at for every task/activity with each step.

1	2	3	4	5
Have **not** begun	Have begun	In progress	Mostly done	Done (for now)

Step 1: Obtain leadership support and identify a champion(s)					
1. Obtain leadership support	1	2	3	4	5
2. Identify a champion(s) to drive the change process	1	2	3	4	5
3. Identify and engage a change team, or key staff	1	2	3	4	5
4. Allocate resources to support champion and/or change team	1	2	3	4	5
5. Consider the readiness of your system and potential barriers to implementing changes	1	2	3	4	5
Step 2: Assess current approach to opioids and identify areas for improvement					
6. Assess current policies and practices	1	2	3	4	5
7. Have key staff complete this self-assessment questionnaire	1	2	3	4	5
8. Collect data on your patient population on opioid therapy	1	2	3	4	5
9. Determine access to specialists and other needed resources	1	2	3	4	5
10. Identify areas of practice in need of improvement	1	2	3	4	5
Step 3: Progress towards implementation of guideline recommendations					
11. Consider practice-level changes	1	2	3	4	5
12. Decide which Guideline recommendations to implement	1	2	3	4	5
13. Prioritize what will be implemented	1	2	3	4	5
Step 4: Define system goals					
14. Set measurable goals	1	2	3	4	5
Step 5: Develop a plan, implement and monitor progress					
15. Develop a plan for implementing selected Guideline recommendations	1	2	3	4	5
16. Implement selected Guideline recommendations	1	2	3	4	5
17. Monitor progress using the QI measures and other data	1	2	3	4	5

PART II: Extent to Which Care Provided is Consistent with the CDC Prescribing Guideline Recommendations

How often do clinicians in your system provide care consistent with the following the CDC *Prescribing Guideline* recommendation statements? Mark your response with an "X" in the box.

Nonpharmacologic and nonopioid therapies (recommendation 1)	Never	Rarely	Sometimes	Very often	Always
Nonpharmacologic therapy and nonopioid 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 nonopioid pharmacologic therapy, as appropriate.					
Pain and functional assessment (recommendation 2)	**Never**	**Rarely**	**Sometimes**	**Very often**	**Always**
Before starting opioid therapy for chronic pain, clinicians should establish treatment goals with all patients, including realistic goals for pain and function, and 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.					
Counsel on risks and benefits (recommendation 3)	**Never**	**Rarely**	**Sometimes**	**Very often**	**Always**
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.					
Prescribe immediate release opioids (recommendation 4)	**Never**	**Rarely**	**Sometimes**	**Very often**	**Always**
When starting opioid therapy for chronic pain, clinicians should prescribe immediate-release opioids instead of extended-release/long-acting (ER/LA) opioids.					

Caution with high MMEs (recommendation 5)	Never	Rarely	Sometimes	Very often	Always
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) or more per day.					
Clinicians should avoid increasing dosage to 90 MME or more per day or carefully justify a decision to titrate dosage to 90 MME or more per day.					
Limit days' supply for acute pain (recommendation 6)	**Never**	**Rarely**	**Sometimes**	**Very often**	**Always**
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.					
When opioids are used for acute pain, clinicians 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.					
Follow-up within four weeks (recommendation 7)	**Never**	**Rarely**	**Sometimes**	**Very often**	**Always**
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.					
Naloxone (recommendation 8)	**Never**	**Rarely**	**Sometimes**	**Very often**	**Always**
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 (≥50MME/d), or concurrent benzodiazepine use, are present.					

PDMP (recommendation 9)	Never	Rarely	Sometimes	Very often	Always
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.					
Clinicians should review PDMP data periodically during opioid therapy for chronic pain, ranging from every prescription to every 3 months.					
Urine drug testing (recommendation 10)	**Never**	**Rarely**	**Sometimes**	**Very often**	**Always**
When prescribing opioids for chronic pain, clinicians should administer urine drug tests before starting opioid therapy to assess presence of prescribed opioids as well as other controlled prescription drugs and illicit drugs.					
When prescribing opioids for chronic pain, clinicians should administer urine drug tests at least annually to assess presence of prescribed opioids as well as other controlled prescription drugs and illicit drugs.					
Co-prescribing Benzodiazepines (recommendation 11)	**Never**	**Rarely**	**Sometimes**	**Very often**	**Always**
Clinicians should avoid prescribing opioid pain medication and benzodiazepines concurrently whenever possible.					
Buprenorphine (recommendation 12)	**Never**	**Rarely**	**Sometimes**	**Very often**	**Always**
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.					

Appendix D

ICD-10 Codes for Neoplasm Exclusion Criterion

Centers for Disease Control and Prevention
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Neoplasms

- **C00-C14** Malignant neoplasms of lip, oral cavity, and pharynx
- **C15-C26** Malignant neoplasms of digestive organs
- **C30-C39** Malignant neoplasms of respiratory and intrathoracic organs
- **C40-C41** Malignant neoplasms of bone and articular cartilage
- **C43-C44** Melanoma and other malignant neoplasms of skin
- **C45-C49** Malignant neoplasms of mesothelial and soft tissue
- **C50-C50** Malignant neoplasms of breast
- **C51-C58** Malignant neoplasms of female genital organs
- **C60-C63** Malignant neoplasms of male genital organs
- **C64-C68** Malignant neoplasms of urinary tract
- **C69-C72** Malignant neoplasms of eye, brain, and other parts of central nervous system
- **C73-C75** Malignant neoplasms of thyroid and other endocrine glands
- **C7A-C7A** Malignant neuroendocrine tumors
- **C7B-C7B** Secondary neuroendocrine tumors
- **C76-C80** Malignant neoplasms of ill-defined, other secondary and unspecified sites
- **C81-C96** Malignant neoplasms of lymphoid, hematopoietic, and related tissue
- **D00-D09** In situ neoplasms
- **D10-D36** Benign neoplasms, except benign neuroendocrine tumors
- **D3A-D3A** Benign neuroendocrine tumors
- **D37-D48** Neoplasms of uncertain behavior, polycythemia vera, and myelodysplastic syndromes
- **D49-D49** Neoplasms of unspecified behavior

Appendix E

ICD-9 Codes That May Represent Chronic Pain

Centers for Disease Control and Prevention
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ICD-9 CODE	ICD-9 DESCRIPTION	ICD-10 CODE	ICD-10 DESCRIPTION
274	Gout	M1A.xxx	Chronic Gout
274	Gout	M10.xxx	Gout
307.8	Pain disorders related to psychological factors	F45.4x	Pain disorders related to psychological factors
307.8	Pain disorders related to psychological factors	G44.209	Tension-type headache, unspecified, not intractable
337.20-337.29	Reflex sympathetic dystrophy	G90.5xxx	Complex regional pain syndrome I
338.0	Central pain syndrome	G89.0	Central pain syndrome
338.2	Chronic Pain	G89.2x	Chronic pain, not elsewhere classified
338.21	Chronic pain due to trauma	G89.21	Chronic pain due to trauma
338.22	Other chronic postoperative pain	G89.22	Chronic post-thoracotomy pain
338.28	Chronic postop pain, not elsewhere classified	G89.28	Other chronic post-procedural pain
338.29	Other chronic pain	G89.29	Other chronic pain
338.4	Chronic pain syndrome	G89.4	Chronic pain syndrome
339	Other headache syndromes	G44.xxx	Other headache syndromes
346	Migraine	G43.xxx	Migraine
350	Trigeminal nerve disorders	G50.x	Disorders of trigeminal nerve
350	Trigeminal nerve disorders	B02.22	Postherpetic trigeminal neuralgia
353.0	Brachial plexis lesions	G54.0	Brachial plexus disorders
353.6	Phantom limb syndrome	G54.6	Phantom limb syndrome with pain
354	Mononeuritis of upper limb (and mononeuritis multiplex)	G56.xx	Mononeuropathies of upper limb
354.5	Mononeuritis multiplex	G58.7	Mononeuritis multiplex
355.9	Causalgia	G58.9	Mononeuropathy, unspecified
354.4	Causalgia of upper limb	G56.4x	Causalgia of upper limb

ICD-9 CODE	ICD-9 DESCRIPTION	ICD-10 CODE	ICD-10 DESCRIPTION
355.71	Causalgia of lower limb	G57.7x	Causalgia of lower limb
710	Diffuse diseases of connective tissues	M32.xx	Systemic lupus erythematosus (SLE)
710	Diffuse diseases of connective tissues	M33.xx	Dermatopolymyositis
710	Diffuse diseases of connective tissues	M34.xx	Systemic sclerosis [scleroderma]
710	Diffuse diseases of connective tissues	M35.xx	Other systemic involvement of connective tissue
710	Diffuse diseases of connective tissues	M36.xx	Systemic disorders of connective tissue in diseases classified elsewhere
712	Crystal arthropathies	M11.xxx	Other crystal arthropathies
713	Arthopathy associated with other disorders	M02.0xx	Arthropathy following intestinal bypass
713	Arthopathy associated with other disorders	M02.2xx	Postimmunization arthropathy
713	Arthopathy associated with other disorders	M02.9	Reactive arthropathy, unspecified
713	Arthopathy associated with other disorders	M07	Enteropathic arthropathies
713	Arthopathy associated with other disorders	M14.xxx	Arthropathies in other diseases classified elsewhere
713	Arthopathy associated with other disorders	M12.80	Other specific arthropathies, not elsewhere classified, unspecified site
713	Arthopathy associated with other disorders	M36.2	Hemophilic arthropathy
713	Arthopathy associated with other disorders	M36.3	Arthropathy in other blood disorders
714	Rheumatoid arthritis and other inflammatory polyarthropathies	M05.xxx	Rheumatoid arthritis with rheumatoid factor
714	Rheumatoid arthritis and other inflammatory polyarthropathies	M06.xxx	Other rheumatoid arthritis
714	Rheumatoid arthritis and other inflammatory polyarthropathies	M08.xx	Juvenile arthritis
714	Rheumatoid arthritis and other inflammatory polyarthropathies	M12.0xx	Chronic postrheumatic arthropathy [Jaccoud]

