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CPG SERIES

CLINICAL PRACTICE GUIDELINE

PALTmed
POST-ACUTE AND LONG-TERM CARE MEDICAL ASSOCIATION

PAIN MANAGEMENT

in the Post-Acute and Long-Term Care Setting

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PREFACE

Post-Acute and Long-Term Care Medical Association is the national professional association representing medical directors, physicians, nurse practitioners, physician assistants, and others practicing in the post-acute and long-term care (PALTC) continuum. For over 20 years, PALTmed has developed clinical practice guidelines (CPGs) to help improve the quality of care in these settings. This Pain Management CPG is one of a series of such guidelines.

These original guidelines are developed by interprofessional workgroups that consist of medical practitioners and others involved in patient care in PALTC facilities. These workgroups obtain information through a thorough literature search and also apply their practice experience to develop a usable guideline tailored to the PALTC setting.

AMDA CPGs are meant to

- Help facilities develop their policies and procedures to guide staff and practitioners, and
- Help the staff and practitioners manage patients with the condition or symptoms covered by a CPG.

In addition to universally applicable information, PALTmed CPGs also emphasize specific concerns and common issues in the PALTC setting. While they are comprehensive, these CPGs are not in-tended to offer an exhaustive review of the topic of interest. They provide many references and resources for those who are interested in more in-depth exploration of the topic.

Clinical Practice Guidelines and the Care Delivery Process

All PALTmed CPGs—including this one—follow the care delivery process (CDP), which is the foun-dation for providing individualized, high-quality care for all patients, symptoms, and situations. The guidelines emphasize the functions and tasks related to recognizing, assessing, treating, and monitoring the medical condition or situation of interest. Figure 1[1] identifies this process and ex-plains its importance in managing all but the simplest situations.

Figure 1. Clinical Problem Solving and Decision Making Process Steps and Objectives

Process Step / Objectives *	Key Tasks **
Recognition / Assessment *Gather essential information about the individual*	– Identify and collect information that is needed to identify an individual's conditions that enables proper definition of their conditions, strengths, needs, risks, problems, and prognosis – Obtain a personal and medical history – Perform a physical assessment
Problem definition *Define the individual's problems, risks, and issues*	– Identify any current consequences and complications of the individual's situation, underlying condition and illnesses, etc. – Clearly state the individual's issues and physical, functional, and psychosocial strengths, problems, needs, deficits, and concerns – Define significant risk factors
Diagnosis / Cause-and-effect analysis *Identify physical, functional, and psychosocial causes of risks, problems, and other issues, and relate to one another and to their consequences*	– Identify causes of, and factors contributing to, the individual's current dysfunctions, disabilities, impairments, and risks – Identify pertinent evaluations and diagnostic tests – Identify how existing symptoms, signs, diagnoses, test results, dysfunctions, impairments, disabilities, and other findings relate to one another – Identify how addressing those causes is likely to affect consequences
Identifying goals and objectives of care *Clarify purpose of providing care and of specific interventions, and the criteria that will be used to determine whether the objectives are being met*	– Clarify prognosis – Define overall goals for the individual – Identify criteria for meeting goals
Selecting interventions / planning care *Identify and implement interventions and treatments to address the individual's physical, functional, and psychosocial needs, concerns, problems, and risks*	– Identify specific symptomatic and cause-specific interventions (physical, functional, and psychosocial) – Identify how current and proposed treatments and services are expected to address causes, consequences, and risk factors, and help attain overall goals for the individual – Define anticipated benefits and risks of various interventions – Clarify how specific treatments and services will be evaluated for their effectiveness and possible adverse consequences
Monitoring of progress *Review individual's progress towards goals and modify approaches as needed*	– Identify the individual's response to interventions and treatments – Identify factors that are affecting progress towards achieving goals – Define or refine the prognosis – Define or refine when to stop or modify interventions – Review effectiveness and adverse consequences related to treatments – Adjust interventions as needed – Identify when care objectives have been achieved sufficiently to allow for discharge, transfer, or change in level of care

* Refers to key steps in the care delivery process, related to clinical problem solving and decision making
** Refers to key tasks at each step in the care delivery process

Although preferred treatments may vary and change over time, decision-making principles and processes are enduring and universal. Faithful adherence to the CDP's clinical reasoning and problem-solving steps by all interprofessional team (IPT) members improves the consistency of care and helps to optimize results, minimize the risks and complications of medications and treatments, and facilitate regulatory compliance.

Audience

This guideline is intended for members of the IPT in PALTC settings. To be consistent with the terminology now used by CMS, the Health Resources and Services Administration (HRSA), National Academy of Medicine (NAM), and other agencies, AMDA CPGs have adopted the term *interprofessional* in place of *interdisciplinary*.

As stated by the World Health Organization, "Collaborative practice happens when multiple health workers from different professional backgrounds work together with patients, families, carers and communities to deliver the highest quality of care across settings."[2] IPT members typically include the medical director, attending physicians and advanced practice clinicians (referred to in the CPGs as "medical practitioners"), director of nursing, nursing staff, consultant pharmacist, and other professionals such as therapists, social workers, dietitians, and nursing assistants who care for patients.

For example, a variety of health care professionals working in the PALTC setting, including nursing assistants, licensed nurses, dietitians, and social workers, may make and document observations (e.g., that a patient does not sleep at night, has become more withdrawn, or has a change in usual eating patterns). However, only some of these disciplines may be qualified to determine the significance of those observations (e.g., the cause of sleeplessness or of a change in eating patterns). In contrast, practitioners may not be present to observe patients in detail or deliver treatments but are responsible for analyzing the significance and causes of symptoms. Therefore, effective CPG implementation requires understanding the specific functions and tasks—not just the roles—of various IPT members.

Assumptions

PALTC facilities care for a variety of individuals, including younger adults with chronic diseases and disabilities, short-stay patients needing post-acute care, and very old and frail individuals with many chronic medical and psychiatric conditions. Practice guidelines for the PALTC setting should be consistent with the fundamental goals of desirable practice in this setting. Patient-centered care means establishing individualized goals of care for each patient.

For example, when patients in the PALTC setting are at or near the end of life, care goals will shift from curative care, functional improvement, or physical stability to end-of-life palliation. A workup may not be indicated if

- The patient has a terminal or end-stage condition,
- The workup findings would not change the management course,
- The burden of the workup is greater than the potential benefit, or
- The patient or his or her legally authorized representative has declined treatment.

PALTmed CPGs address such transitions and suggest appropriate modifications of the patient's care plan.

Organization of These Guidelines

Each guideline includes a narrative portion that covers the definition of the condition being addressed, as well as the following:

- **Recognition and Assessment** refers to identifying the presence of a condition, situation, or risk, and collecting the details needed for cause identification, interpretation, and subsequent management.
- **Diagnosis and Interpretation** refers to the process of defining causes and consequences of a symptom or problem and identifying the meaning and implications of the information gathered during the assessment.
- **Treatment and Management** addresses the selection and provision of appropriate interventions for the identified condition or situation.
- **Monitoring** addresses reviewing the course of a condition or situation as a basis for deciding to continue, change, or discontinue interventions.

Each guideline includes many recommendations for practice. Often, the CPG summarizes the information and recommendations from various references and resources that have used a grading system such as the GRADE Working Group system[3] a framework for rating the quality of evidence and the strength of recommendations. The reader can refer to the references within this CPG to learn more about the evidence basis for recommendations.

Other Terminology

In addition to people who live in PALTC facilities (residents), many individuals enter these fa-cilities for short-term care (e.g., after hospitalization for surgery or a stroke). PALTmed CPGs use the term *patient* because they are addressing individuals within the context of treating a medical condition, even though they take a much broader approach than treating medical issues alone.

When referring to pharmaceutical products, PALTmed CPGs avoid the use of brand names and refer to classes of drugs whenever possible.

References

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HOW TO USE THE AMDA PAIN MANAGEMENT CPG

Pain is common in patients in the post-acute and long-term care (PALTC) setting. It often coexists with other issues such as psychiatric symptoms, falls, and anorexia or weight loss. Multiple symptoms may have common causes and a single symptom may have multiple causes. The best results are obtained by managing all such issues in the context of the entire patient picture.

Thus, this Pain Management CPG is not only about pain treatment but also about addressing the many questions and issues that influence—and are influenced by—pain management (e.g., patients with limited cognition and verbal communication, survey-related issues, opioid diversion, substance use disorders).

How to Use This CPG

A CPG can serve several purposes. It can

- Directly guide clinical practice and individual patient care;
- Help to establish or modify existing policies, procedures, and practices related to a topic; and
- Help to answer specific questions and apply general advice to specific situations.

All interprofessional team (IPT) members can use this Pain Management CPG to help find the information they need, as shown in the **Table**.

Table. How Interprofessional Team Members Can Use the Pain Management CPG

Issue	How to Use the CPG
Our facility wants to understand why we should have a uniform, systematic approach to pain management.	■ Review the Introduction section of the CPG, p. 1-9, and discuss with your staff and practitioners. ■ Get an overview of the entire CPG by reviewing the Table of Contents and skimming the sections briefly to understand the approach.
Our patients could benefit from a more organized, consistent approach to pain management. *Our staff and practitioners could benefit from guidance on how to manage pain in various situations, including selecting specific medications and nonpharmacological interventions.*	■ Review the Table of Contents and built-in Q&As, and review and follow Steps 1 through 9. ■ Review these recommended practices and evidence-based approaches against your existing systems to see if your facility is doing the best you can. ■ Use this information to develop, revise, and implement policies and procedures, including expectations for clinical practices. ■ Share the information and expectations with your IPT, including medical practitioners.
We have questions about specific aspects of pain management – for example: ■ *How to decide when and whether to modify a patient's pain management regimen* ■ *How to make adjustments between standing and PRN doses of analgesics*	■ The CPG is set up in Q&A style, so it can be referenced by questions as well as by steps. ■ Review the questions in the Table of Contents. ■ When you identify the question you wish to have answered, jump to the section of the CPG that addresses it. *(Note: The answers to each Question include all of the content up until the next Question; e.g., everything between Question 1 and Question 2 covers Question 1.)*
Our patients could benefit from optimal prescribing and use of opioids to manage pain.	■ Review the related content starting with Step 8, Question 17, to guide everyday practice. Review this content with your staff and practitioners.

TABLE CONTINUED

Table. (cont.) How Interprofessional Team Members Can Use the Pain Management CPG

Issue	How to Use the CPG
We want more information about a topic covered in this CPG.	■ The CPG refers the user to readily accessible online sources of additional discussion and information (e.g., pain documentation tools). ■ The electronic version facilitates online searching ■ The CPG includes more than 140 references, many of which contain much more detail about specific topics such as assessing pain in older adults and managing postoperative or neuropathic pain.

In summary, using this Pain Management CPG effectively can help both individual clinicians and entire facilities to improve their practices and outcomes.

INTRODUCTION

QUESTION 1: What is pain?

DEFINITION

Defining pain precisely is challenging because pain is an all-encompassing symptom with diverse causes, such as

- Occasional discomfort that is part of daily life (e.g., the sensation of bumping a knee against a table, heartburn after a large meal)
- More-serious acute causes (e.g., appendicitis, fracture, herpes zoster, myocardial infarction, toothache)
- Chronic pain with a known underlying cause (e.g., osteoarthritis, primary or metastatic cancer, radiculopathy)
- Debilitating pain syndromes without a clear underlying cause (e.g., fibromyalgia, "hurts all over," "my aching back")

Definitions of pain generally encompass the common notion of an unpleasant subjective sensation that serves as a signaling mechanism for an underlying physiological condition (Table 1). Pain has biological, psychological, and social influences. Recurrent, persistent, or untreated pain may ultimately result in chronic alterations of the nervous system and may impair psychosocial and emotional functioning.