ICD-9 CODE	ICD-9 DESCRIPTION	ICD-10 CODE	ICD-10 DESCRIPTION
715	Osteoarthrosis and allied disorders	M15-M19	Osteoarthritis
716	Other and unspecified arthropathies	M12.1xx	Kaschin-Beck disease
716	Other and unspecified arthropathies	M12.5xx	Traumatic arthropathy
716	Other and unspecified arthropathies	M12.8xx	Other specific arthropathies, not elsewhere classified
716	Other and unspecified arthropathies	M12.9	Arthropathy, unspecified
717	Internal derangement of knee	M22.4x	Chondromalacia patellae
717	Internal derangement of knee	M23	Internal derangement of knee
717	Internal derangement of knee	S83.0xxx	Subluxation and dislocation of patella
717	Internal derangement of knee	S83.1xxx	Subluxation and dislocation of knee
717	Internal derangement of knee	S83.2xxx	Tear of meniscus, current injury
717	Internal derangement of knee	S83.4xxx	Sprain of collateral ligament of knee
717	Internal derangement of knee	S83.5xxx	Sprain of cruciate ligament of knee
717	Internal derangement of knee	S83.6xxx	Sprain of the superior tibiofibular joint and ligament
717	Internal derangement of knee	S83.8xxx	Sprain of other specified parts of knee
717	Internal derangement of knee	S83.9xxx	Sprain of unspecified site of knee
718.0	Articular cartilage disorder	M24.1xx	Other articular cartilage disorders
718.0	Articular cartilage disorder	S83.3xxx	Tear of articular cartilage of knee, current
718.1	Loose body in joint	M24.0xx	Loose body in joint
720	Ankylosing spondylitis and other inflammatory spondylopathies	M45	Ankylosing spondylitis
720	Ankylosing spondylitis and other inflammatory spondylopathies	M46.0x	Spinal enthesopathy

ICD-9 CODE	ICD-9 DESCRIPTION	ICD-10 CODE	ICD-10 DESCRIPTION
720	Ankylosing spondylitis and other inflammatory spondylopathies	M46.1	Sacroiliitis, not elsewhere classified
720	Ankylosing spondylitis and other inflammatory spondylopathies	M46.5x	Other infective spondylopathies
720	Ankylosing spondylitis and other inflammatory spondylopathies	M46.8x	Other specified inflammatory spondylopathies
720	Ankylosing spondylitis and other inflammatory spondylopathies	M46.9x	Unspecified inflammatory spondylopathy
720	Ankylosing spondylitis and other inflammatory spondylopathies	M48.8Xx	Other specified spondylopathies
720	Ankylosing spondylitis and other inflammatory spondylopathies	M49.8x	Spondylopathies in diseases classified elsewhere
721	Spondylosis and allied disorders	M47	Spondylosis
721	Spondylosis and allied disorders	M48.1x	Ankylosing hyperostosis [Forestier]
721	Spondylosis and allied disorders	M48.2x	Kissing spine
721	Spondylosis and allied disorders	M48.3	Traumatic spondylopathy
721	Spondylosis and allied disorders	M48.9	Spondylopathy, unspecified
722	Intervertebral disc disorders	M46.4x	Discitis, unspecified
722	Intervertebral disc disorders	M50	Cervical disc disorders
722	Intervertebral disc disorders	M51	Thoracic, thoracolumbar, and lumbosacral intervertebral disc disorders
722	Intervertebral disc disorders	M96.1	Postlaminectomy syndrome, not elsewhere classified
722	Intervertebral disc disorders	S13	Dislocation and sprain of joints and ligaments at neck level
722	Intervertebral disc disorders	S23	Dislocation and sprain of joints and ligaments of thorax
722	Intervertebral disc disorders	S33	Dislocation and sprain of joints and ligaments of lumbar spine and pelvis
723.0	Spinal stenosis in cervical region	M48.02	Spinal stenosis, cervical region
723.1	Cervicalgia	M54.2	Cervicalgia

ICD-9 CODE	ICD-9 DESCRIPTION	ICD-10 CODE	ICD-10 DESCRIPTION
723.2	Cervicocranial syndrome	M53.0	Cervicocranial syndrome
723.3	Cervicobrachial syndrome (diffuse)	M53.1	Cervicobrachial syndrome
724	Other and unspecified disorders of back	M48.00-M48.01, M48.03-M48.08-	Spinal stenosis
724	Other and unspecified disorders of back	M43.2x	Fusion of spine
724	Other and unspecified disorders of back	M43.8X9	Other specified deforming dorsopathies, site unspecified
724	Other and unspecified disorders of back	M53.2X7	Spinal instabilities, lumbosacral region
724	Other and unspecified disorders of back	M53.2X8	Spinal instabilities, sacral and sacrococcygeal region
724	Other and unspecified disorders of back	M53.3	Sacrococcygeal disorders, not elsewhere classified
724	Other and unspecified disorders of back	M53.8x	Other specified dorsopathies
724	Other and unspecified disorders of back	M53.9	Dorsopathy, unspecified
724	Other and unspecified disorders of back	M54.03	Panniculitis affecting regions of neck and back, cervicothoracic region
724	Other and unspecified disorders of back	M54.04	Panniculitis affecting regions of neck and back, thoracic region
724	Other and unspecified disorders of back	M54.05	Panniculitis affecting regions of neck and back, thoracolumbar region
724	Other and unspecified disorders of back	M54.06	Panniculitis affecting regions of neck and back, lumbar region
724	Other and unspecified disorders of back	M54.07	Panniculitis affecting regions of neck and back, lumbosacral region
724	Other and unspecified disorders of back	M54.08	Panniculitis affecting regions of neck and back, sacral and sacrococcygeal region
724	Other and unspecified disorders of back	M54.09	Panniculitis affecting regions, neck and back, multiple sites in spine

ICD-9 CODE	ICD-9 DESCRIPTION	ICD-10 CODE	ICD-10 DESCRIPTION
724	Other and unspecified disorders of back	M54.3x	Sciatica
724	Other and unspecified disorders of back	M54.4x	Lumbago with sciatica
724	Other and unspecified disorders of back	M54.5	Low back pain
724	Other and unspecified disorders of back	M54.6	Pain in thoracic spine
724	Other and unspecified disorders of back	M54.89	Other dorsalgia
724	Other and unspecified disorders of back	M54.9	Dorsalgia, unspecified
724	Other and unspecified disorders of back	S12	Fracture of cervical vertebra and other parts of neck
724	Other and unspecified disorders of back	S14	Injury of nerves and spinal cord at neck level
724	Other and unspecified disorders of back	S22	Fracture of rib(s), sternum, and thoracic spine
724	Other and unspecified disorders of back	S24	Injury of nerves and spinal cord at thorax level
724	Other and unspecified disorders of back	S32	Fracture of lumbar spine and pelvis
724	Other and unspecified disorders of back	S34	Injury of lumbar and sacral spinal cord and nerves at abdomen, lower back, and pelvis level
725	Polymyalgia rheumatica	M35.3	Polymyalgia rheumatica
725	Polymyalgia rheumatica	M31.5	Giant cell arteritis with polymyalgia rheumatica
726	Peripheral enthesopathies and allied syndromes	M25.7	Osteophyte
726	Peripheral enthesopathies and allied syndromes	M70.1x	Bursitis of hand
726	Peripheral enthesopathies and allied syndromes	M70.2x	Olecranon bursitis
726	Peripheral enthesopathies and allied syndromes	M70.3x	Other bursitis of elbow
726	Peripheral enthesopathies and allied syndromes	M70.4x	Prepatellar bursitis

ICD-9 CODE	ICD-9 DESCRIPTION	ICD-10 CODE	ICD-10 DESCRIPTION
726	Peripheral enthesopathies and allied syndromes	M70.5x	Other bursitis of knee
726	Peripheral enthesopathies and allied syndromes	M70.6x	Trochanteric bursitis
726	Peripheral enthesopathies and allied syndromes	M70.7x	Other bursitis of hip
726	Peripheral enthesopathies and allied syndromes	M75	Shoulder lesions
726	Peripheral enthesopathies and allied syndromes	M76	Enthesopathies, lower limb, excluding foot
726	Peripheral enthesopathies and allied syndromes	M77	Other enthesopathies
727.0	Synovitis and tenosynovitis	D48.1	Neoplasm of uncertain behavior of connective and other soft tissue
727.0	Synovitis and tenosynovitis	M65	Synovitis and tenosynovitis
727.0	Synovitis and tenosynovitis	M67.3xx	Transient synovitis
727.1	Bunion	M20.1x	Hallux valgus (acquired)
727.1	Bunion	M21.61x	Bunion
727.1	Bunion	M21.62x	Bunionette
727.2	Specific bursitides often of occupational origin	M70.0xx	Crepitant synovitis (acute) (chronic) of hand and wrist
727.3	Other bursitis	M71.1xx	Other infective bursitis
727.3	Other bursitis	M71.5xx	Other bursitis, not elsewhere classified
727.4	Ganglion and cyst of synovium tendon and bursa	M67.4xx	Ganglion
727.4	Ganglion and cyst of synovium tendon and bursa	M71.3xx	Other bursal cyst
729.0	Rheumatism, unspecified and fibrositis	M79.0	Rheumatism, unspecified
729.1	Myalgia and myositis, unspecified	M79.7	Fibromyalgia
729.1	Myalgia and myositis, unspecified	M79.1	Myalgia
729.1	Myalgia and myositis, unspecified	M60.8xx	Other myositis

ICD-9 CODE	ICD-9 DESCRIPTION	ICD-10 CODE	ICD-10 DESCRIPTION
729.1	Myalgia and myositis, unspecified	M60.9	Myositis, unspecified
729.2	Neuralgia, neuritis, and radiculitis, unspecified	M54.1x	Radiculopathy
729.2	Neuralgia, neuritis, and radiculitis, unspecified	M54.81	Occipital neuralgia
729.2	Neuralgia, neuritis, and radiculitis, unspecified	M79.2	Neuralgia and neuritis, unspecified
729.5	Pain in limb	M79.6xx	Pain in limb, hand, foot, fingers, and toes
729.7	Nontraumatic compartment syndrome	M79.Axx	Nontraumatic compartment syndrome
780.96	Generalized pain	R52	Pain, unspecified
784.0	Headache	R51	Headache
784.0	Headache	G44.1	Vascular headache, not elsewhere classified

Appendix F
Toolkit

Centers for Disease Control and Prevention
National Center for Injury Prevention and Control

Please note that the CDC does not endorse the resources and websites cited throughout this document. Further, those included here do not present an exhaustive list of references, but rather are those taken into consideration by CDC scientists in developing this document.