TABLE 1
Some Definitions of Pain

- A localized or generalized unpleasant bodily sensation or complex of sensations that causes mild to severe physical discomfort and emotional distress and typically results from a bodily disorder, such as injury or disease (Merriam-Webster.com. https://www.merriam-webster.com/dictionary/pain)
- A basic bodily sensation that is induced by a noxious stimulus, is received by naked nerve endings, is associated with actual or potential tissue damage, is characterized by physical discomfort (such as pricking, throbbing, or aching), and typically leads to evasive action. (Merriam-Webster.com. https://www.merriam-webster.com/dictionary/pain)
- An unpleasant sensation that can range from mild localized discomfort to agony (MedicineNet.com. Medical definition of pain. https://www.medicinenet.com/script/main/art.asp?articlekey=4723)
- An unpleasant sensory and emotional experience associated with, or resembling that associated with, actual or potential tissue damage (International Association for the Study of Pain [IASP]. https://www.iasp-pain.org/PublicationsNews/NewsDetail.aspx?ItemNumber=10475)
- An aversive sensory and emotional experience typically caused by, or resembling that caused by, actual or potential tissue injury (IASP, 2019)

PURPOSE OF PAIN

The principal biological purpose of pain is to notify an individual that something is not right or is to be avoided. From an evolutionary perspective, pain is a strong motivational signal (indicating a threat) with negative emotional connotations. As a form of relief and reward, pain relief represents a potent influence on behavior. Additionally, individuals learn the concept of pain and its applications through their life experiences. Not uncommonly, people seek out painful stimuli or situations because of some associated reward or positive experience.[1]

QUESTION 2: What is the prevalence of pain and conditions that predispose to pain?

PREVALENCE OF PAIN

Pain is universal. All humans experience acute pain at some time and many people experience chronic pain. Estimates of pain prevalence may change as the classification and diagnosis of pain expand and are refined.

Prevalence appears to increase with advancing age, increasing disability and morbidity, and within post-acute and long-term care (PALTC) settings. It has been estimated that 45% to 80% of residents of PALTC facilities have pain. Patients in the PALTC setting tend to have many conditions that are associated with pain, such as injuries, cancer, postoperative status, multiple sclerosis, and arthritis,[2] and pain has a major impact on their function and quality of life.[3,4] In the PALTC setting, patients' pain is often related to musculoskeletal causes such as arthritis.[5] Over time, patients often experience several categories of pain (e.g., acute, postoperative, chronic).

QUESTION 3: What are some common challenges in managing pain?

COMMON CHALLENGES IN PAIN MANAGEMENT

The challenges of safe and effective pain management in the PALTC setting emphasize the importance of adopting a systematic approach.

Diagnostic Challenges

Identifying and describing pain and accurately diagnosing its causes present ongoing challenges. Patients' perceptions of, responses to, and descriptions of pain vary widely. Although we can identify situations that are nearly universally painful, people differ in how they perceive and respond to pain and how much pain they tolerate.

Many patients in the PALTC setting have limited ability to report and describe pain. There may be significant gender or cultural differences in attitudes toward and ability or willingness to acknowledge pain. Often, limited objective findings are available to support the diagnosis and treatment of pain. For example, a medical practitioner may have limited direct contact with a patient, or the patient may be unable to answer questions. Documented assessment by licensed health care professionals may provide little more than the "chief complaint" ("patient says they are still having pain") and a number on a pain scale. In all but the simplest situations, inadequate details impede an already challenging path to safe and effective treatment. It can be challenging to objectively determine whether and to what extent pain management improves a patient's function and quality of life.

Impact of Cognitive Biases

Cognitive biases have a major impact on all human endeavors, including clinical practices.[6] It is important to use a systematic approach such as the steps in this clinical practice guideline (CPG) to try to minimize the impact of cognitive biases (**Table 2**) on clinical decision making, including decision making related to pain.[7] [8]

Variability in Processes and Practices

Opinions and recommendations in the literature about many aspects of pain management (e.g., categorizing pain, selecting treatments) are diverse. Licensed health care professionals vary substantially in their skill in defining, diagnosing, and managing pain. Accurate pain classification is important but often vague. The reliability, accuracy, timeliness, and completeness of pain-related information and the soundness of conclusions about causation will invariably drive treatment decisions.

TABLE 2
Examples of Cognitive Biases That May Affect Pain Management

Cognitive Bias	Examples
Anchoring bias (excessive reliance on preexisting information and failure to reconsider previous conclusions or interventions when evidence suggests that current working assumptions might be wrong)	■ Pain in a patient with cancer could be due to something other than their cancer. ■ Worsening joint pain in a patient with known osteoarthritis could be due to acute inflammation or trauma.
Premature closure (jumping to conclusions too quickly without considering all relevant evidence)	■ Additional details are often needed to determine whether grimacing in a nonverbal patient reflects pain. ■ Pain description (e.g., burning, stabbing, shooting) alone may be suggestive—but is not diagnostic—of neuropathic pain.[9] ■ Nonspecific symptoms such as fidgeting are immediately assumed to be due to pain without considering other plausible or likely explanations. ■ The staff and practitioners mistakenly minimize a patient's pain because of the patient's limited verbal communication or history of substance use disorder
Bandwagon effect (being overly persuaded by the conclusions of others)	■ Staff and practitioners assume that any pain in the extremity of a patient with diabetes is neuropathic and write progress notes and orders accordingly, without adequate consideration of the differential diagnosis. ■ A medical practitioner increases a patient's opioid dose based primarily on the patient's insistence or a request by staff or a family member.

Undertreatment and Overtreatment

Both undertreatment and overtreatment of pain can have adverse consequences (Table 3), especially—although not exclusively—in older adults. For example, as discussed in Step 5 and Step 6, both undertreatment of pain[10] and excessive dosing and duration of opioids can affect mental status and behavior. In addition, the clinical, legal, and political landscape has shifted between pressure to treat pain aggressively and stricter prescribing guidelines related to heightened concern about the adverse impacts of pain medications. Ultimately, treatment is a balancing act that requires careful assessment of the patient and the clinical knowledge to find the path that provides enough of the right interventions and limits marginal, problematic, or ineffective treatment.

Challenges Related to Treatment Options

Options for providing effective pain treatment without major adverse consequences may be limited by indications, availability, cost, complexity, patient acceptance, and risks. As with all medications, every analgesic has pros and cons. The effectiveness of nonpharmacological treatment options (e.g., acupuncture, massage, psychotherapy, pain support groups, therapeutic movement) varies widely and is often limited in PALTC patients.[11] Frailty (an aging-related syndrome of physiological decline, characterized by marked vulnerability to adverse health outcomes) and impaired cognition add to the challenges of using both analgesics and some nonpharmacological interventions in older adults, although the impact of frailty on medication response has yet to be well defined.[12]

QUESTION 4: What preparation/systems/processes does a facility need to support effective pain management?

FACILITY PREPARATION TO SUPPORT PAIN MANAGEMENT

Policies and Procedures

PALTC facilities should have written policies and procedures in place for pain assessment and management, consistent with desirable practices as outlined in this CPG and related references and resources (**Table 4**). Although facility staff and practitioners may change over time and treatment options may vary, this process is universal and enduring.

In PALTC patients, pain is one symptom among many (e.g., anorexia, confusion, dysphagia, falls, impaired behavior, indigestion, nausea, weight loss). Multiple symptoms may have common causes and individual symptoms may have multiple causes. Although uncomplicated pain involves relatively straightforward interventions (e.g., acetaminophen for a headache, ice for a swollen knee due to minor trauma), most chronic pain-related situations require rigorous adherence to the processes identified in this CPG and the involvement of knowledgeable, skilled, and experienced medical practitioners. Pain should be considered and managed in the context of the whole patient, not in isolation (a "silo").

TABLE 3

Comparative Impact of Under- and Overtreatment of Pain

Risks of Undertreatment	Optimal Treatment	Risks of Overtreatment
Mood/Behavior		
■ Hopelessness, despair ■ Apathy ■ Anhedonia ■ Depression ■ Antagonistic relationships with clinical staff ■ Suicidal thoughts	■ Optimal and effective medication regimen and focused nonpharmacological interventions ■ Balance between pain treatment and side effects meets patient needs	■ Impaired mood and behavior ■ Verbal and physical aggression ■ Psychosis
Function		
■ Reduced functional status due to pain	■ Maximal functional capacity	■ Impaired functional status due to medication side effects and interactions
Other Patient Outcomes		
■ Drug-seeking behavior ■ Early death	■ Improved patient satisfaction, quality of life ■ Patient has sense of control, hope, a plan for dealing with exacerbations of pain	■ Medication side effects (e.g., sedation, changes in mental status, adverse impact on renal or hepatic function) ■ Opioid hyperalgesia ■ Overdoses, drug dependency, possible addiction
Facility Impact		
■ OBRA survey deficiencies, lawsuits ■ Multiple Emergency Room transfers	■ Better outcomes overall ■ Optimal medication use ■ Fewer complications requiring time-consuming interventions	■ Excessive time spent on medication pass/ polypharmacy ■ OBRA survey deficiencies for treatment-related complications (e.g., weight loss, falls, aggression)

OBRA: Omnibus Budget Reconciliation Act of 1987

TABLE 4

Examples of Policies and Procedures Related to Pain Assessment and Management

- Documented processes for all disciplines for assessing, documenting and reporting pain (new onset, escalating, improved)
- Standardized tools and definitions to facilitate discussion and management of pain
- Identification of interprofessional team (IPT) member roles in pain assessment and management
- How to identify pain emergencies
- Setting pain-related goals and assessing progress, including functional outcomes
- List of medications available for urgent pain management; e.g., at night or on weekends
- List of nonpharmacological interventions available in the facility and via outside sources
- Policies regarding appropriate use of opioids for acute and chronic pain management
- Appropriate references and resources (e.g., opioid conversion tables, pain management agreements) and notes on how IPT members may access or use these resources
- Interdisciplinary oversight and review processes and audits to assure compliance with preferred pain management practices
- Processes (e.g., guideline and literature reviews) for identifying recommended practices and updating facility approaches

References and Resources

Medical practitioners and staff should have a process for identifying and using reliable sources of information about pain assessment and management (e.g., symptom presentation, types of pain, differentiating causes of pain, pain management options).[13] In addition to the information and references identified in this CPG, many reliable sources are readily available—often for free—by using an internet search engine. [14]

Defining Roles of the Interprofessional Team

A coordinated interprofessional approach to pain assessment and management is recommended. Interprofessional team (IPT) members may include primary care medical practitioners, nurses, psychiatrists, psychologists, physiatrists, rehabilitation therapists, social workers, and consultant pharmacists, who can help with the appropriate selection and use of analgesics.

Members of the IPT play important roles (e.g., as observers, information analysts, selectors of treatment), which should be identified and reinforced, consistent with each discipline's training, knowledge, and skills (Table 5). For example, certified nursing assistants have a prominent role as observers and in implementing pain-related interventions such as turning and positioning, while medical practitioners analyze information that is mostly collected by other disciplines, have a prominent (but not exclusive) role in selecting treatments, and only occasionally actually deliver treatments to patients.

TABLE 5
Examples of Interprofessional Team Member Roles in Pain Management

Discipline / Position	Principal Roles
Certified nursing assistants	Observation, reporting, treatment delivery
Registered nurses/licensed practical nurses	Observation, screening, assessment, reporting, documenting, treatment delivery
Therapists	Screening, assessment, reporting, documenting, treatment selection, treatment delivery
Other direct care staff	Observation, reporting, documenting
Medical practitioners	Assessment, documenting, information analysis, treatment selection

In conjunction with the patient, IPT members should provide essential accurate and detailed information to help medical practitioners precisely define the problem, identify causes, clarify the impact of pain on the patient, and individualize and adjust treatments. This information includes objective details (e.g., description, frequency, intensity, duration) and a chronological story of symptoms, while minimizing speculation, assumptions, and guessing. For example, as discussed in **Step 2** (*see also* **Table 2**), agitation may reflect pain but also can have many other possible causes, from delirium to medication-related adverse effects.