Toolkit Part A.

Examples of Comprehensive Management Approaches

- **There are several existing resources that outline the components of safer management of long-term opioid therapy, including:**
  - Kaiser Permanente's *Patients on Chronic Opioid Therapy for Chronic Non-Cancer Pain Safety Guideline* (**https://www.ghc.org/static/pdf/public/guidelines/opioid.pdf**); and
  - Oregon Pain Guidance's *Opioid Prescribing Guidelines* (**http://www.oregonpainguidance.org/wp-content/uploads/2014/04/OPG_Guidelines.pdf**).
- **There is also literature on different practices' and organizations' approaches to managing long-term opioid therapy:**

1. Anderson D, Wang S, Zlateva I. Comprehensive assessment of chronic pain management in primary care: A first phase of a quality improvement initiative at multisite Community Health Center. Quality in Primary Care. 2012;20.
2. Anderson DR, Zlateva I, Coman EN, Khatri K, Tian T, Kerns RD. Improving pain care through implementation of the Stepped Care Model at a multisite community health center. Journal of pain research. 2016;9:1021.
3. Cahana A, Dansie EJ, Theodore BR, Wilson HD, Turk DC. Redesigning delivery of opioids to optimize pain management, improve outcomes, and contain costs. Pain Medicine. 2013;14:36-42.
4. Chelminski PR, Ives TJ, Felix KM, et al. A primary care, multi-disciplinary disease management program for opioid-treated patients with chronic non-cancer pain and a high burden of psychiatric comorbidity. BMC Health Services Research. 2005;5(3).
5. Dorflinger L, Moore B, Goulet J, et al. A partnered approach to opioid management, guideline concordance care and the stepped care model of pain management. Journal of General Internal Medicine. 2014.
6. Eaton LH, Gordon DB, Wyant S, et al. Development and implementation of a telehealth-enhanced intervention for pain and symptom management. Contemporary clinical trials. 2014;38(2):213-220.
7. Losby JL, Hyatt JD, Kanter MH, Baldwin G, and Matsuoka D. Safer and more appropriate opioid prescribing: a large healthcare system's comprehensive approach. J Eval Clin Pract. 2017 Jul 14.
8. Moore BA, Anderson D, Dorflinger L, et al. Stepped care model of pain management and quality of pain care in long-term opioid therapy. J Rehabil Res Dev. 2016;53(1):137-46.
9. Morasco, Benjamin J., et al. "Care management practices for chronic pain in veterans prescribed high doses of opioid medications." Family practice 30.6 (2013): 671-678.
10. Pade PA, Cardon KE, Hoffman RM, Geppert CMA. Prescription opioid abuse, chronic pain, and primary care: A co-occurring disorders clinic in the chronic disease model. Journal of Substance Abuse Treatment. 2012;43:446-450.
11. Parchman ML, Von Korff M, Baldwin LM, Stephens M, Ike B, Cromp D, Hsu C, Wagner EH. Primary care clinic re-design for prescription opioid management. The Journal of the American Board of Family Medicine. 2017 Jan 1;30(1):44-51.
12. Von Korff M, Dublin S, Walker RL, Parchman M, Shortreed SM, Hansen RN, Saunders K. The impact of opioid risk reduction initiatives on high-dose opioid prescribing for patients on chronic opioid therapy. The Journal of Pain. 2016 Jan 31;17(1):101-10.
13. Westanmo A, Marshall P, Jones E, Burns K, Krebs EE. Opioid Dose Reduction in a VA Health Care System—Implementation of a Primary Care Population-Level Initiative. Pain Medicine. 2015.
14. Wiedemer NL, Harden PS, Arndt IO, Gallagher RM. The opioid renewal clinic: a primary care, managed approach to opioid therapy in chronic pain patients at risk for substance abuse. Pain Med. Oct-Nov 2007;8(7):573-584.

Toolkit Part B.

Examples of Local Healthcare System Policies

- **The following are examples of policies for managing and coordinating long-term opioid therapy:**
  - The practice develops an administrative definition of long-term opioid therapy to enable identification of long-term opioid therapy patients (e.g. receiving at least 70 days' supply of opioids in a 90-day period).
  - The practice develops an administrative definition to identify patients potentially transitioning into long-term opioid use (e.g., filling a third opioid prescription within six months when not identified as a long-term opioid therapy patient).
  - Long-term opioid therapy patients receiving daily doses in excess of 90 Morphine Milligram Equivalent (MME) should have their opioid regimen reviewed by a pain and/or rehabilitation medicine specialist.
  - Providers obtain signed, informed consent from patients initiating long-term opioid therapy.
  - The practice will not refill lost or stolen opioid prescriptions except in extraordinary circumstances.
  - A standard advance notification period (e.g., 4 days) prior to receiving an opioid refill is required.
  - A standard monthly refill will be for 28 days, so refills can be picked up on the same day of the week, avoiding refills that fall on a weekend.
  - Guidance for appropriate duration of opioid prescriptions (e.g., 3-7 days) for managing common acute pain conditions.
  - The practice will not provide opioid pain medicines to long-term opioid therapy patients already getting opioids from other healthcare providers.
  - Patients on particularly high-dose opioids (e.g., 200 MME) have their use reviewed by a pain medicine specialist every month.
  - The practice checks the prescription drug monitoring program (PDMP) periodically for patients receiving long-term opioid therapy, ranging from every prescription to every three months.
  - All long-term opioid therapy patients must sign or review an opioid treatment agreement and informed consent form, which is placed in the medical record.
  - Providers use standardized forms and templates in the electronic health record (EHR) for managing long-term opioid therapy patients.
  - Patients receiving long-term opioid therapy have urine drug tests every 12 months.
  - Providers must assess the functional status, quality of life, and pain intensity in all patients receiving long-term opioid therapy at baseline and follow-up visits, using a standard scale (e.g., PEG).
  - The practice will educate and engage the patient in order to ensure effective pain management.
  - Patients receiving long-term opioid therapy are expected to concurrently use nonopioid therapies and self-care management strategies to increase engagement in life activities and enhance quality of life.

Toolkit Part C.

Treatment Agreements

- **The following are potential talking points to discuss with patients as part of the treatment agreement conversation:**
  - Discuss that opioid therapy at any dosage level carries potential risks as well as benefits.
  - Discuss that opioid therapy may not improve pain or function, and initial benefits may diminish with prolonged use.
  - Ensure the patient understands the practice's policies regarding prescribing, refills, and use of different prescribers and pharmacies.
  - Discuss the methods and reasons for monitoring the patient's opioid use by means of UDTs, periodic v isits, checking the state's PDMP, and asking about symptoms of OUD. Assure the patient this is done for the sake of their safety.
  - If needed, introduce the patient to others on the care team and describe what their roles and responsibilities will be.
  - Conclude by summarizing the main responsibilities the provider and the patient will have.

- **The following are examples of treatment agreements for opioid therapy, followed by a health literacy-appropriate treatment agreement:**
  - Washington State Treatment Agreement (**http://www.lni.wa.gov/Forms/pdf/F252-095-000.pdf**)
  - VVA/DoD Clinical Practice Guideline Opioid Therapy: Chronic Pain Sample Opioid Pain Care Agreement (**https://www.nhms.org/sites/default/files/Pdfs/OpioidTxAgreement-VA2010.pdf**)
  - Canadian Guideline for Safe and Effective Use of Opioids for Chronic Non-Cancer Pain (**http://nationalpaincentre.mcmaster.ca/documents/opioid_guideline_part_b_v5_6.pdf**) "Appendix B-5: Sample Opioid Medication Treatment Agreement"
  - Treatment Plan Using Prescription Opioids (**http://health.utah.gov/prescription/pdf/guidelines/treatment_plan.pdf**)
  - University of Michigan Health System Managing Chronic Non-Terminal Pain in Adults Including Prescribing Controlled Substances (**http://www.med.umich.edu/1info/FHP/practiceguides/pain/pain.pdf**) "Appendix C. Patient-Provider Agreement for Ongoing Use of Controlled Medication"
  - Oregon Pain Guidance (**http://www.oregonpainguidance.org/app/content/uploads/2016/05/Patient-Treatment-Agreements.pdf**) "Patient Treatment Agreement (Sample 3)"

Example of a Treatment Agreement

Patient name: _____ MR#:_____

[Name of Clinic]

Pain Medicine and Other Controlled Substances Agreement

This agreement is for patients who are prescribed certain pain medicines called opioids and other "controlled substances." These medicines are sometimes called narcotics.

This agreement pertains to the following list of your medicine(s).