To the extent possible, direct-care staff (e.g., nursing assistants, licensed practical nurses, registered nurses) should complete basic competencies for pain-related screening, assessment, reporting, and documentation, consistent with their licensure and positions. They should be guided by written case examples that identify desirable approaches (e.g., how to document pain, how to give a medical practitioner an organized chronological story of a patient's pain symptoms and current treatments).

Medical Practitioner Roles

More-complex pain situations require significant detailed knowledge and skill (e.g., how to interpret signs and symptoms, diagnose causes of pain and contributing factors, choose appropriate interventions, determine the effectiveness of the current treatment regimen). For example, competency to prescribe opioids for pain includes the ability to select opioids based on thorough knowledge of the indications, contraindications, side effects, and possible interactions with other medications. **Table 6** outlines medical practitioners' responsibilities in pain management.

TABLE 6

Medical Practitioners' Responsibilities in Pain Management

Medical practitioners have a responsibility to

- Advocate for patient comfort and collaborate with the patient, family, and other IPT members to develop a beneficial plan of care for each patient.
- Attain and maintain competency in basic pain management through ongoing education and training and feedback regarding performance and patient outcomes.
- Recognize the extent and limits of their knowledge and experience and look things up or get help with more-complex situations.
- Appropriately screen for and assess pain.
- Diagnose and classify pain appropriately (e.g., acute vs chronic, somatic vs visceral) and update their thinking about pain classification.
- Collaborate with the patient, family, and other IPT members to identify the impact of pain on function, quality of life, mood, and behavior (e.g., the effect of facial pain on sleep or on eating comfortably; of musculoskeletal pain on ambulation, socialization, participation in activities) and select safe and effective nonpharmacological interventions and pain medications.
- Monitor patient progress in attaining pain relief and adjust interventions accordingly.
- Monitor for, identify, and manage analgesic-related adverse effects.

Implications: Every facility needs a foundation for pain assessment and management. This foundation must be systematic, include necessary details, and be integrated into the facility's overall care-delivery process.

RECOGNITION AND ASSESSMENT

This CPG integrates a series of steps in the pain care-delivery process that can guide medical practitioners and the rest of the IPT involved in the care of PALTC patients. Step 1 (below) addresses screening for pain.

STEP 1 — Screen for pain periodically

QUESTION 5: When should routine and interim screening for pain be performed?

To answer this question, we must first understand the minimum expectation for a PALTC facility and then consider the potential added value of expanding opportunities to assess for pain and the effectiveness of treatment.

SCREENING FOR PAIN

Periodic Screening

Screening refers to checking whether someone without a currently identified problem or related symptom might need a more-detailed assessment. Screening for pain may be scheduled or event-driven. There are ways to optimize screening for pain.[15]

While periodic screening for pain is important, it is no longer recommended to consider pain as the "the fifth vital sign" or to record pain level when other vital signs are measured.[16] This has given way to a more flexible approach. Standard practice is to screen for pain periodically. All patients should undergo basic screening for pain. At a minimum, patients without diagnoses of chronic pain or active pain problems should be screened for pain on admission, on a change of condition, quarterly, and annually.

Event-Driven Screening

Possible pain is an important consideration in evaluating a patient with a change of condition or a decline in function, after an injury, during an acute illness, upon return from acute hospitalization, when engagement or adherence to the plan of care changes, or in the presence of persistent or recurrent behavioral or mood issues.

Following **acute events** such as a fall or surgery, patients should be evaluated for possible pain more frequently for a period of time (e.g., several days to a week), at least until the immediate episode is resolved or is known to be chronic and tolerable. Several pain screening tools are available (*see* **Step 2**), including questions included in the Minimum Data Set (MDS). Although brief and limited, the MDS questions about pain may lead to more-detailed assessment and care planning.

STEP 2 — Obtain and document details about a patient's pain

QUESTION 6: What are key elements of a medical practitioner/nurse assessment for pain?

ASSESSMENT AND DOCUMENTATION OF PAIN

Assessment Components

Ultimately, as with any symptom, the objective is to get enough detailed, pertinent, and accurate information about a patient's pain to be able to manage it safely and effectively. **Table 7** identifies key components of a pain assessment.

TABLE 7
Key Assessment Components Related to Pain

- Symptom history (e.g., location, intensity, duration, radiation, mitigating and exacerbating factors)
- Medical and surgical history
- Medication use history (including pain-related opioid use)
- Substance use history (including non-pain-related opioid use)
- Psychosocial considerations
- Meaning of pain to the patient
- Cultural factors
- Physical examination
- Laboratory and other diagnostic test results
- Neurological examination
- Functional impact and evaluation

Sources of Information

Assessment may be both direct and indirect. Direct assessment involves gathering information directly from the patient. Indirect assessment involves reviewing other diverse sources of information (Table 8).

First, identify the patient's ability to communicate their pain and reliability in reporting and describing symptoms, including pain. Verbal description is only one of several ways to express pain; limited ability to communicate does not preclude the existence of pain. As with other symptoms, pain is expressed based on an individual's experience and may be influenced by (among other things) gender, culture, experience, and history. Where feasible, patients can be encouraged to keep a pain diary or other written record of their pain.

TABLE 8
Examples of Sources of Information About a Patient's Pain

Direct Assessment

- Ask questions of the patient or review their written information (e.g., pain diary)
- Observe the patient (e.g., pain during movement, performance of tasks such as dressing and eating, nonverbal signs of possible pain)
- Perform a physical assessment

Indirect Assessment

- Review current and previous medical records, including history of a patient's symptoms and treatments
- Ask those in direct contact with the patient about their interactions with and observations of the patient (e.g., eating, sleeping comfort and position, engagement in activities)
- Obtain and review diagnostic test results; e.g., presence of a fracture or kidney stones on x-ray, bladder scan showing urine retention, impaction of stool on abdominal x-ray, evidence of gallstones or dilated bile ducts on a computed tomography scan.

QUESTION 7: How should we define and characterize an individual's pain?

Amount of Detail

Details of pain are vital. It is often stated that pain is subjective and that we should believe the patient's recitation of their symptoms. However, although it is always reasonable to start with a patient's explicit statements about their pain, it is nonetheless possible and desirable—as with all symptoms—to validate and expand on patient-provided information (*see* Table 2, Examples of Cognitive Biases That May Affect Pain Management). For example, additional observation of the patient may help to confirm whether pain is present, its impact on the patient, and evidence of the impact of treatment.[15]

Less detail may be needed if pain is straightforward or well controlled. More-detailed information (e.g., more than simply stating that "the resident still complains of pain and it is 6 out of 10") is essential in the following circumstances, among others:

- When pain is new, worse, or not well controlled
- If the category, causes, and complications of pain are not adequately understood
- If it is unclear whether nonspecific symptoms (*see* **Table 12, Examples of Nonspecific Findings That May Suggest Pain**) reflect pain
- If treatment is ineffective or the patient is experiencing significant treatment-related side effects
- In the face of family or patient concerns about pain symptoms or management

Identifying Pain Characteristics

Essential details about pain include a chronological story of symptoms and detailed pain characteristics (e.g., duration, frequency, intensity, location, severity) (**Table 9**). Answers may come from the patient or from other sources (*see* **Table 8**).

It is helpful to ask "neutral" questions. For example, asking "How is your (or "the patient's") pain now, compared to [a previous interval such as a day, week, or month]?" may be preferable to asking "Is the pain better (or worse) than before?"

Impact of Pain

It is important to identify the consequences of a patient's pain for their comfort, function, and overall well-being. Especially in older adults, pain may be associated with many adverse outcomes, including functional impairment, anxiety, depression, insomnia, falls, delayed rehabilitation, decreased quality of life, reduced socialization, anorexia or weight loss, and greater health care usage and costs.[15]

QUESTION 8: What are key aspects of documentation related to pain?

General Principles of Pain Documentation

Documentation records findings as well as conclusions based on those findings. Methods of documenting pain include checklists, flow sheets, narrative progress notes, and summaries of conclusions and interventions. The content and depth of documentation will vary by discipline.

Over time, staff and practitioner documentation should collectively relate the story of a patient's pain, including its impact on the patient and the effects of treatment (*see* **Table 8** and **Table 9**). Narrative notes that contain details of a patient's pain, including comparisons over time (e.g., characteristics, duration, frequency, intensity, location, nature of pain, exacerbating and relieving factors, impact of pain on function) are very helpful.

TABLE 9
Questions to Ask About Pain

To standardize the approach to pain assessment, these questions can be incorporated into a checklist or used as a template for narrative documentation in electronic medical records.

Presence and nature of pain
- Do you have pain or discomfort right now? Are you hurting anywhere right now?
- What does the pain feel like, in as much detail as possible (e.g., sharp, stabbing, burning, aching, gnawing, dull)?

Intensity
- How would you rate the severity of your pain (e.g., based on a scale)?
- How bad is the pain at its worst? How about at its best?

Location
- Where is the pain? (Please be as specific as possible.)
- Is the pain localized (in one or several places) or generalized (all over your body)?
- Does the pain move (migrate or radiate)?

Aggravating and alleviating
- Have you used any treatments (e.g., complementary and alternative therapies such as heat, cold, music, massage) or taken any medications for this pain? If so, how and to what extent were they helpful?
- What makes the pain better or worse (e.g., movement, resting, stretching, touch, weight bearing)?
- What has been used to treat the pain previously and to what extent did it help?
- What do you think might be causing your pain? Why do you think that?

Temporal
- Approximately for how long have you had pain?
- Have you had the pain before? If so, what brought it on or made it worse?
- How often do you have pain, and how long does it last?

Functional impact
- Let's have you move/get up and walk. Do you have pain as you are moving/walking?
- How is the pain affecting your life? Is it affecting your ability to do things that matter to you (e.g., activities, mood, relationships, sleep)?
- How tolerable is your current level of pain?

Checklists and pain scales can help to monitor and communicate information about pain, but it is important to use them judiciously, interpret them appropriately, and not rely on them excessively. Findings from checklists and pain scales should be combined with other information (e.g., chronological history of pain, pain characteristics over time, differential diagnosis of the causes of pain)[17] to make pain management decisions.

Although routine numeric screening for pain is widely recommended, the association of rating scales with the overall quality of pain care is unclear.[18] For example, pain scales may be less useful in diagnosing and managing chronic pain. Severity scores alone are unlikely to help to differentiate underlying causes or identify the most appropriate treatments,[19] especially—but not solely—in chronic non-cancer pain. Patients with chronic pain may suffer pain ranked at extreme levels for years with little change in their overall pain score.[20]

Pain Assessment and Screening Tools

Many tools and resources are available for assessing and documenting pain in both cognitively and verbally impaired and intact patients.[15] Variations of pain scales may include self-report with visual analog scales, pictures, verbal descriptions, or observational scales for those who are unable to complete a pain scale (**Table 10**).[21] [22]

Pain assessment in verbally and cognitively impaired individuals can be challenging for both facility staff and practitioners. Observational pain scales should be used for patients with cognitive impairment who cannot use verbal scales.

A more detailed list of pain assessment tools, with links to download, can be found online at **https://geriatricpain.org/list-nonverbal-pain-behavior-tools-2019**.

TABLE 10

Examples of Pain Assessment Instruments (Including for Cognitively and Verbally Impaired Patients)

Pain Tool	Comments
General Tools	
Single-Dimensional Pain Scales	■ Only measure pain intensity ■ Can be useful in acute pain ***Examples:*** numeric pain scale, visual analog scale, verbal pain scale, Wong Baker Faces Rating Scale
Multidimensional Assessment Tools	■ Evaluate the multidimensional impact of pain on function and/or quality of life ■ Typically measure intensity, nature, location, and potential impact on function, activity, mood, and sleep ***Examples:*** Brief Pain Inventory, Pain Disability Index, Pain Outcome Questionnaire
Population-Specific Tools	
Pain Assessment in Advanced Dementia (PAIN-AD) *Observational*	■ Used to assess pain in older adults with dementia or other cognitive impairment who are unable to reliably communicate their pain[23] ■ Can be used by direct-care staff to screen for behavior that may reflect pain ■ View at https://www.mdcalc.com/pain-assessment-advanced-dementia-scale-painad
Pain Assessment Checklist for Seniors with Limited Ability to Communicate (PACSLAC-D) *Observational*	■ Used to screen for pain in older adults with dementia or other cognitive impairment and limited ability to communicate their pain ■ Almost half of patients with dementia who were screened using the PACSLAC-D were observed to experience some pain[24] ■ Download at https://geriatricpain.org/pacslac
Doloplus-2 *Observational*	■ A tool for assessing pain in nonverbal patients using three subscales (somatic, psychomotor, psychosocial) ■ Some concerns have been raised about the validity of this scale and the feasibility of using it[25] ■ Download at https://prc.coh.org/PainNOA/Doloplus 2 Tool.pdf

Minimum Data Set

The MDS is the principal documentation tool developed as part of the Resident Assessment Instrument authorized by the Omnibus Budget Reconciliation Act of 1987 nursing home regulations. Section J of the MDS 3.0 includes questions about pain; its results are primarily useful for screening for pain and summarizing findings. Lack of key symptom details, including a chronological history and examination details, limits its use for differentiating causes of pain and identifying desirable approaches to pain management. Attempts to use MDS Section J data as quality indicators for pain management are questionable. It is unclear to what extent information about pain in the MDS reflects actual clinical experience.[26]

QUESTION 9: What are key elements of a physical assessment related to pain?

Physical Assessment for Pain

Both nurses and medical practitioners should perform a relevant physical assessment or examination that includes inspection, palpation, auscultation, and percussion, as indicated. For example, engage the patient in movement and other physical activity, as pain may not be notable when lying down or sitting. Manipulate joints in an attempt to elicit pain.

If neuropathic pain is suspected, the combined assessments should include checking the patient's responses to light touch, a pinprick, heat or cold, position sense, and temperature response to confirm the hypothesis and rule out other types or causes of pain. These examinations can identify relevant findings such as **allodynia** (pain from a stimulus that would not normally be painful), **hyperalgesia** (more-severe pain from stimuli that would normally be only mildly painful), and **hypoesthesia** (a reduced or absent response to painful stimuli as compared with most people). Hyperalgesia may also result from the accumulation of higher doses of opioids or their metabolites.

Table 11 provides additional examples of relevant basic physical assessment in individuals with pain in various body areas, which both nurses and medical practitioners can perform with different levels of detail. Not uncommonly, many of these key elements are inadequate or missing. A health care practitioner's documentation is critically important and can serve as a good example to other disciplines.

TABLE 11

Examples of Helpful Physical Examination Based on Location or Suspected Type of Pain

Location of Reported Pain	Possible causes	Examination
Head and face	Gingivitis or tooth infection Parotitis Sinusitis Temporal arteritis Tension headache	■ Tap over the sinuses ■ Press over the temples ■ Palpate scalp and face ■ Observe for redness and swelling ■ Open mouth, palpate teeth, and gums, lift tongue
Neck	Infection or inflammation Muscle strain or spasm Neck sprain Nerve-root compression Osteoarthritis	■ Move shoulders and neck through range of motion ■ Palpate neck ■ Check movement and sensation of arm, elbow, hand, fingers
Skin	Infection Inflammation Ulceration	■ Assess skin for breakdown, rash, erythema, swelling, local tenderness
Abdominal pain	Acute hepatitis Gallbladder disease Gastritis Inflammatory bowel disease Intestinal ischemia Medication-related ileus Partial intestinal obstruction Peptic ulcer	■ Inspect, auscultate, percuss ■ Palpate abdomen for tenderness and listen to abdomen for the presence of bowel sounds ■ Seek evidence for ileus vs obstruction, pelvic pain ■ Prostate and rectal exam
Joints	Bursitis Fracture Inflammatory arthritis (e.g., gout) Osteoarthritis Tendinitis	■ Inspect, palpate, percuss ■ Check for redness, warmth, swelling, point tenderness, or pain with movement in joints ■ Have the patient transfer and ambulate or engage in his or her highest level of function
Neuropathic	Diabetes Nerve-root compression Nutritional deficiencies	■ Neurological assessment, including basic motor and sensory exam (e.g., pinprick, temperature, light touch)

Identifying and Differentiating Nonspecific Findings

Table 12 provides examples of nonspecific findings identified via observation or examination that may suggest pain.

TABLE 12
Examples of Nonspecific Findings That May Suggest Pain

- Bracing, guarding, rubbing
- Change in gait
- Disturbances in appetite or sleep
- Decreased function or activity levels
- Fidgeting, increasing or recurring restlessness, irritability
- Frowning, grimacing, fearful facial expressions, grinding of teeth
- Increasing or recurring agitation
- Refusing care, resisting being touched or moved during care (e.g., being turned)
- Sighing, groaning, crying, breathing heavily
- Social withdrawal, signs and symptoms of depression, anxiety, or fear

It is important to identify details about the patient's behavior and function and consider a relevant differential diagnosis of general symptoms such as agitation and aggression. For example, a common dilemma is when and to what extent verbal and physical aggression may reflect pain. Opinions about this are diverse and findings mixed.

While agitation and aggression may reflect pain, it is often reasonable to consider other possible causes, either instead of or in addition to pain. For example, striking at staff during attempted care involving movement of a limb (which might indicate pain, delirium, or medication-related adverse effects) is not comparable with having physically aggressive interactions with other residents (which is more likely to reflect a problem other than pain).[27] [28] [29]

Implications: Pain is a symptom with many possible causes and interventions. Accurate and complete details are essential to create an individualized pain management plan. There are preferred approaches to gather and document details. Standardized instruments that have been shown to help providers document pain history and choose appropriate treatments can be helpful, but must be used prudently.

DIAGNOSIS AND INTERPRETATION

STEP 3 — Identify causes of pain

QUESTION 10: What are key considerations in diagnosing causes of pain?

DIAGNOSTIC CONSIDERATIONS

Pain can accompany disruption, disease, or impairment of almost any organ system or body function. Because many pain treatments are symptomatic rather than cause-specific, diagnostic effort is important to identify potentially treatable underlying causes of pain. Many of the references at the end of this CPG explore the differential diagnosis of various types of pain in more detail.

It is imperative to develop a differential diagnosis that is based on a good history, examination, and other sources of information. For example, physical assessment is relevant to identifying causes of abdominal pain, especially when combined with adequate symptom details. Palpation can help to clarify the location of an underlying source of pain. Inspection and auscultation can help to differentiate ileus from obstruction. Identifying visible peristaltic rushes along with abdominal distention on inspection increases the likelihood of obstruction, whereas markedly reduced bowel sounds and diffuse tenderness may indicate ileus. The cause of ileus may be identified by reviewing bowel function and all current medications, many of which can impair bowel motility and cause ileus. Involuntary guarding may help to distinguish significant pathology from functional bowel discomfort.[30]

Always consider the possibility that a patient's existing medications could be causing or exacerbating pain, especially when pain persists despite additions to or increased doses of analgesics. Table 13 and Table 14 list some commonly used medications in PALTC patients that can cause pain and headache, respectively. Not infrequently, discontinuing or adjusting problematic medications successfully reduces or eliminates pain, thereby reducing or eliminating the need for analgesics.[31]

TABLE 13
Examples of Medications That Can Cause or Exacerbate Pain

Pain Type	Examples
Musculoskeletal/joint pain	Angiotensin-2 receptor antagonists, bisphosphonates, calcium channel blockers, carvedilol, cephalosporins (second generation), corticosteroids, donepezil, fibrates, fluoroquinolones, fluticasone, NSAIDs, pregabalin, proton pump inhibitors, SSRIs, statins
Dysphagia/gastrointestinal pain	Antibiotics, anticholinergics, anticonvulsants, antihistamines, antipsychotics, benztropine mesylate, calcium channel blockers, cardiac antiarrhythmics, iron, metoclopramide, NSAIDs, opioids, oxybutynin, SSRIs, tolterodine, tricyclic antidepressants

NSAIDs: nonsteroidal anti-inflammatory drugs; SSRIs: selective serotonin reuptake inhibitors
Adapted from Bannwarth, 2007[32]; Conforti et al, 2007[33]

TABLE 14
Medications That May Cause Headache

Headache Type	Drug Examples
Predictable, related to the principal pharmacological action of the drugs, dose dependent	ACE inhibitors, agents for erectile dysfunction, α_1-adrenergic blockers (doxazosin, prazosin), α_2-adrenergic agonist (clonidine), amiloride, amphetamine, angiotensin II blockers, antiarrhythmics, β_2-adrenergic agonists, β-adrenergic blockers, calcium channel blockers, cannabis, ergotamine, ethanol, histamine, methylxanthines, nicotine, statins, sympathomimetics
Idiosyncratic, unpredictable adverse drug reaction	Amoxicillin, carbamazepine, diclofenac, famotidine, ibuprofen, immune globulin, infliximab, ketorolac, leflunomide, levamisole, metronidazole, naproxen, ranitidine, rofecoxib, sulfamethoxazole, sulfasalazine, sulindac, tolmetin, trimethoprim, valacyclovir
Adverse drug reaction after chronic medication	Amiodarone, anabolic steroids, contraceptives (combination), ciprofloxacin, corticosteroids, danazol, gentamicin, lithium carbonate, nalidixic acid, nitrofurantoin, ofloxacin, retinoic acid, tetracycline, thyroid hormone replacement, Vitamin A
Adverse drug reaction related to substance withdrawal	Caffeine, ergotamine, estrogen, methysergide, opioid withdrawal headache
Migraine with aura	Cyclosporin, dipyridamole, phosphodiesterase inhibitors, ondansetron, sertraline, tacrolimus

Adapted from Ferrari et al.[34]

STEP 4 — Interpret findings and draw conclusions about a patient's pain

QUESTION 11: What are key concepts and vocabulary related to discussing and managing pain?

CLASSIFYING A PATIENT'S PAIN

The next step of a detailed assessment and diagnostic effort is to accurately categorize a patient's pain, as a foundation for identifying appropriate pain management.

Because of the diverse uses and meanings of the word *pain*, a standard nomenclature for pain can help us to identify its appropriate assessment, treatment, and management. Some current terminology (e.g., *functional pain*, *psychogenic pain*, *dysfunctional pain*) lacks a patient-centered focus. As of 2021, terminology is still evolving. More-recent efforts to define and categorize pain have recognized that some older definitions may be inaccurate or inadequate. New classifications of pain are on the horizon.

Clinically relevant categories of pain include

- Acute versus chronic (persistent)
- Nociceptive (somatic or visceral) versus neuropathic

ACUTE VERSUS CHRONIC (PERSISTENT) PAIN

Acute or New Pain

Acute pain typically starts abruptly. It is likely to be associated with new or recent tissue injury or other damage and is a signal that something is wrong with the body. Acute pain may be further distinguished by whether it is associated with an emergency (e.g., acute appendicitis, myocardial infarction, fracture); a nonemergent medical condition that requires diagnosis and treatment (e.g., urinary tract infection, dental abscess, acute esophagitis, joint sprain), or a normal, self-limiting bodily response (e.g., sore muscles after exercise, distended stomach after a large meal).

Often, acute pain occurs in someone who also has chronic pain (e.g., acute joint pain in a patient with osteoarthritis, new onset of leg pain in a patient with neuropathy). The diagnostic challenge is to correctly identify whether the problem is an exacerbation of chronic pain (i.e., "breakthrough" pain or "incident" pain), new onset of pain from a different source, or pain with multiple sources.