1 _____

2 _____

3 _____

4 _____

The purpose of this agreement is to describe how you, your physician, and your treatment team will work together to make sure your medicine is used safely and works well to help you.

You and a [clinic] physician will sign the agreement to show you both understand and agree with it. It will be saved in your medical record, so you and your treatment team can look at it again later. You will get a copy to take home.

My pain/symptoms and goals

My pain/symptoms is/are (describe):

_____

What (activities) do I hope to be able to do?

_____

Goals for me are (describe):

_____

I understand the following:

- ☐ My pain/symptoms will probably not go away completely.
- ☐ My medicine may not work for me.
- ☐ The long-term use of opioid pain medicine is controversial.
- ☐ It is important not to miss appointments with my physician.
- ☐ Treating pain/symptoms often includes physical therapy, counseling, and/or other treatments.
- ☐ I will try additional treatments that my physician suggests.
- ☐ Increasing my participation in family, social, and/or work activities is part of my treatment program, which can make pain less bothersome.

Risks and safer use of controlled substances

Using this medicine might cause problems like:

☐ addiction ☐ allergic reactions ☐ breathing problems ☐ sleep apnea

☐ constipation and/or upset stomach

☐ dangerous driving and/or being charged with DUI

☐ feeling sleepy, dizzy, or confused

☐ overdose or death—especially if taken with alcohol or other drugs, or if I take more than my doctor prescribes

☐ problems urinating, problems with erections, reduced testosterone levels

☐ worse pain or feeling sick if I stop my pain medicine suddenly

I will:

☐ only get my medicine from my physician, Dr._____, or a covering doctor at this office if my physician is not available. If any other physicians prescribe pain medicine or other controlled substances for me in an emergency, I will let my [clinic name] physician know as soon as possible.

☐ call my nurse, _____, between the hours of 9 a.m. to 5 p.m. Monday through Friday with any questions or concerns about my pain/symptoms or medications.

☐ only get the medicine(s) listed here from one pharmacy:_____

Phone number: _____

I will:

☐ be honest and open with my physician and members of my treatment team about medicines and drugs I am taking, including over-the-counter medications and illegal drugs.

☐ talk to my physician if I feel I need more medicine than was prescribed, but I will not change it on my own or take pain medicine from other people.

☐ talk to my physician if I stop or would like to stop the medicine(s) listed here.

☐ never give or sell any of my medicine to anyone else.

☐ always keep my medicine in a safe place AND away from children and other people who come to my home.

☐ allow my doctor to check my urine to see what medicines or drugs I am taking.

☐ bring all of my unused medicines in their pharmacy bottles to my office visits if my doctor asks me.

My physician will:

- ☐ work with me to find the best treatment for my pain/symptoms.
- ☐ be honest and open with me about my pain/symptom treatment.
- ☐ ask me about problems caused by my medicine and treat these effects.
- ☐ make sure my medicine is refilled on time.
- ☐ refill my medicine during a visit.
- ☐ allow my nurse to refill my medicine if I don't have a scheduled appointment, and I will call at least 4 days before I run out of medicine.
- ☐ arrange for a covering physician at the clinic to refill my medicine when my physician is not available.
- ☐ will not provide extra refills if my medicine or prescription is lost, stolen, destroyed, misplaced, or if I run out earlier than expected.

Stopping and changing medicine (should involve provider-patient partnership and consent):

- ☐ My physician will stop or change my medicine if:
  - my goals are not being met, OR
  - I do not follow this agreement, OR
  - my physician thinks my medicine may be hurting me more than it is helping me.
- ☐ My physician might refer me to a specialist for treatment of pain/symptoms or drug problems.
- ☐ If my physician believes I have stolen or forged prescriptions, I sell my medicine, or if I threaten or act violently in any way, I will no longer be prescribed controlled substances from this clinic.

I have been able to ask questions about this agreement, and I understand and agree with what it says.

Patient signature: _____ Date: _____

Physician signature: _____ Date: _____

Source: Adapted from a form used with permission of Dr. Jessica Merlin, Assistant Professor, Division of Infectious Diseases, Division of Gerontology, Geriatrics, and Palliative Care, University of Alabama at Birmingham.

Toolkit Part D.

Telemedicine Consultation

Telemedicine consultations have been a way for healthcare providers without ready access to experts in a specific clinical area can connect providers with those experts across the country and obtain provider-to-provider feedback on specific patient cases. The following are two specific telemedicine consultation initiatives.

Project ECHO

"Project ECHO exponentially increases access to specialty care by moving knowledge, instead of moving patients." (http://echo.unm.edu)

Project Extension for Community Healthcare Outcomes (Project ECHO) was developed by the University of New Mexico with the goal of breaking down the walls between specialty and primary care. It focused on creating "communities of practice," building primary care providers' expertise, improving patients' access to specialty care, and improving the retention of primary care providers in rural and underserved communities. The development of Project ECHO was sparked by the fact that thousands of people are unable to access appropriate specialty care for their complex health conditions merely because there are not enough specialists to treat everyone who needs care; the gap between the need to access specialty care and the ability to access specialty care is even more pronounced in isolated and underserved communities. Project ECHO reduces these health disparities and revolutionizes medical education and care delivery by training primary care physicians on how to provide these specialty services. As a result, "primary care doctors, nurses, and other providers learn to provide excellent specialty care to patients in their own communities" and are consequently able to treat patients they otherwise would have referred out (**http://echo.unm.edu**). Initially launched so primary care providers could treat hepatitis C in their own communities, Project ECHO has been expanded to address 11 different disease conditions, including chronic pain and headache management.

The foundation of the Project ECHO model is its hub-and-spoke knowledge-sharing networks. These networks are led by teams of experts who use multipoint videoconferencing to conduct virtual clinics with community providers. Expert specialist teams at an academic hub are linked with primary care providers in local communities, who represent the spokes. The model orients itself around a learning community, where information exchange is multidirectional—"community providers learn from specialists, they learn from each other, and specialists learn from community providers as new best practices emerge" (**http://echo.unm.edu**).

▶ Pain and opioid-specific teleECHO clinics

Expert specialists and primary care providers participate in weekly TeleECHO clinics, which resemble virtual grand rounds and are combined with mentoring and patient care presentations. "The Chronic Pain & Headache TeleECHO Clinic (ECHO Pain) facilitates a multifaceted approach to chronic pain by incorporating a team of specialists that support primary care providers in rural communities who lack the resources necessary to sufficiently understand the management of [chronic] pain."

- The University of New Mexico: Project ECHO was developed by the University of New Mexico and launched in 2003. Specialist teams at academic medical centers throughout the state are linked to local providers. There are more than 45 sites receiving medical education and care management training with a treatment focus of "Chronic Pain and Headache" within the state of New Mexico. (**http://echo.unm.edu/**)
- The Integrative Pain Center of Arizona: The Integrative Pain Center of Arizona (IPCA) and its partner, the Community Health Clinic, Inc. (CHC) conducted the first Project ECHO replication project in Arizona and Connecticut. This is known as the CHC-IPCA ECHO. The Weitzman Institute is a branch of the Community Health Center, Inc. It is the first community-based research center established by a Federally Qualified Health Center. The Institute uses weekly Project ECHO telemedicine conferences to connect primary care

providers with expert faculty and improve the management of chronic pain.

- Project ECHO was introduced to the Department of Veterans Affairs (VA) in 2010. "Specialty Care Services adopted and expanded this program to transform the delivery of specialty care throughout VA. Specialty Care Access Network-Extensions for Community (SCAN-ECHO) extends the reach of specialty services and coordinates with the Veterans Patient Aligned Care Team (PACT)." (**http://www.va.gov/HEALTH/docs/Specialty-Care-Access-Network.pdf**)
- "The Rural Opiate Addiction Management Project for Rural Washington Physicians (Project ROAM) trains rural physicians in opioid use and helps them apply for the waiver to legally prescribe buprenorphine. After Project ROAM trains providers, Project ECHO's interdisciplinary experts monitor them as they begin to treat addiction in their practices." (**http://depts.washington.edu/givemed/magazine/2011/03/addiction-and-chronic-pain/**)

University of Washington TelePain (UW TelePain)

UW TelePain multidisciplinary pain expert tele-mentoring has already successfully demonstrated an effective means to disseminate and implement guidelines for prescribing opioids for chronic pain (Washington State Agency Medical Director's Group Interagency Guideline on Prescribing Opioids for Pain) across a large regional network (Washington State, Wyoming, Alaska, Montana, Idaho, Oregon, and Colorado) of primary care providers. Since March 2011, a multidisciplinary team of pain experts has delivered to more than 7,300 total attendees > 10,500 hours of chronic pain training, education, and consultation (30 avg./session, unique attendees 1,200+), reaching out to 270+ unique locations.[3]

Launched in direct response to extremely poor access to pain specialists, and confronting statewide high opioid use and escalating dose, with poor patient outcomes and "distressed" primary and specialty care practices , the Washington State legislature instructed the WA State Department of Health to impose 2011 regulatory requirements. These requirements necessitated access to pain specialty consultation for patients who met one or more of these criteria: on high-dose opioids, have poor pain outcomes, or are at high risk of addiction.

▶ Didactic curriculum (repeats every six months)

- Pain history and assessment
- Motivational interviewing
- Functional assessment
- Addiction assessment
- Establishing a pain diagnosis
- Risk screening for opioid safety
- UDT: use, interpret, respond
- Opioids and MME calculation
- Controlled substance agreements
- Prescription drug monitoring programs: how to access, use, and respond
- Pain tracker: patient outcomes
- Adjuvant analgesics
- Anxiety: assessment and treatment
- Depression: assessment and treatment
- PTSD as comorbid condition: assessment and treatment
- Cognitive-behavioral therapy
- Exercise and pain

▶ Supplemental curriculum (repeats every year)

- Medicinal cannabis
- Methadone
- Sleep disturbances and chronic pain
- Disability
- Complementary and alternative medicine
- Pain in children
- Pain in older adults
- Pain during pregnancy
- Primary care pain disorders (e.g., fibromyalgia, headaches, osteoarthritis, low back pain, diabetic peripheral neuropathy, visceral abdominal and pelvic pain)

Toolkit Part E.