Chronic (Persistent) Pain

The International Classification of Diseases, Tenth Revision (ICD-10) has classified pain syndromes anatomically and etiologically but lacks a specific diagnostic category that encompasses the unique and diverse nature of chronic pain.

Chronic pain is characterized not only by the duration of symptoms (typically, pain that persists for more than 3 to 6 months), but also by the fact that it

- May not be associated with a specific identifiable cause or defined tissue damage,
- Is almost always associated with diverse physiological and psychological changes that make it a unique condition that is often independent of its location or origins, and

- Often has predictable ("incident" pain) or unpredictable ("breakthrough" pain) surges. Incident or breakthrough pain in individuals with chronic pain may be
  - Pain that occurs often during an anticipated activity, such as receiving personal care or a wound dressing change,
  - Pain that returns before the next scheduled or PRN analgesic dose, or
  - Spontaneous pain that is often irregular and temporary (e.g., in neuropathic pain).

The World Health Organization (WHO) and others have supported recommendations for much more-detailed categorization of chronic pain and for considering chronic primary pain as a distinct condition, even if its underlying cause is unknown. The ICD-11 update, which is due to replace the ICD-10 in 2022, is expected to expand diagnostic considerations of pain and revamp the classification of clinical conditions associated with chronic pain (Table 15). It will gather in one place the relevant codes for chronic pain management that in the ICD-10 are scattered across disease categories.[35]

Regardless of the time frame for implementing this new formal approach to pain classification, there is value in improving the categorization of chronic pain and in dividing the most common painful conditions into subgroups defined by etiology or affected organ system (**Table 15**). This classification also includes a subgroup of conditions related to pain with unclear causes.[36]

Nociceptive Versus Neuropathic Pain

Distinguishing nociceptive from neuropathic pain (Table 16) can help with identifying causes and selecting treatment. **Nociceptive** implies some type of tissue injury that directly stimulates specialized pain receptors along normally functioning nerve pathways. It can be subdivided further into somatic and visceral pain. In contrast, **neuropathic** pain appears to result from abnormal functioning of the peripheral or central nervous system (CNS).

Neuropathic Pain

Neuropathic pain can be acute or chronic and may occur secondary to degenerative disorders affecting neural tissues, direct compression, inflammation, ischemia (arterial insufficiency), metabolic derangement, toxic exposure, or trauma.[37]

The diagnosis of neuropathic pain is supported by a neuroanatomically plausible distribution of the pain and a history of a nervous system lesion or neurological disease in the absence of non-neural tissue damage, as well as by somatosensory signs (e.g., allodynia, hyperalgesia, sensory loss) consistent with the suspected lesion or disease. However, none of the commonly attributed pain descriptions (e.g., burning, stabbing, shooting) are specific to neuropathic pain.[9]

Pain may also occur despite the absence of objective physical evidence of injury or inflammation.[38] Neuropathic pain commonly persists beyond the natural healing process of the underlying disease (e.g., in post-herpetic neuralgia) or despite treatment directed at the disease cause.[39]

TABLE 15

Revised Categories of Chronic Pain Anticipated in the ICD-11

Category	Diagnosis	Examples
Chronic primary pain: Unknown etiology or established pathophysiology, does not meet criteria for somatic psychiatric disorders	Chronic primary pain	
	Chronic widespread pain	■ Fibromyalgia
	Chronic primary visceral pain	■ Irritable bowel syndrome
	Chronic primary musculoskeletal pain	■ Chronic back pain
	Chronic primary headache or orofacial pain	■ Tension-type headache ■ Trigeminal autonomic cephalgias
	Chronic regional pain syndrome	■ Reflex sympathetic dystrophy (pain disproportionate to original event)
Chronic secondary pain: Known etiology or established pathophysiology	Chronic cancer-related pain	■ Lung cancer ■ Metastatic colon cancer
	Chronic postsurgical or posttraumatic pain	■ Persistent pain after hip replacement surgery, partial lung resection, mastectomy
	Chronic secondary musculoskeletal pain	■ Osteoarthritis ■ Polymyalgia rheumatica
	Chronic secondary visceral pain	■ Intestinal ischemia ■ Inflammatory bowel disease ■ Partial obstruction due to adhesions
	Chronic neuropathic pain (subdivided into *chronic central neuropathic pain and chronic peripheral neuropathic pain)*	■ Post-stroke pain ■ Multiple sclerosis ■ Spinal cord injury ■ Trigeminal neuralgia (orofacial neuropathic pain restricted to one or more divisions of the trigeminal nerve)
	Chronic secondary headache or orofacial pain	■ Migraine ■ Chronic sinusitis

TABLE 16

Comparison of Nociceptive and Neuropathic Pain

	Features	Locations	Symptoms	Examples	
Nociceptive pain	■ Results from the body's reaction to painful stimuli (e.g., broken bone, muscle strain) ■ Triggered by inflammation, irritants, or physical events ■ Usually in response to a specific acute situation ■ Tends to resolve as the affected body part heals (e.g., fracture, surgical incision)	■ ***Somatic*** ■ Skin, muscles, bones, peripheral soft-tissue structures ***Visceral*** ■ Internal organs and cavities innervated by the autonomic nervous system	■ May be localized or diffuse, constant or intermittent ***Somatic*** ■ Typically localized ■ Commonly described as gnawing, aching, stabbing pain that may be worse with movement ***Visceral*** ■ Typically diffuse ■ Pain may be referred (e.g., cardiac pain in jaw or arm) ■ Commonly described as aching, deep throbbing, colicky, crampy	***Somatic*** ■ Bone pain ■ Sprained ankle ■ Osteoarthritic pain ■ Trauma (e.g., fracture) ■ Touching a hot object ■ Pain from tooth cavity ■ Inflammation (e.g., costochondritis) ■ Metastatic cancer invading bone, skin, or soft tissues ■ Pressure injury ■ Muscle spasms, contractures	***Visceral*** ■ Distention ■ Ischemia ■ Inflammation of or damage to the GI or GU tract or to cardiac, peritoneal, or pleural tissues ■ Small-bowel obstruction ■ Cancer/metastases of internal organs ■ Cholecystitis, cholelithiasis ■ Inflammatory Bowel Disease ■ Peritonitis
Neuropathic pain	■ Results from damage or injury to a single nerve or group of nerves ■ Hypersensitivity to pain results after nerves become damaged, compressed, or inflamed ■ Nerves give false or exaggerated pain signals despite healing of the original injury or other disruption ■ Central sensitization: Excessive sensitivity to mild touch over time ■ Usually chronic	■ May be peripheral or central	■ Sharp, burning, shooting, searing, or stabbing pain ■ Tingling sensations ■ Numbness ■ Exaggerated sensitivity to light touch ■ Insensitivity to heat or cold ■ Muscle weakness ■ Pain worse at night ■ Pain follows route of damaged peripheral nerve (e.g., sciatica, herpes zoster) ■ Stocking-glove distribution (diabetic neuropathy)	■ Sciatica ■ Cervical radiculopathy with chronic arm pain ■ Trigeminal neuralgia ■ Herniated disk with nerve-root compression ■ Post-herpetic neuralgia ■ Phantom limb pain ■ Diabetic peripheral neuropathy ■ Traumatic nerve lesions ■ Damage to spinal cord or brain (e.g., stroke)	

SUMMARIZING FINDINGS AND CONCLUSIONS

Summary documentation provides an overview of trends and patterns in a patient's pain and the effectiveness of pain management efforts over time. Succinct and accurate summary notes may be more efficient and useful than numerous checklists and pain scales buried in the medical record. Such documentation should

- "Tell the story" of a patient's pain,
- Explain the basis for conclusions about the nature and causes of the patient's pain,
- Clarify the patient's values and pain management goals,[15] and
- Summarize the treatment plan and evaluate its pertinence, benefits, and risks.

The following is an example of a pertinent progress note:

> "The patient was admitted for postacute care after a stroke 12 weeks ago. She has a history of osteoarthritis and uses acetaminophen as needed. She has been experiencing persistent pain for the past several months in her right shoulder, different than her usual intermittent mild aching. It is described as stabbing and gnawing and is worse with movement, especially when she tries to raise her right arm to the side or over her head. It wakes her up from her sleep multiple times a week. Examination of her right arm and shoulder revealed point tenderness in the deltoid area. She grimaced and stopped short when I asked her to raise her right arm over her head. Exam otherwise unremarkable. Diagnosis: probable tendinitis, possibly due to the unaccustomed activity from her participation in therapy. I will order ibuprofen and local heat for 7–10 days. She does not have renal failure, major cardiac issues, or upper gastrointestinal history or symptoms. "

A subsequent summary note from the practitioner or nurses might state the following:

> "In the past month, pain complaints in her upper extremity have gone from multiple times daily to occasionally (less than daily during the week). The patient is more active and can do more ADLs with less assistance and has had more uninterrupted sleep, up to 5 hours at a time. Lower-extremity pain is less severe and is confined to the left knee. Her tendinitis has resolved. The main cause of pain now appears to be osteoarthritis. She uses her PRN acetaminophen with good results."

Implications: Adequate problem definition and cause identification enable safe and effective targeted interventions. While many IPT members play a role in pain management, the interpretation of substantial information by a knowledgeable health care practitioner is essential. The medical record should relate a single unified story that enables others to understand the diagnosis, workup, aggravating and alleviating factors, attempted and effective treatments to date, rationale for choosing specific interventions, and clear goals and overall treatment plan. To improve care and information-sharing, every facility should develop a system in which this information is documented, accessible, and reviewed and updated periodically.

TREATMENT AND MANAGEMENT

STEP 5 — Implement a pertinent pain management plan.

GENERAL PAIN MANAGEMENT PRINCIPLES

QUESTION 12: What factors influence a pain management plan?

Pain Management Plan

A unified pain management plan should be part of the overall plan of care for every patient with pain. This plan relies on the evidence gathered and conclusions drawn in the preceding steps of this CPG. Both direct-care staff and medical practitioners should have access to, review carefully, and coordinate all aspects of a patient's plan of care (which is broader than just the nursing "care plan" or medical orders), including all identified approaches to manage pain. Table 17 lists factors that may influence pain management.

As identified throughout this CPG, pain management is often challenging and sometimes it may be necessary to draw tentative conclusions and initiate empirical treatment. Prudent empirical approaches to pain management emphasize low-risk interventions whenever possible and close monitoring to ensure that the issue really is pain and that the treatment is beneficial and is not causing significant adverse effects.

Clarifying Patient Expectations and Pain Management Goals

Based on the comprehensive pain assessment (*see* Step 1 through Step 4), the IPT (including the medical practitioners) identifies, reviews, and updates patient goals as a foundation for the pain management plan. Goals for pain management should be based on shared decision making with the patient or legally authorized representative. Pain management should, to the extent possible, address relevant physical, functional, psychological, social, emotional, and spiritual aspects of pain. Complete pain relief is only sometimes feasible, mostly for reversible causes of acute or occasional intermittent pain.[40]

TABLE 17

Factors That May Influence Pain Management

- Overall medical condition and prognosis
- Characteristics of pain and its underlying causes and contributing factors
- Extent to which underlying causes can be addressed
- Patient's preferences, wishes, values, and goals for pain management, including what constitutes an acceptable pain level (either obtained directly or via discussion with a legally authorized representative)
- Optimal or highest level of function anticipated
- Possible adverse effects and interactions involving pain treatments (primarily analgesics)
- Other medications in the current medication regimen
- Underlying conditions that may influence treatment decisions (e.g., chronic kidney disease)
- Preferred route of medication administration
- Availability of various treatment options
- Cost of various treatment options

Patients can reasonably expect that all feasible and reasonable efforts will be made to address pain. However, practitioners are not obliged to order inappropriate, ineffective, or problematic treatment. Table 18 provides examples of potentially attainable pain management goals.

Document the basis for conclusions about whether expectations can be met and treatment requests are pertinent (e.g., the underlying cause is progressing; the requested medication is not indicated for the underlying cause, has not been effective in the past, poses a high risk of major adverse effects for this patient). In some cases, a second opinion (e.g., pain consultation) may be helpful.