Examples of Training Resources

- **The following table describes existing resources for training on the topics relevant to safer and more effective management of long-term opioid therapy in non-cancer pain patients. The table provides the URL to access each training and indicates the topics covered by each resource.**

CDC Clinician Outreach and Communication Activity (COCA) Calls/Webinars: CDC's National Center for Injury Prevention and Control (NCIPC) partnered with CDC's Clinician Outreach and Communication Activity (COCA) and the University of Washington to present a webinar series about the CDC Guideline for Prescribing Opioids for Chronic Pain. This seven-part series is intended to use a data-driven approach to help providers choose the most effective pain treatment options and improve the safety of opioid prescribing for chronic pain. The primary objective is to provide informative, case-based content that will demonstrate and instruct participants on how the 12 recommendations of the the CDC *Prescribing Guideline* can be incorporated and applied in a primary care practice setting.

- CDC's seven-part COCA Call Webinar Series

CDC's Online Training Series for Healthcare Providers: This interactive online training series aims to help healthcare providers apply CDC's recommendations in clinical settings through patient scenarios, videos, knowledge checks, tips, and resources. Providers can gain a better understanding of the recommendations, the risks and benefits of prescription opioids, nonopioid treatment options, patient communication, and risk mitigation. Additional topics are planned. Each stand-alone module is self-paced and offers free continuing education credit (CME, CNE, and CEU).

- Applying CDC's Guideline for Prescribing Opioids Online Training Series

Additional resources:

- CDC Train
- CDC Learning Connection

Select educational resources for providers

- **The following are resources that can be used in training providers and other healthcare professionals to support care coordination of long-term opioid therapy:**

- Group Health Research Institute's "Principles for more selective and cautious opioid prescribing" (https://depts.washington.edu/anesth/education/forms/pain/Principles_opioidPrescribing.pdf)
- Deyo, Von Korff and Duhrkoop's state of the art review of opioids. See: Deyo, R. A., Von Korff, M., & Duhrkoop, D. (2015). Opioids for low back pain. Bmj, 350, g6380. (http://www.bmj.com/content/350/bmj.g6380)

Additional resources:

- Safe and Effective Opioid Prescribing for Chronic Pain (Boston University School of Medicine)
- Prescriber's Clinical Support System for Opioid Therapies (PCSS-O)
- Prescriber's Clinical Support System for Medicated Assisted Treatment (PCSS-MAT)
- COPE-REMS (University of Washington)

Toolkit Part F.

Challenges or Barriers to Implementing Long-term Opioid Management Strategies and Potential Solutions

▶ Table 1. Solutions for implementing long-term opioid management strategies

CHALLENGES OR BARRIERS	POTENTIAL SOLUTIONS
Lack of provider understanding of the safety issues with long-term opioid therapy and extent of misuse and abuse.	Provide training to providers; retrain and update on findings in practice (e.g., rates of misuse).
Insufficient access to needed patient information.	Use strategies like the Prescription Drug Monitoring Programs (PDMPs) and other sources mentioned in CDC *Prescribing Guideline*.
Competing demands on providers' time.	Educate practices and providers on the real safety issue with long-term opioid therapy and the importance for providing high-quality care.
Inadequate time for providers to participate in telemedicine or e-consulting (Project ECHO).	Encourage medical directors to prioritize ongoing training, support, and provider participation in telemedicine efforts.
Insufficient provider adherence to new opioid policies	Have the leadership provide incentives
Challenges with applying policies or strategies because of the difficult conversations to hold with patients.	Provide robust training on difficult conversations with patients in managing long-term opioid therapy.
Consistency across providers' approaches to assessment, care plan, documentation.	Create templates embedded in the EHR (e.g., treatment agreement, pain assessment components).
Excessive number of calls from patients demanding medication renewals and other requests.	Develop a treatment agreement to set consistent response to calls and demands from patients. Designate a person who has a list of patients on opioids—print out prescription for provider to sign (after ensuring that the patient has a follow-up scheduled within 3 months of last evaluation).
Unknown prejudice and bias against patients who develop opioid addiction among staff.	Address prejudice and bias at the beginning of implementation and as part of training to enhance non-judgmental interviewing skills of providers.
Limited uptake and utilization of standardized templates for documentation.	Use a clinical dashboard or other monitoring tool to share each provider's rates.
Providers "got no time for pain," as one leader in long-term opioid therapy described it. Providers have inadequate time to discuss with patients about their pain.	Use a team-based approach to leverage providers' time, and provide a template of aspects to cover in pain assessment to support the provider-patient encounter. Use other staff to do tasks that they can (e.g., print PDMP results, order UDT per protocol).
Inefficient work procedures or workflow to implement some strategies successfully.	Determine the appropriate workflow for staff in their role implementing the strategies is important (e.g., understanding who, how, and when random UDTs will be drawn).
Some PDMP systems are clunky; a non-delegable duty to check; difficulty to register on system.	Many states are making improvements to their PDMP systems; New Jersey developed an app to access their PDMP. Health systems can work with EHR vendors to integrate PDMP information into the EHR.
Inconsistent implementation; providers do not complete or integrate all components.	Create EHR templates and monitor progress and rates of adherence to policy.
Adhering to templates for assessment or monitoring long-term opioid therapy /pain.	Use clinical dashboard to closely monitor and display utilization by provider and make the dashboard publicly visible and available; providers can see ratings of themselves and other providers—incentive not to be an outlier with poor adherence to templates (negative incentive).
Limited resources.	Leverage existing infrastructure (i.e., EHR, QI), utilize staff to the top of their licenses (e.g., MAs), and select strategies that are appropriate and feasible given current resource constraints.

Toolkit Part G.

PEG: Scale to Assess Pain Intensity and Interference

The PEG is a three-item scale to assess pain intensity and interference.

1. What number best describes your pain on average in the past week?

0	1	2	3	4	5	6	7	8	9	10
No pain										Pain as bad as you can imagine

2. What number best describes how, during the past week, pain has interfered with your enjoyment of life?

0	1	2	3	4	5	6	7	8	9	10
Does not interfere										Completely Interferes

3. What number best describes how, during the past week, pain has interfered with your general activity?

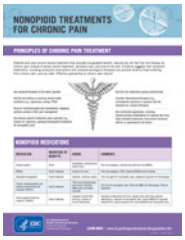
0	1	2	3	4	5	6	7	8	9	10
Does not interfere										Completely Interferes

Source: Krebs EE, Lorenz KA, Bair MJ, et al. Development and Initial Validation of the PEG, a Three-item Scale Assessing Pain Intensity and Interference. *J. Gen. Intern. Med. 2009;24(6):733-738*

Toolkit Part H.

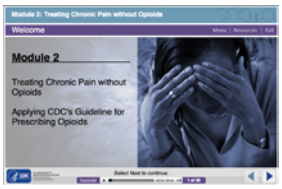
Nonopioid Options for Managing Chronic Pain

▶ CDC resources:



Fact Sheets:

- Nonopioid Treatment for Chronic Pain
- Promoting Safer and More Effective Pain Management



Training:

- Treating Chronic Pain Without Opioids

▶ Table 2. Nonopioid options for managing chronic pain

Patient lifestyle	Physiotherapy interventions
• Increasing engagement in meaningful, rewarding and/or pleasant life activities that reduce focus on chronic pain • Healthy sleep management including sleep restriction and stimulus control techniques • Weight reduction • Improve healthy eating and nutrition • Stress reduction, relaxation, mindfulness meditation • Exercise (including non-aerobic, low impact activities that reduce sedentary time lying down or sitting)	• Functional therapies – Physical therapy (PT) – Occupational therapy (OT) – Passive modalities ("activities performed by the physical therapist on the patient without any form of exercise involving patient volitional efforts")
Behavioral interventions	**Medical interventions**
• Educational groups – Preventive – Support – Peer-to-peer/Living well workshops – Shared medical appointments • Psychotherapy – Individual counseling – Group therapy – Cognitive behavioral therapy – Acceptance and commitment therapy • Supportive care – Case management • Trauma-informed care – PTSD screening – Domestic violence screening – Child abuse screening	• Nonopioid medications that may aid in chronic pain management – NSAIDS, acetaminophen – Tricyclic antidepressants (neuropathic pain) – Anti-epileptics (neuropathic pain) – Antidepressants – Topical medications • Minimally invasive surgical procedures – Nerve blocks, steroid injections – Interventional treatments: ablations, injections, – Surgical treatment • Complementary and alternative treatments – Manipulation therapy

Source: Oregon Pain Guidance Group. Opioid Prescribing Guidelines. *Oregon Pain Guidance*. 2014.

Toolkit Part I.

Additional Guidance on Urine Drug Testing

Who should be tested?

All patients on long-term opioid therapy should have UDTs periodically. Patients can be targeted for testing based on the risk of abuse or be selected randomly, though implementing random testing can be difficult for practices. [4-11] Universal testing similar to universal precautions is another approach that aims to "de-stigmatize" testing and to remove any perceived bias related to patients selected for testing. [1-4, 6-7, 13-16]

Key points to provide patients before conducting UDT

▶ **Discuss the following key points regarding UDT with the patient beforehand:**

- Purposes of testing.
- Provider/patient trust—requiring UDT does not imply a lack of trust on the part of the provider; it is part of a standardized set of safety measures.
- What drugs the test will cover.
- What results does the patient expect?
- Prescribed drugs or any other drugs (including marijuana and other illicit drugs) the patient has taken.
- Time and dose of most recently consumed opioids.
- Potential cost to patient if the UDT is not covered by insurance.
- Expectation of random repeat testing depending on treatment agreement and monitoring approach.
- Actions that may be taken based on the results of the test.