TABLE 18

Examples of Potentially Attainable Pain Management Goals

Pain Type	Goal
Acute pain (including postoperative pain)	■ Reduce the intensity and duration of pain while simultaneously addressing underlying causes, to the extent possible
Chronic pain	■ Optimize function and quality of life by reducing the intensity, frequency, and/or duration of pain as much as possible ■ No more than 2 episodes of breakthrough pain daily ■ Breakthrough pain is reduced by at least 50 percent within an hour of taking PRN medication ■ No more than moderate and intermittent pain ■ Minimal and tolerable adverse effects of treatment ■ Walk to the bathroom without pain ■ Participate in favorite activities with no more than moderate pain ■ Avoid opioids
Significant cancer-related pain or when death is imminent	■ Relieve pain to attain the greatest possible comfort with the lowest side-effect burden that the patient deems acceptable ■ Reduce pain intensity to no more than level 5 at rest and 7 with activity ■ Sleep for at least 4 hours straight without being awakened by severe pain ■ Die comfortably

Levels of Pain Management

Several stepwise approaches to analgesic prescribing have been developed. The WHO Pain Ladder, developed in the 1980s for managing cancer-related pain, identifies the following stepwise approach, based primarily on pain severity:

- **Step 1:** Non-opioid analgesics for mild pain
- **Step 2:** Low-potency opioids (e.g., hydrocodone, morphine) for moderate pain
- **Step 3:** High-potency opioids (e.g., hydromorphone, oxycodone) for severe pain
- Adjunctive medications (adjuvants) as indicated at any step

Over time, the WHO Pain Ladder has been widely extrapolated to apply to all pain management. However, the relevance of this approach for situations other than significant cancer-related pain and true end-of-life pain has been challenged.

For example, the WHO analgesic ladder is not strictly applicable to managing acute or chronic joint pain.[41] [42] In neuropathic pain and other non-cancer–related chronic pain, severity alone should not drive treatment selection. Instead, nonpharmacological therapy and non-opioid pharmacological treatment is generally recommended as the first-line approach.[19]

Postoperative pain management will vary widely depending on the type of surgery, underlying conditions, complications, and patient goals and may range from nonpharmacological interventions only to more-frequent or prolonged use of either a low- or higher-potency opioid.

Table 19 summarizes the discussions in this CPG about incremental approaches for managing various categories of pain. Level 1 represents the starting point, and subsequent levels of treatment may either add to or replace lower-level interventions, depending on multiple factors, including but not limited to pain severity.

Implications: Effective pain management plans involve several simultaneous interventions and are about more than just treating the symptom. Pain severity is only one of several key considerations to guide the selection of interventions.

TABLE 19

Levels of Pain Management

Pain Type	Level 1	Level 2*	Level 3*	Level 4*
	■ Intermittent or occasional pain ■ Minimal or occasional impact on function ■ Low to moderate intensity	■ Frequent or continuous pain ■ Frequent but not continuous impact on function ■ Moderate to high intensity	■ Continuous and/or high intensity pain with major adverse impact on function	■ Not resolving sufficiently with standard treatment options
Acute (including postoperative) pain	Non-pharm Topical (if localized) Non-opioid	Adjunctive SA/LP opioid	LA/LP opioid	LA/HP opioid
Chronic non-cancer–related pain	Non-pharm Topical (if localized) Non-opioid Behavioral	Adjunctive Behavioral	SA/LP opioid	LA/LP opioid Other
Chronic cancer-related pain/ end-of-life pain	Non-opioid Non-pharm Adjunctive Behavioral	SA/LP opioid	SA/HP opioid	LA/HP opioid Other
Neuropathic pain	Non-pharm Topical Adjunctive (e.g., SNRI) Behavioral	Adjunctive (e.g., GPD, TCA) Topical-additional	SA/LP opioid	LA/HP opioid Other

* Add to, or replace, previous level of interventions

Adjunctive: adjuvant medication; Behavioral: behavioral interventions; GPD: gabapentinoid; Non-opioid: non-opioid analgesic; Non-pharm: nonpharmacological interventions; Other: specialized approaches and procedures; Opioid: opioid analgesic; SNRI: serotonin and norepinephrine reuptake inhibitor; TCA: tricyclic antidepressant; Topical: topical treatment; HP: high potency; LP: low potency; LA: long-acting; SA: short-acting

STEP 6 — Manage specific pain situations

QUESTION 13: What are additional considerations for pain management in specific situations?

SPECIFIC PAIN MANAGEMENT SITUATIONS

Certain situations require tailoring general pain management approaches, including

- Acute pain (including postoperative pain)
- Chronic (persistent) pain (cancer- and non-cancer–related)
- End-of-life pain

Patients in the PALTC setting are likely to have pain in several of these categories simultaneously.

For all of the following situations, select analgesics and nonpharmacological interventions based on the factors covered in **Step 5**. To the extent possible, begin and continue with nonpharmacological interventions (*see* **Table 23**). *See* **Table 24**, **Table 25**, and **Table 28** for specific medication options.

Acute Pain (Including Postoperative Pain)

Manage acute pain aggressively to alleviate the patient's acute distress while to the extent possible identifying and addressing underlying causes or waiting for them to resolve (e.g., antibiotics for cystitis, cholecystitis, or diverticulitis; anti-inflammatory medication for acute tendonitis or bursitis; ice or heat for back spasms or local trauma). When patients decline to have underlying causes investigated or treated (e.g., as part of a palliative care plan), treatment may be primarily symptomatic.

Postoperative Pain

Postoperative pain is a variety of acute pain with a specific identifiable underlying cause—namely, the mechanical disruption, reconstruction, or removal of body organs and tissues.

Both the preoperative evaluation of patients who are scheduled to undergo surgery and the post-admission evaluation of patients who have recently undergone surgery should consider factors relevant to managing postoperative pain (e.g., pain history, medical and psychiatric comorbidities, current medications).[43] It is advisable to discuss the postoperative pain treatment plan with the patient so that they understand and can provide input into treatment options. Where feasible, individualized education and support for patients undergoing surgery who have more-complicated pain management needs may be beneficial (e.g., by reducing postoperative opioid consumption).

After the immediate postoperative period (from several days to several weeks), identify whether continuing or new pain is related to the surgery, another cause, or both, especially if pain persists or recurs weeks or months after surgery (e.g., significant continuing hip pain 3 weeks after hip replacement surgery).

- **Options for Treating Postoperative Pain**

Optimal surgery-related pain management begins in the preoperative period and utilizes a multimodal approach.[44] Treat postoperative pain based on the kind of surgery, the location and characteristics of the pain, and the patient's goals, overall physical and psychological status, and coexisting medication regimen. Use nonpharmacological interventions (e.g., heat, ice, positioning, physical activity) and non-opioid analgesics as much as possible, as these are less likely to contribute to significant CNS side effects (e.g., anorexia, confusion, delirium, falls, sedation, somnolence) in the PALTC population, many of whom are older adults.

Acetaminophen or nonsteroidal anti-inflammatory drugs (NSAIDs) are often as effective as opioids for postoperative pain, especially after the immediate in-hospital postoperative period. These agents (e.g., acetaminophen 500 or 650 mg q8h orally as a standing dose, with the possible addition of ibuprofen 200–400 mg q8h PRN, if not contraindicated) may be more effective when combined with local treatments such as ice, heat, positioning, distraction, and other nonpharmacological modalities. These medications may also be effective in combination with opioids, allowing for reduced opioid doses.

When **opioids** are indicated in the immediate postoperative period, shorter-acting oral opioids are preferred, if feasible and adequate (e.g., hydrocodone/acetaminophen combinations). For more-severe or prolonged pain, other routes of administration are available, such as a patient-controlled analgesia pump.

It is increasingly being recommended that the use of postoperative opioids be limited to a few days and at most 1–2 weeks.[45,46] Often, after the immediate postoperative period, prescription opioids are not needed and go unused.[47] Even when patients require stronger analgesics for a longer period, lower or less-frequent analgesic doses may be possible.

Subsequent adjustments to the pain treatment regimen will depend on the progress of postoperative healing and the patient's responses to treatment, similar to the approach to treating nonoperative acute pain. If substantial pain persists after 2 weeks, a significant reevaluation is indicated to identify if the pain is related to the surgery itself, the condition that necessitated surgery, or something entirely unrelated.

Chronic Pain

Chronic pain—pain that persists for at least 3 months—can arise from diverse sites and causes. Often, a comprehensive approach and multiple interventions are indicated to treat chronic pain. It is desirable to conduct a thorough history and assessment for any chronic pain as the basis for selecting a multifaceted approach. However, it may be necessary to initiate empirical treatment before completing a thorough assessment.

Complete cessation of chronic pain is only occasionally possible. When complete pain resolution is unattainable, the objective is to attain the least possible pain with the greatest possible function and quality of life.

Treatment of chronic pain typically requires management of both baseline and breakthrough or incident pain. Common treatment options for chronic pain include (1) **nonpharmacological interventions**, (2) **analgesics**, and (3) **adjuvant medications and topical agents**.

Managing the underlying causes of chronic pain may reduce or possibly eliminate the need for analgesics.[48] Nonpharmacological interventions should be used as much as possible (*see* **Table 23**). In addition, various procedures and surgical interventions may be considered for chronic pain that has not responded to first- or second-line measures. The details of these options can be found in various references.[49]

Chronic Non-Cancer Pain

Chronic non-cancer pain includes any painful condition that persists for at least 3 months and is not associated with malignant disease. Patients with chronic non-cancer pain may also be subdivided further into those with and without serious underlying illness (e.g., major cardiac and pulmonary conditions).

- **Analgesics**

No specific category of analgesics is consistently effective in treating chronic non-cancer pain. A typical initial approach of nonpharmacological interventions plus some combination of standing and PRN acetaminophen or standing and PRN ibuprofen is often helpful for baseline and breakthrough somatic pain[48] and may occasionally be helpful for visceral pain. Patients with refractory persistent pain (e.g., back pain, diffuse bone pain, fibromyalgia, headache, temporomandibular disorder) may be candidates for adjunctive medications. Patients with localized non-neuropathic persistent pain may be candidates for topical NSAIDs, if not contraindicated.

Opioids (including tramadol) are sometimes beneficial when chronic pain does not respond adequately to nonpharmacological treatments and non-opioid analgesics—for example, as part of a palliative approach in patients with more advanced underlying illness. However, in general the evidence for the effectiveness of this class of medications in chronic non-cancer pain is very limited and their side effects are substantial (*see* **Pharmacological Options—Opioid** section).

Neuropathic Pain

As discussed previously (*see* **Table 16**), neuropathic pain arises from a disease of, or damage to, the central and/or peripheral somatosensory nervous system. Neuropathic pain typically requires a combination of treatment options, including nonpharmacological interventions (*see* **Table 22** and **Nonpharmacological Interventions** section), topical treatments, and oral medications. It may help to manage underlying causes to the extent possible, such as traumatic injuries, infections (e.g., herpes zoster), metabolic problems (e.g., Vitamin B12 deficiency, thyroid dysfunction, poorly controlled diabetes).

Patient responses to the treatment of neuropathic pain vary and are hard to predict. When a chosen medication is at least partially effective, it may be reasonable to increase the dose or add other medications to try to improve pain relief. However, a different approach may be warranted when these medications are only minimally effective despite increased doses, or are causing clinically significant side effects or interactions.

Topical Treatments

Local treatments (e.g., lidocaine, capsaicin) are sometimes effective. Additionally, cold packs, ice, heat, and lidocaine patches may help in selected cases. Other topical agents (e.g., capsaicin, menthol) may be considered for regional pain syndromes.

Medications

Based on mixed evidence of effectiveness and limited approved indications, three categories of adjuvant medications have been widely used to treat neuropathic pain: serotonin-norepinephrine

reuptake inhibitors (SNRIs; primarily duloxetine), tricyclic antidepressants (TCAs), and gabapentinoids (*see* **Table 25**). Anti-inflammatory agents (e.g., ibuprofen) may be helpful for traumatic injuries and inflammatory conditions.[50] As with other analgesics, they should be used cautiously in older adults.

- **Antidepressants**

Some evidence exists for the effectiveness of duloxetine for pain due to fibromyalgia and diabetic peripheral neuropathy. TCAs (e.g., amitriptyline, desipramine, nortriptyline) have also been used to treat neuropathy, with varying success. All of the tricyclics have potentially significant interactions and side effects (e.g., constipation, delirium, orthostasis, sedation, urinary retention) and must be prescribed in the proper context. Amitriptyline is not recommended for older adults.[51] For management of chronic pain following herpes zoster, appropriate antidepressants may be more effective than gabapentinoids.[52]

- **Gabapentinoids**

Gabapentinoids (e.g., carbamazepine, gabapentin, pregabalin) have been used extensively to treat neuropathic pain and sometimes for non-neuropathic pain. Both pregabalin and gabapentin are approved by the U.S. Food and Drug Administration (FDA) for post-herpetic neuralgia, defined as pain persisting at least 3 months after acute herpes zoster. However, no evidence supports their effectiveness for acute zoster pain. Pregabalin—but not gabapentin—is also approved for diabetic neuropathy, fibromyalgia, and pain related to spinal cord injury. Carbamazepine is often effective in treating pain due to trigeminal neuralgia.

Evidence is lacking for the effectiveness of gabapentinoid therapy for low-back pain or radiculopathy. The evidence to support treating nondiabetic neuropathies with gabapentinoids is scant. Evidence is mixed at best for the effectiveness of gabapentin in treating painful diabetic neuropathy.[53]

Complex Regional Pain Syndrome

Complex regional pain syndrome (CRPS), previously called reflex sympathetic dystrophy, is an uncommon but debilitating form of chronic pain that may develop after a stroke, surgery, injury, or heart attack. The pain is out of proportion to the severity of the initial injury. It usually affects an arm or a leg.[54]

Besides substantial pain in an affected arm or leg, early symptoms may include redness, swelling, skin temperature and color changes, joint stiffness, changes in hair and nail growth, weakness and atrophy, contractures, partial local loss of movement, and hypersensitivity to cold and touch. These symptoms may persist, worsen, or even spread to a previously unaffected limb. Symptoms may persist for months or years and eventually may either resolve or worsen.

Treatment that begins soon after the event (e.g., stroke, injury) is likely to be more effective than delayed treatment. Movement and physical therapy are important preventive measures after a stroke. Nonpharmacological options include heat to relieve swelling and discomfort, exercise and physical activity, and acupuncture. Nerve blocks (injection of an anesthetic to block pain fibers in the affected nerves) may relieve some patients' pain. Steroid medications (e.g., short-term oral prednisone) may reduce inflammation and improve mobility in the affected limb.

Oral NSAIDs may ease mild pain and inflammation. Some topical treatments (e.g., capsaicin cream, lidocaine cream or patches) may help to reduce hypersensitivity. Antidepressants and

anticonvulsants may help with accompanying neuropathic pain. Opioids may be tried if other measures fail to achieve adequate pain relief.

Chronic Cancer-Related (Malignant) Pain

While most people with cancer have at least some pain, cancer-related complications are diverse and vary from minimal to widespread with severe discomfort. Bone metastasis is a common cause of cancer-related pain. To some extent, the severity of cancer-related pain can be graded by the extent of its interference with function as well as its intensity. Patients with cancer may also have pain due to other causes.[55]

No single standard "cancer pain" treatment regimen exists. Instead, a regimen for cancer-related pain must be individualized and adjusted over time as the situation warrants. A regimen to control both background and breakthrough pain is often necessary.

Only some pain in patients with cancer requires or responds to opioids. For less-severe situations, acetaminophen and NSAIDs may provide partial or substantial relief. Opioids provide the best relief in more-advanced situations (e.g., advanced pancreatic cancer, widespread bony metastases from prostate cancer). Opioids may be combined with non-opioid analgesics.

When opioids are indicated, oral morphine is a commonly recommended first choice, although other opioids (e.g., hydromorphone, oxycodone) can also be effective (*see* **Table 28**).

Morphine can be administered in many forms (i.e., oral, sublingual, rectal, subcutaneous, intravenous, intramuscular, intrathecal). Parenteral or transdermal opioids (e.g., buprenorphine, fentanyl) may be indicated when oral opioids are not suitable (e.g., patient resistance, inability to swallow) and analgesic requirements are stable.[56] [57] [58] [59] [60]

End-of-Life Pain

At the end of life, when death is imminent (within days to weeks), medications plus various nonpharmacological interventions are the mainstays of pain treatment. Morphine is a common and typically effective choice, available in both short- and long-acting forms and multiple potential routes of administration. As with chronic cancer-related pain, other opioids may provide additional options. Nonpharmacological interventions and non-opioid analgesics may also be helpful.

When secondary effects such as terminal sedation and dyspnea management are relevant to a comfortable death, opioid analgesics in doses that produce those side effects may be desirable. However, because a patient is receiving palliative care or hospice services does not automatically imply that opioids are required for pain management or that the patient's pain will respond to opioids. If death is not imminent and the ultimate goal is the patient's comfort, it may still be desirable to relieve pain with pertinent nonpharmacological interventions and non-opioid medications, and to aim to cause the least amount of excess distress due to medication-related adverse effects.

Implications: Pain management approaches must be tailored to specific situations, based on adequate problem definition, pain classification, and cause identification. What works for one patient or situation may not apply or work as well for others. It is important to consider these variables and their implications before choosing, implementing, and subsequently adjusting the approaches

STEP 7 — Select and implement specific aspects of pain management

QUESTION 14: What are general considerations for prescribing analgesics?

INTERVENTIONS FOR PAIN MANAGEMENT

General Considerations for Analgesic Use

All analgesics have benefits and risks. The selection of analgesics should consider indications, effectiveness, safety, cost, side-effect profile, and flexibility. Table 20 identifies general principles for prescribing analgesics in the PALTC setting.

TABLE 20
General Analgesic Prescribing Principles in the PALTC Setting

- Follow the **Recognition and Assessment** and **Diagnosis and Interpretation** steps in this CPG to help determine the most appropriate treatment approach for pain.
- Consider indications, contraindications, drug–drug interactions, and evidence-based recommendations for each medication option.
- Select medication options that are most likely to optimize benefits and minimize risks.
- In determining the dosing interval, consider a medication's half-life along with factors (e.g., renal failure) that may affect its metabolism and excretion.
- Whenever possible, start with a low to moderate dose and titrate upward as indicated until an acceptable balance is achieved between pain relief and medication side effects.
- For more-severe or debilitating pain, it may be necessary to start with an intermediate or higher dose and titrate downward.
- Medications are often more effective when combined with nonpharmacological interventions.
- As indicated, adjusting the timing of medication administration may make a difference (e.g., a PRN analgesic dose may be more effective if given before the patient receives care that tends to exacerbate pain).
- Key parameters for monitoring the patient's response to analgesics over time are similar to those for monitoring all other symptoms (e.g., comparative frequency, intensity, duration, related patient function).
- Recognize that analgesics—both alone and in combination with other medications—are more likely to have clinically significant adverse consequences in older adults and should be prescribed with caution.[61]

Analgesics in Context

Analgesics must be prescribed in the proper context as they can affect, and be affected by, many medical conditions and many other medications in a patient's current regimen. They can cause adverse effects both independently and via interactions with other medications. For example:

- NSAIDs and bisphosphonates can cause severe gastric and esophageal erosion, either individually or when used together.
- Opioids can cause diverse adverse consequences, including abdominal pain due to severe constipation or ileus, delirium, falls, and psychiatric symptoms.
- Opioids taken together with benzodiazepines or gabapentin can increase the risk for serious or even fatal adverse consequences.
- All medications used to treat neuropathic pain have other dominant effects and side effects. For example, the addition of gabapentinoids to treat neuropathy in a patient who is already receiving anticonvulsants for other reasons (e.g., seizure disorder, bipolar disorder) may result in significant cumulative side effects due to the use of multiple anticonvulsants.

Route of Administration

In general, try to use the least invasive and most comfortable route of administration (starting with oral). Subcutaneous and intramuscular injections have disadvantages (e.g., greater discomfort, wider fluctuations in absorption, more-rapid attenuation of action) compared with oral administration. However, alternate routes (e.g., oral transmucosal, rectal, transdermal) may be needed for patients with pain who cannot or will not take oral medication or who have impaired gastrointestinal (GI) absorption.

QUESTION 15: What are the approaches to prescribing and administering PRN and standing doses of analgesics?

STANDING VERSUS PRN ANALGESIC ORDERS

Standing analgesic doses are given on a scheduled basis. After adjustments over time, standing analgesic doses should be consistently effective and should minimize the need for PRN doses.

PRN doses are offered or considered at specified intervals and given as needed, requested, or determined to be indicated, based on various criteria (e.g., for breakthrough or occasional pain, continuous pain that the patient only occasionally identifies as problematic, or when a patient appears to be resisting care because of discomfort).

Table 21 provides examples of the use of standing versus PRN analgesic doses in various pain situations.

TABLE 21

Use of Standing vs PRN Doses in Different Pain Categories

Category	PRN or Standing Dose
Acute pain (mild to moderate, intermittent)	PRN dosing may suffice (+/- nonpharmacological interventions) ***Example:*** Acetaminophen 650 mg q6h PRN
Acute pain (moderate or more severe, continuous)	May require a standing dose +/- supplemental PRN doses (plus nonpharmacological interventions) ***Examples:*** ■ Acetaminophen 650 mg q12h standing dose + 325 mg q8h PRN in between standing doses ■ Diclofenac 25 mg q12h standing dose + acetaminophen 325 mg q8h PRN in between standing doses of diclofenac ■ Hydrocodone/acetaminophen 5/325 mg q6h PRN or standing
Chronic non-cancer–related pain (mild to moderate, intermittent)	PRN dosing alone may suffice (+/- nonpharmacological interventions) ***Example:*** Acetaminophen 650 mg q8h PRN or alternate with ibuprofen 200 mg q6h PRN
Chronic non-cancer–related pain (more severe, frequent, or continuous)	May require a standing dose +/- supplemental PRN doses (+ nonpharmacological interventions) ***Examples:*** ■ Acetaminophen 650 mg q12h standing dose + 325 mg q8h PRN in between standing doses ■ Diclofenac 50 mg q12h standing dose + acetaminophen 325 mg q8h PRN in between standing doses of diclofenac
Chronic cancer-related pain (mild to moderate, intermittent)	May require a standing dose +/- supplemental PRN doses (+ nonpharmacological interventions) ***Examples:*** ■ Morphine sulfate ER 15 mg q12h standing dose + acetaminophen 650 mg q8h PRN in between standing doses of morphine sulfate ■ Morphine sulfate IR 20 mg/cc; give 0.25 cc (5 mg) sublingually every 2 hours PRN for breakthrough pain
Chronic cancer-related pain (more severe, frequent, or continuous)	Standing dose of an opioid with frequent supplemental PRN opioid doses (+ nonpharmacological interventions) ***Examples:*** ■ Morphine sulfate ER 15 mg q12h standing dose + Morphine sulfate IR 20 mg/cc; give 0.25 cc (5 mg) sublingually every 2 hours PRN for breakthrough pain ■ Hydromorphone 4 mg q6h standing dose +/- ibuprofen 400 mg q8h PRN in between standing doses of hydromorphone
Chronic pain – neuropathic/ fibromyalgia	Standing dose of a SNRI/TCA/gabapentinoid (+ nonpharmacological interventions) ***Example:*** Duloxetine 30 mg q12h
End-of-life pain	Standing dose of an opioid with frequent supplemental PRN opioid doses ***Example:*** Morphine sulfate ER 15 mg q12h standing dose + morphine sulfate-IR 2 mg q2h PRN

ER: extended release; IR: immediate release

TABLE CONTINUED

NOTE: The above examples may or may not be relevant to any specific patient. Medication selection may vary due to multiple factors, including a patient's age, comorbidities, and total medication regimen. Strengths may vary by manufacturer and brand. Medical practitioners should familiarize themselves with prescribing information and individualize their approaches.