Interpreting results and actions to be taken

Providers need to be aware of the limits of UDTs and have a resource for questions regarding drug testing or results.[12] This could be a certified medical review officer, clinical laboratory director, or manufacturer for point of care (POC) testing.[10] Multiple variables affect the diagnostic accuracy of UDTs, including cutoff selection, pharmacokinetics, pharmacodynamics, and pharmacogenetics, laboratory technology, and subversion or adulteration of the urine specimen. [3-4, 16]

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[1] Chou R. 2009 Clinical Guidelines from the American Pain Society and the American Academy of Pain Medicine on the use of chronic opioid therapy in chronic noncancer pain: what are the key messages for clinical practice? Pol Arch Med Wewn. 2009;119(7-8):469-477

[2] Chou R, Deyo R, Devine B, et al. The Effectiveness and Risks of Long-Term Opioid Treatment of Chronic Pain. Vol Evidence Report/Technology Assessment No. 218. Rockville, MD: Agency for Healthcare Research and Quality; 2014.

[3] Manchikanti L, Abdi S, Atluri S, et al. American Society of Interventional Pain Physicians (ASIPP) guidelines for responsible opioid prescribing in chronic non-cancer pain: Part 1 - Evidence assessment. Pain Physician. 2012;15:S1-S66.

[4] Manchikanti L, Abdi S, Atluri S, et al. American Society of Interventional Pain Physicians (ASIPP) guidelines for responsible opioid prescribing in chronic non-cancer pain: Part 2 - Guidance. Pain Physician. 2012;15:S67-S116.

[5] National Opioid Use Guideline Group (NOUGG). Canadian Guideline for Safe and Effective Use of Opioids for Chronic Non-Cancer Pain. 2010.

[6] Chou R, Fanciullo GJ, Fine PG, et al. Clinical Guidelines for the Use of Chronic Opioid Therapy in Chronic Noncancer Pain. J Pain. 2009;10(2):113-130.

[7] Hooten WM, Timming R, Belgrade M, et al. Institute for Clinical Systems Improvement. Assessment and Management of Chronic Pain. 2013.

[8] Thorson D, Biewen P, Bonte B, et al. Institute for Clinical Systems Improvement. Acute Pain Assessment and Opioid Prescribing Protocol. 2014.

[9] The University of Michigan. Managing Chronic Non-Terminal Pain Including Prescribed Controlled Substances. Guidelines for Clinical Care. 2009.

[10] Department of Veterans Affairs, Department of Defense. VA/DoD Clinical Practice Guideline for Management of Opioid Therapy for Chronic Pain. The Management of Opioid Therapy for Chronic Pain Working Group. 2010.

[11] Washington State Agency Medical Directors' Group. Interagency Guideline on Prescribing Opioids for Pain 2015.

[12] Agency Medical Directors Group (AMDG). Interagency Guideline on Opioid Dosing for Chronic Non-Cancer Pain: An educational aid to improve care and safety with opioid therapy. 2010.

[13] Park TW, Saitz R, Ganoczy D, Ilgen MA, Bohnert ASB. Benzodiazepine prescribing patterns and deaths from drug overdose among US veterans receiving opioid analgesics: case-cohort study. 2015;350.

[14] Degenhardt L, Bruno R, Lintzeris N, et al. Agreement between definitions of pharmaceutical opioid use disorders and dependence in people taking opioids for chronic non-cancer pain (POINT): a cohort study. Lancet Psychiatry. 2015;2(4):314-322.

[15] Timm KE. A randomized-control study of active and passive treatments for chronic low back pain following L5 laminectomy. Journal of Orthopaedic & Sports Physical Therapy. 1994;20(6):276-286.

[16] Christo PJ, Manchikanti L, Ruan X, et al. Urine drug testing in chronic pain. Pain Physician. 2011;14:123-143.

Unexpected UDT results, interpretation, and options for providers' response

Table 3. Unexpected results, possible explanations, and potential actions for providers to take

Unexpected result	Possible explanation	Actions for provider
UDT negative for prescribed opioid	• False negative. • Non-compliance. • Diversion.	• Repeat test using chromatography: specify the drug of interest (e.g., oxycodone often missed by immunoassay). • Take detailed history of the patient's medication use for the preceding 7 days (e.g., could learn that patient ran out several days prior to test). • Ask patient if they've given the drug to others. • Monitor compliance with pill counts.
UDT positive for non-prescribed opioid or benzodiazepines	• False positive. • Patient acquired opioids from other sources (double doctoring, "street").	• Repeat UDT regularly • Ask the patient if they accessed opioids from other sources. • Assess for opioid misuse/addition? • Review/revise treatment agreement.
UDT positive for illicit drugs (e.g., cocaine, cannabis)	• False positive. • Patient is occasional user or addicted to the illicit drug. • Cannabis is positive for patients taking dronabinol (Marinol). THC: CBD (Sativex) or using medical marijuana.	• Repeat UDT regularly. • Assess for abuse/addiction and refer for addiction treatment as appropriate. • Ask about medical prescription of dronabinol, Delata-9-Tetrahydrocannabinol (THC): Cannabidiol (CBD) or medical marijuana access program.
Urine creatinine is lower than 2-3 mmol/liter or < 20 mg/dL	• Patient added water to sample.	• Repeat UDT. • Consider supervised collection or temperature testing. • Take a detailed history of the patient's medication use for the preceding 7 days. • Review/revise treatment agreement.
Urine sample is cold	• Delay in handling sample (urine cools within minutes). • Patient added water to sample.	• Repeat UDT. • Consider supervised collection or temperature testing. • Take a detailed history of the patient's medication use for the preceding 7 days. • Review/revise treatment agreement.

Source: National Opioid Use Guideline Group (NOUGG). Canadian Guideline for Safe and Effective Use of Opioids for Chronic Non-Cancer Pain. 2010.

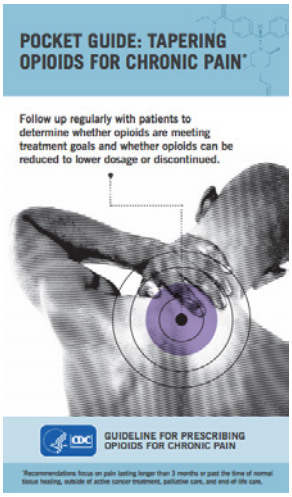
Actions to take after UDT results

- **Act on the UDT results in the following ways:**
  - Inform the patient of the test results.
  - Discuss with the patient any unexpected results or findings of drug use that the patient had talked about prior to the test. It can be helpful to ask patients what to expect the UDT will show beforehand.
  - Review the treatment agreement and reiterate concerns about the patient's safety.
  - Determine if frequency and intensity of monitoring should be increased.

For additional information on using UDTs to monitor opioid therapy, see the Washington State Agency Medical Directors' Group's Interagency Guidelines on Prescribing Opioids for Pain. (**http://www.agencymeddirectors.wa.gov/Files/2015AMDGOpioidGuideline.pdf**).

Toolkit Part J.

Tapering and Discontinuing Opioids

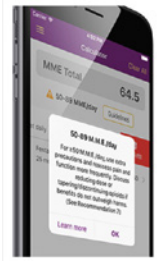
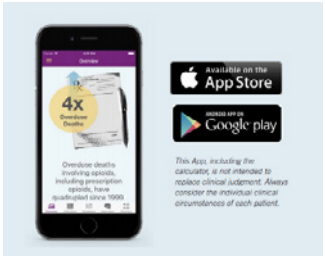


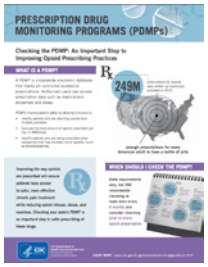
- CDC's Pocket Guide for Tapering Opioids for Chronic Pain (**https://www.cdc.gov/drugoverdose/pdf/clinical_pocket_guide_tapering-a.pdf**)
- Dosing and Titration of Opioids (**https://emergency.cdc.gov/coca/calls/2016/callinfo_081716.asp**)
- "Tapering or Weaning Patients off of Chronic Opioid Therapy" (**https://7cd526d7dc73a4cc6c93-d371975f3074159d211824381bcd2df5.ssl.cf1.rackcdn.com/GroupHealthTapering_Patients_off_Chronic_Opioid_Therapy.pdf**)
- Tapering Long-term Opioid Therapy in Chronic Noncancer Pain: Evidence and Recommendations for Everyday Practice. Mayo Clin Proc. 2015;90(6):828-842.

Toolkit Part K.

Working Collaboratively with Patients Receiving Long-term Opioid Therapy: Principles and Examples

▶ CDC resources:



- **Guideline resources:** CDC Opioid Guideline Mobile App
- **Training:** Communicating with Patients
- **Checklist:** PDO Checklist for Prescribing Opioids
- **Brochure:** Pharmacists on the Front Lines
- **Fact sheet:** Prescription Drug Monitoring Programs
- **Pocket guide:** SAMHSA Pocket Guide for Medication-Assisted Treatment (MAT)

Use these principles and language suggestions when discussing with the patient, opioid risks and safety monitoring or introducing a change in treatment plan.

Principles for talking with patients about opioids

Keep the primary focus on outcomes patients care about.

- Conversations should focus on improving overall quality of life, enabling participation in important life activities, protecting patients from opioid-related harm, and achieving their long-term goals, not on eliminating pain. Emphasize concern for the patient's well-being.

▶ When discussing risk, focus on the medications.

- Make it clear that drug-related harms can happen to anyone, so all patients are monitored for signs they are having problems with opioids.
- Emphasize that new information on opioid risks and harms are leading providers to change when and how opioids are prescribed.
- Particularly if patients are prescribed moderate-to-high opioid doses or are using other sedating substances (sedatives, alcohol), discuss risks of opioids suppressing respiratory drive.
- Particularly if patients have a history of substance abuse disorder, discuss risks of opioids inadvertently endangering their sobriety.

▶ Develop a differential diagnosis for patient behaviors that cause concern.

- If a patient is misusing opioids, expressing concerns about opioid effects, reports symptoms of OUD when asked relevant questions, getting opioids from multiple sources, using more than prescribed, or has unexpected urine results, consider it a sign of potential opioid-related harm or an unrecognized serious condition (e.g., substance use disorder, depression)—not as a "treatment agreement violation."
- When deciding on treatment changes, consider all evidence you have about the benefits and harms the patient is experiencing.

- **Focus on what patients can do to improve their quality of life.**
  - Opioids are not a "panacea" and should not be the main approach to managing chronic pain. On average, patients can expect a 30 percent reduction in pain at 12 weeks, but long-term benefits for pain relief are unknown. Initial analgesic benefits may not be sustained long term.
  - Instead, help patients explore ways to live better and become more engaged in life activities—the ability to do more of what the patient values most. Have patients define treatment goals without using the word "pain." Alternatively, ask what they would be doing if they had less pain.
  - Options to increase activities that patients have more control over than pain can be more effective over the long run and carry fewer risks than prescriptions for pain medications.
  - Even with chronic pain, many patients can go for walks or do other pleasant activities that reduce their suffering. Emphasize the importance of using multiple therapies and self-care strategies in addition to using opioids.
  - Help address any unrealistic anxieties or fears patients may have about physical activity.
  - If a patient asks for a higher dose, redirect the conversation to strategies more likely to improve their quality of life in the long run.
  - Emphasize the potentially temporary nature of pain relief from opioids—but the permanent dependence on opioids—to avoid withdrawal symptoms. Over time, it can be difficult to distinguish benefits of pain relief from the avoidance of withdrawal symptoms.
  - Remember that your relationship with and empathy for the patient, along with optimism that your patient can achieve a better quality of life, are the most important things you offer, not the drugs, tests, and procedures you prescribe.

Effective patient communication and education

In high-quality care for chronic pain, the provider's relationship with the patient can be much more important than the drugs, tests, or procedures prescribed.

- **Remember the importance of the patient-provider relationship.**
  - It is important to work collaboratively with patients, conveying empathy for the difficulties living with chronic pain, and adopt a non-judgmental stance. Communication with the patient is a building block of the therapeutic relationship. Emphasize the shared goal of ensuring safety and improving quality of life, while acknowledging the patient's own experiences with the limitations of medications for controlling chronic pain. During pain exacerbations, help the patient recall that pain will improve and identify temporary management strategies (pharmacologic or otherwise) rather than escalating opioid dose for the long run. Remember, what the provider says is only part of what is being communicated. Body language, eye contact, and expressions of respect and empathy send messages that engender trust. Because long-term opioid therapy is inherently risky, patients' trust in their providers is essential to safe and successful treatment.
- **Use a patient-centered, empathic communications style.**
  - Some conversations with patients treated for chronic pain are difficult for both providers and patients.
- **Use suggested approaches to working collaboratively with patients when dealing with difficult and sensitive issues:**
  - Introduce the changes being made in the practice to manage long-term opioid therapy.
  - Introduce the need for monitoring.
  - Discuss patient preferences regarding dose-reduction or tapering.
  - Introduce non-drug approaches to managing chronic pain.
  - Discuss refills and irregularities in supply of medications.
  - Respond to unexpected findings in UDT or PDMP.

- **Talk with patients about UDT.**

- **Review the model approaches for working with patients through difficult situations and consider adapting the suggested language to your practice.**
  - Providers can also utilize education resources to help patients understand the risks, develop realistic expectations regarding the long-term effectiveness of opioid therapy and the limited scientific evidence, and better understand the many different ways of managing chronic pain that some patients find helpful.
- **Use patient education resources to help patients understand the risks of opioid therapy and different ways of managing chronic pain that patients find helpful.**
  - (See **Toolkit Part L** for a list of existing patient education resources.)

Having difficult conversations

- **Introducing a change in practice[1] (Krebs et al.)**

Focus on new information and how expert thinking on opioids has changed.	"I want to talk with you about how what we know about opioids has changed based on the latest science and clinical recommendations."
	"Fifteen years ago, many physicians were taught that these medications were good for most kinds of pain and almost risk free. But recent evidence has shown us they were wrong."
	"Have you been paying attention to the news about pain meds lately? Do you have concerns or questions about what you've been hearing?"
	"From what you have been telling me, these medications aren't as effective as you would like. Let's think about trying something different." *If patient is defensive:* "Patients who expect drugs alone to improve their overall quality of life are usually disappointed. What are other things you do that seem to help you be more active? Let's talk about approaches that I have seen work for other patients with problems like yours."

- **Introducing monitoring for opioid harms (Krebs et al.)**

Focus on the harms opioids can cause.	"These drugs have serious risks even when used as directed, especially at higher doses."
	For patients on higher doses, using extra for flare-ups, or using sedatives and/or alcohol: "These drugs can stop your breathing which can cause you to die. It happens even when people have been on the same dose for a long time."
	"We used to think people suffering from pain did not become addicted to prescription pain medicines. We now know that you can become addicted to pain killers used for chronic pain, even if you haven't had problems with drugs or alcohol in the past."
	"We used to think the dose didn't matter as long as we went up slowly, but now we know higher doses lead to higher risks of serious injuries and accidental death. And, higher doses don't seem to reduce pain over the long run."

[1] Krebs E, Von Korff M, Deyo R, et al. Safer Management of Opioids for Chronic Pain: Principles and language suggestions for talking with patients. Minneapolis: Center for Chronic Disease Outcomes Research, Women's Veteran's Comprehensive Health Center

Reduce stigma by treating everyone the same.	"Our clinic has a policy recommending against moving to higher doses because there is no evidence of benefits, but risks and harms are much greater, and it can be much harder to quit if problems arise."
	"Our clinic is making changes for all of our patients, so pain medication prescribing is safer than it has been in the past."
	"It's my job to consider potential benefits and harms and prescribe treatments only when they are safe and the benefits are greater than the potential harms."
	"Our clinic suggests monitoring opioid safety using standard approaches for all patients."
	"People don't choose to develop an addiction, and I have no way to predict who might have trouble with these medications."
Be your patient's ally by expressing empathy and support for their concerns and uncertainties.	"Do you know anyone who has had an opioid problem, such as becoming addicted, or been hurt by these medications, such as an overdose?"
	"I promise to be honest with you if I have any concerns about how you are using your medications. In turn, I ask you to let me know right away if you develop any cravings or other concerns about how the drugs are affecting you. It is common to experience these problems, and they aren't your fault, so let me know right away."

▶ Introducing dose reduction or tapering (Krebs et al.)

Provide information and redirect the conversation.	"Some call them 'pain killers,' but they don't work that well for most people with back pain. Studies show that 4 out of 5 people continue to have bad pain and pain-related activity limitations when using opioids long term." "My experience is that patients who taper opioids end up with clearer thinking and more energy to engage in positive activities that help them focus less on their pain."
	"It seems the body just gets used to the long-acting, around-the-clock medicines, and they quit working. Many of my patients seem to do better taking the short-acting medications only when they need them."
	"For most people, the benefits wear off as the body gets used to the medications. Then they're stuck on a medicine that isn't really doing much for them. They often assume they'd be worse off without it, but it turns out that's not true. Let's talk about what you can do to live a better life, so all your eggs aren't in one basket."
	"These drugs have risks for everyone who takes them. You are more likely to have a serious harm because you [have been taking them for a long time; are taking them every day; are taking > 50 mg morphine equivalent dose a day; are taking sleeping pills, too; have a family history of alcoholism; have depression; etc.]. We can't do much about your family history, but you could reduce your risk by [going down on the dose; stopping the sleeping pills; taking them less often]."
Ask about the patient's concerns.	"Do you ever worry about harmful effects of your pain medications?"
	"You're on a very high dose and have been for [number of] years. Do you ever wonder if the drugs are still working for you?"
	"How would you feel about taking these medications for the rest of your life?"
	"Have you ever thought about trying to cut back?"

Suggest a change.	"You're telling me that your pain is really terrible, and I hear you. It seems to me that what we're doing just isn't working. I know they helped you at first, but I think the effect of the medications has worn off. We should consider making some changes."
	"I wonder if you really need to be on this high a dose. In my experience, most people can cut their doses back quite a bit without any increase in pain. I'd like to try going down just [5 mg; 1 pill a day; etc.] and see if you notice a difference. What do you think?"
	"I want to start making changes to make sure this medication is safe for you. There are several different things we could start with … [provide options]. Where would you like to start?"
	"While we're working on the medications, I also want to work on some of the underlying things that are contributing to your pain. For you to get better, you'll need to [get stronger; start being more active; get back to your social life]. I'd like to talk about some goals we can keep track of together, so we know how well our plan is working."
Continually revisit readiness to change.	"Last time, we talked about [the safety of your pain meds; whether the opioids are really working]. I still recommend [making some changes; going down on the dose]. Have you thought more about whether you're ready for that?" *If yes, suggest options. If no, remind of reasons, suggest potential options, ask again next visit.*
Be honest and reassuring about what patients can expect.	"We can push the pause button any time you need to."
	"I don't want to make any sudden moves—just one baby step at a time. Then we'll talk about the results together."
	"I promise I'm going to stick by you."
	"Remember, you might feel a little worse before you feel better. I want to see you again in four weeks to check how you're doing. By then, your pain should be evened out again."
	"Since your body is used to having this drug in your system, you might feel withdrawal symptoms after we decrease your dose. This might mean you feel more pain or get worse sleep. But it will be temporary. It doesn't mean the drug is actually helping—it's just that your body needs to get used to the new dose."
Be honest and reassuring about what patients can expect.	"As a back-up plan, in case of a seriously bad day, I could give you some extra [short-acting opioid]."
	When tapering after a small dose reduction, ask the patient about any positive changes—such as increased energy, alertness, ability to be active, sleeping better. It helps to have patients focus on any beneficial outcomes. It may also be helpful to note expected negative effects that did not materialize: "From what you are saying, your pain seems to be about the same as before."
Respond to setbacks and focus on problem-solving.	"Remember how miserable you were on the medications? If your pain was really well-controlled back then, we wouldn't be doing this at all."
	"Let's just hold on the current dose and not try to make more changes right now. How are things going with your goal to [walk every day; keep a regular sleep schedule; join the gym]?" *Focus on ways to problem-solve and reach the patient's goals.*
	"Usually these flare-ups only last a few days. Is there anything that would help to take your mind off it in the meantime? I know you mentioned that [you do better when you're with other people; that it feels good to float in the pool]."
	"I'm not holding out on you. If I had an easy solution for the pain today, I'd give it to you right now. I still think this is going to be worth it in the long run.' *Remind the patient of their long-term goals.* "How can you get back on track with [your short-term goal]?"

Introducing nondrug approaches to managing chronic pain (Krebs et al.)

Introduce materials on other ways to manage chronic pain.	*Try giving a limited amount of reading material that will be discussed at the next visit. Information on sleep and pacing are helpful for many patients.* "This workbook has helped other patients of mine with chronic pain. It gives a lot of different ideas for ways to manage chronic pain"
	Check in on progress at every visit, even if not discussed in depth: "How are things going with the relaxation techniques we talked about?"
	"There are a lot of things that make pain worse, like not sleeping well, or doing too little or too much exercise. When the pain is really bad, people do things that make it worse, like shallow breathing, tensing muscles, and thinking that the pain will never get better. This provides a menu of options." *Focusing discussion on these kinds of options can change the conversation from what the doctor is doing to control pain to what the patient is doing to improve quality of life This can be helpful, even if the changes seem small initially.*

Talking with patients about medication supply[2] (SAMHSA, 2012)

Provider	"I see that you are here because you ran out of your pain medication before you were due to pick up the next prescription."
Patient	"I took extra pills for a few days, and now I'm out. I'm hurting more because I don't have any pills."
Provider	"Can you tell me what happened?"
Patient	"I fell and hurt my knee, and it was really bothering me, so I took more than I usually do."
Provider	"We have a written agreement that you'll take your medications only as prescribed."
Patient	"Yeah, but it made sense because my knee hurt so bad."
Provider	"Knee pain is a different kind of pain, and increasing your opioid medication is not necessarily the best treatment for that. Next time, please call me first as we agreed."
Patient	"OK, I'm sorry."
Provider	"Whenever one of my patients breaks the agreement for any reason, I always ask for a urine sample. When did you last take your medicine?"
Patient	"I just ran out yesterday."
Provider	"So you did not take anything else when you ran out of your prescription?"
Patient	"No! I didn't have anything else to take."
Provider	"OK, I'll write your prescription while you go see the nurse. If your urine sample is OK, I'll give you your prescription."

Responding to unexpected findings, UDT or PDMP results, or concern for substance use disorder or diversion (Krebs et al.)

Keep the focus on the patient's well-being.	"I called because I'm concerned about you. There was something I didn't expect in your [urine/ pharmacy records], so I wanted to check in with you about how you're doing." *Followed by silence to allow patient to talk.*
	"This pattern can sometimes be a sign that a person is at risk for opioid addiction, which is a serious disease that needs treatment." *Followed by assessment questions and offer of resource/referral.*
	"It's my job to weigh up the potential benefits and potential harms, and to prescribe medications only when the benefits are greater than the harms. In your situation, I'm worried the risks outweigh the benefits, so I can't keep prescribing them for you."

[2] Substance Abuse and Mental Health Services Administration (SAMHSA). A Treatment Improvement Protocol: Managing Chronic Pain in Adults With or in Recovery From Substance Use Disorders. 2012.

Avoid backing the patient into a corner.	"I know that medications get lost and things happen. But this pattern can also look like there is a problem developing—like someone is getting hold of your medicines, or there is loss of control over how much you are using. As a doctor, I just can't prescribe if I'm not 100% sure where the medications are going and how they are being used."
	"As a doctor, my job is to be careful with these medications and to watch out for your health."
	"I'm not sure what's been happening with you, but I'm concerned for your well-being."
Redirect the conversation while maintaining the relationship.	"These drugs aren't an ideal treatment for pain in the long term, anyway. For many people, their effects wear off over time. I'd like to try some new approaches to see if we can do better."
	"Patients who expect drugs to control their pain are usually disappointed. With or without chronic pain, my patients who are doing better use multiple approaches. Let's talk about what might help you become more active and do more things that you enjoy [walking; pleasant activities; relaxing activities; mindfulness meditation; avoiding thoughts that everyday pain means you are harming your body]." *It can be difficult to talk about alternatives if opioids are being cut off or reduced against the patient's wishes. In difficult circumstances, taking time to listen to concerns (within limits) and expressing empathy without changing your decision can be helpful for the future.*
Redirect the conversation while maintaining the relationship.	"I want to work with you to find a better pain management plan."
	"When can you come back to see me?"

▶ Addressing resistance to urine drug testing (SAMHSA, 2012)

Patient	"Why do I need to give you a urine sample? Don't you trust me?"
Provider	"The urine sample gives me a great deal of useful information about how you are using your medications and whether you are running into problems with other substances."
Patient	"It feels like spying."
Provider	"It may seem like that to you, but it's a standard part of care for all my patients. Any level of substance use can affect a patient's life and the management of the pain. I do this as part of my responsibility to lower risks for all my patients, along with asking about your concerns. Is there something we need to talk about?"
Patient	"But I gave you a urine sample last time I was here."
Provider	"Yes, you did. Let's look at the standard treatment agreement. Let's see. Here it is. We agreed that you might be asked for a screen at every appointment."

▶ Talking with Patients about unexpected UDT results (SAMHSA, 2012)

Provider	"It seems you have been taking medications that I haven't prescribed."
Patient	"No, I haven't."
Provider	"Your last urine test was positive for benzodiazepines. Can you think of any reasons why they might have appeared?"

Toolkit Part L.

Patient Education Resources

▶ **The following are examples of patient education resources:**

- **Fact Sheet:** Prescription Opioids: What You Need to Know
- **Patient Poster:** Expectations for Opioid Therapy
- **Video:** Prescription Opioids: Even When Prescribed by a Doctor
- **Videos:** RxAwareness Campaign
- **Tip Card:** Preventing an Opioid Overdose
- **Additional patient resources:**
  - Pregnancy and Opioids
  - Podcast
  - Get the Facts

▶ **SAMHSA Resources:**

- Opioids
- Finding Quality Treatment for substance Use Disorders
- Clinical Guidance for Treating Pregnant and Parenting Women With Opioid Use Disorder and Their Infants
- Medications for Opioid Use Disorder – Executive Summary

▶ **Videos on chronic pain and opioids from Oregon Pain Guidance:**

- Understanding Pain: What to do about it in less than five minutes
  Animation by Hunter Integrated Pain Service (5 minutes)
- Best Advice for People Taking Opioid Medication
  Animation by Dr. Mike Evans (11 minutes)

Toolkit Part M.

Patient Health Questionnaire (PHQ-9)

- The Patient Health Questionnaire (PHQ-9) can be accessed here.

Generalized Anxiety Disorder seven-item (GAD-7) Scale

Over the past two weeks, how often have you been bothered by any of the following problems?	Not at all	Several days	More than half the days	Nearly every day
1. Feeling nervous, anxious, or on the edge	0	1	2	3
2. Not being able to stop or control worrying	0	1	2	3
3. Worrying too much about difficult things	0	1	2	3
4. Trouble relaxing	0	1	2	3
5. Being so restless that it's hard to sit still	0	1	2	3
6. Becoming easily annoyed or irritable	0	1	2	3
7. Feeling afraid as if something awful might happen	0	1	2	3

Column totals: _____ + _____ + _____

Add totals together: _____

8. If you checked off any problems, how difficult have those problems made it for you to do your work, take care of things at home, or get along with other people?

☐ Not difficult at all ☐ Somewhat difficult ☐ Very difficult ☐ Extremely difficult

Source: Spitzer RL, Kroenke K, Williams JBW, Lowe B. A brief measure for assessing generalized anxiety disorder. Arch Intern Med. 2006;166:1092-1097.

[1] http://www.agencymeddirectors.wa.gov/Files/2015AMDGOpioidGuideline.pdf

[2] Franklin G, Sabel JC, Jones CM, Mai J, Baumgartner C, Banta-Green CJ, Neven D, Tauben, D. A comprehensive approach to address the prescription opioid epidemic in Washington State - milestones and lessons learned. Am J Pub Health. 2015 Mar;105(3):463-9.

[3] depts.washington.edu/anesth/care/pain/telepain/index.shtml.

[4] Upshur CC, Luckmann RS, Savageau JA. Primary care provider concerns about management of chronic pain in community clinic populations J Gen Intern Med. Jun 2006; 21(6): 652–655

[5] Medical Quality Assurance Commission Chapter 246-919 WAC: 850 -863