See Table 24, Table 25, *and* Table 28 *for additional medication options.*

Guiding Staff in Selecting PRN Medications

PRN medications may be effective in managing breakthrough pain when the patient is able to express the need for additional medication and a nurse is able to evaluate the patient's pain. On the other hand, when a patient cannot effectively express or describe pain or request a specific medication, a brief but focused nursing assessment is essential to determine whether to administer PRN medication and which one to give (if several options are ordered) at a particular time. Giving PRN analgesics based on guesswork may limit the benefits and increase the risk of harm.

Orders for PRN analgesics need to be clear and specific about the location and type of pain that they are intended to treat. Details may need to be integrated into the patient's interdisciplinary care plan. When several options for administering analgesics are ordered for a patient, nursing staff need adequately detailed guidance concerning how and when to select a PRN medication from among the several options that have been ordered. If nurses are not available to assess pain and determine the need for PRN medication (e.g., in assisted living or other settings), treatment should focus on routine dosing and careful follow-up to be certain that pain is optimally managed.

A decision about whether to give a PRN opioid dose usually requires a substantially more-detailed assessment than simply a measurement of the severity of the patient's pain (i.e., a numeric result on a pain scale). Consider, for example, a patient with chronic musculoskeletal pain and cancer for whom both acetaminophen PRN and hydromorphone PRN are ordered for pain. This patient would likely warrant either acetaminophen or a topical or nonpharmacological intervention rather than an opioid for musculoskeletal pain. Nurses should be advised against automatically giving the most potent opioid analgesic available from among several options instead of performing an adequate assessment of the patient.

As another example, for a patient with a headache, first try nonpharmacological interventions (e.g., lower the lights and play music). If pain has not subsided after 30 minutes, apply cool menthol pads on both temples. If pain persists after another 30 minutes, give acetaminophen 650 mg and repeat if needed in another 30 minutes.

Switching from PRN to Standing Doses

It is commonly recommended that a PRN analgesic be changed to a standing order when the patient frequently requests or receives PRN analgesics. However, this is applicable only occasionally. Increasing doses of an ineffective medication may cause adverse consequences while not providing additional relief.

Table 22 identifies some of the distinctly different reasons for frequent or increasing PRN analgesic use. In all but the most straightforward situations, before switching PRN analgesics to a standing dose, consider whether the current PRN medications have been at least somewhat effective and are indicated for the condition for which they are being used. If not, consider switching to a different PRN or standing medication.

TABLE 22

Possible Reasons for Frequent PRN Analgesic Use

- Current analgesic dose or frequency is appropriate but is effective only for a limited time
- Current medication regimen is ineffective or not indicated for the condition (e.g., opioids for fibromyalgia or chronic low-back pain, acetaminophen for inflammation)
- Overall pain management approach is inadequate or otherwise problematic
- Cause of pain is not treatable or has not been identified correctly
- Patient may have a drug-seeking issue

SPECIFIC OPTIONS FOR PAIN MANAGEMENT

Options for pain management can be divided into nonpharmacological and pharmacological interventions for all types and categories of pain.

Nonpharmacological Interventions

Nonpharmacological interventions have a role both independently and in conjunction with pharmacotherapy. Table 23 provides examples of nonpharmacological interventions for pain.

Evidence for the effectiveness of nonpharmacological pain interventions is limited and variable. Most of these modalities require some active patient participation, which should be strongly encouraged to the extent possible instead of relying solely on medications. In the PALTC population, cognitive impairment as well as medical comorbidities and problems such as confusion and lethargy may limit the potential applicability of some nonpharmacological interventions.

Combined interventions may be more effective than any single approach for maintaining long-term gains and may help to reduce the need for medications. For example, where appropriate, behavioral interventions can be combined with topical analgesics.[62]

- **Exercise and Movement**

Along with CBT, exercise has some evidence for improving pain severity, physical function, and quality of life.[63] Structured exercise can include walking, yoga, tai chi, motor-control exercise, and progressive relaxation. Stretching can improve function and reduce symptoms due to chronic low-back pain. Strengthening exercises may be helpful for painful joints, extremities, and trunk muscles. Physical therapy demonstrates small to moderate effects on pain and disability, and some benefit for anxiety, depression, and quality of life. Both exercise and movement may be particularly beneficial in preventing and treating CRPS.

Implications: There are both pharmacological and nonpharmacological options for managing pain. Optimal pain management typically involves an individualized combination of these options. What works for one patient or situation may not apply or work as well for others. It is important to select approaches systematically, based on the details obtained and analyses performed by following the steps in this CPG.

TABLE 23
Nonpharmacological Interventions for Pain

Category	Examples
Exercise therapy	■ Motor control, stretching, aerobic exercise ■ Tai chi, yoga
Psychoeducational interventions	■ Cognitive behavioral therapy ■ Family therapy ■ Psychotherapy ■ Patient education ■ Psychosocial support groups
Mind-body therapies	■ Mindfulness-based stress reduction ■ Meditation ■ Relaxation techniques (e.g., aromatherapy, therapeutic massage, music, deep-breathing exercises, guided imagery)
Physical interventions	■ Physical therapy ■ Transcutaneous electrical nerve stimulation ■ Heat or cold ■ Therapeutic massage ■ Acupuncture; acupressure; fascial techniques ■ Chiropractic manipulation ■ Repositioning ■ Aromatherapy ■ Hydrotherapy
Miscellaneous	■ Services of a chaplain or pastoral counselor ■ Special equipment (e.g., comfortable pillows, air-circulating beds) ■ Pet therapy, art therapy, music therapy

Among nonpharmacological interventions for the treatment of chronic pain, cognitive behavioral therapy (CBT)[64] and exercise and movement have the strongest evidence of effectiveness.

- **Cognitive Behavioral Therapy**

CBT for pain differs somewhat from CBT for anxiety, depression, and insomnia. It addresses the interaction between thoughts and behavior. It can help to address unhelpful attitudes, beliefs, and thoughts (e.g., "It will never get better," "This pain will never go away") or excessive fear that movement or activity will worsen pain. As with other psychoeducational interventions (e.g., behavioral skill training), CBT requires that patients be able to gain insight into triggers for their pain and stress as well as their emotional, behavioral, and physical reactions to pain and stress. This requirement may limit its applicability in PALTC patients.

STEP 8 — Prescribe and monitor analgesics prudently

QUESTION 16: What are the pharmacological options for managing pain?

Pharmacological options include topical medications and oral and parenteral medications. Some medications are adjunctive (i.e., they are not primarily analgesics but may have some analgesic effects). Medications can be further divided into opioid and non-opioid analgesics.[65]

Table 24 (non-opioid analgesics), Table 25 (adjuvant medications), and Table 28 (opioid analgesics) list key pharmacological options that are relevant to patients in the PALTC setting (e.g., available dosage strengths, recommended starting and maximum dosages). Because it is not possible to cover all relevant details about medications in this CPG, all medical practitioners and other key facility staff and consultants should seek additional information from reliable sources. It is generally quick, easy, and usually free to look up the indications, contraindications, precautions, interactions, warnings, and dosing options for all medications online and in other published references (e.g., search by medication name within https://reference.medscape.com/).

Pharmacological Interventions–Topical

Topical analgesics include topical NSAIDs, counterirritants, topical anesthetics, and combination agents, as well as compounded topical products with ingredients such as DMSO (dimethyl sulfoxide) and ketamine.

To the extent possible, consider topical medications—either as primary or as an adjunct to oral medications—to treat localized somatic (e.g., musculoskeletal) pain or neuropathic pain. Their effectiveness will depend on the source of pain and the degree of penetration of the topical substance. Topical medications should generally be used on intact skin, as the active substance may be excessively absorbed through damaged skin.

Topical NSAIDs

Topical NSAIDs (e.g., diclofenac, salicylate derivatives) appear to be safe and potentially effective for short-term treatment (i.e., up to 4 weeks). In some situations, topical NSAIDs may be as effective as oral NSAIDs.[66] Overall, topical NSAIDs have fewer side effects than oral NSAIDs. A small fraction of a topical NSAID's dose may be absorbed and potentially have systemic effects.

Topical NSAIDs should generally be avoided if a patient is also receiving aspirin or other oral NSAIDs because the combination may increase the risk of cardiovascular, GI, and renal adverse effects that are known to be associated with NSAIDs and aspirin. Topical NSAIDs are contraindicated if a patient has had previous reactions to aspirin or NSAIDs (e.g., anaphylaxis, asthma, hives).

Topical Anesthetics

Topical anesthetic preparations can be useful for dermal and mucosal lesions, although application to damaged skin may increase systemic absorption. Commonly used topical anesthetics include lidocaine and counterirritants.

- **Lidocaine Gel or Patch**

Topical lidocaine is FDA approved only for the relief of pain associated with post-herpetic neuralgia. However, it is used empirically for many varieties of localized somatic pain, often with questionable effectiveness. Some patients with localized neuropathic or non-neuropathic pain may benefit empirically from topical lidocaine. Penetration may be insufficient for deep joint pain. The patch provides more predictable and sustained relief than the gel.

While it is generally considered safe, lidocaine is somewhat absorbed and may cause side effects.[67] The amount of lidocaine that is systemically absorbed is directly related to both the duration of application and the surface area over which it is applied.[68] To avoid local skin reactions, lidocaine patches should not be left on the skin for more than 12 hours at a time. Reconsider the continuing use of a lidocaine patch periodically; e.g., by reviewing and comparing the impact on the patient's pain of going several days without using the patch.

- **Counterirritants**

Counterirritants excite and desensitize nociceptive sensory neurons. They may be effective for mild pain but are generally not indicated for moderate to severe pain. They can help by giving patients the perception that something is being done and they can be added to most treatment regimens. Examples include capsaicin, camphor, and menthol, used individually or combined in a single product.

Capsaicin is an alkaloid derived from chili peppers (dosage strengths 0.025% or 0.075%). It appears to work by stimulating receptors that may cause initial pain (e.g., a burning sensation), followed by pain relief resulting from a reduction in the activity of other nociceptive nerve endings. However, care must be taken to avoid getting capsaicin in the eyes. The wraps can cause blistering and must be used carefully and as directed. Capsaicin may be used in combination with menthol to try to minimize the discomfort associated with capsaicin.

Pharmacological Interventions–Non-Opioid

Acetaminophen

Acetaminophen is a useful and frequently—although not universally—effective analgesic for a variety of pain situations.

- **Potential Applications**

For individuals without contraindications (e.g., significant liver disease), acetaminophen is a reasonable first-line analgesic for acute pain (e.g., uncomplicated headache), postoperative pain, and for initial and long-term treatment of chronic pain. It can be helpful for both somatic (e.g., musculoskeletal or joint pain) and visceral pain; and for nonspecific or generalized pain ("hurts all over") complaints other than fibromyalgia.[69] Because it lacks anti-inflammatory properties, acetaminophen may provide minimal, if any, relief in inflammatory conditions (e.g., tendonitis, bursitis, gout).

Although it is typically recommended only for mild to moderate pain, acetaminophen may sometimes be at least partially helpful for more-severe pain, depending on the cause. Even when it is only partially effective, its use as a baseline treatment can potentiate the effects of opioids and may reduce the need for higher-risk medications, including opioids.

A trial of acetaminophen may be considered in patients with dementia who display agitation as a possible indicator of pain, after or while ruling out other possible causes of these symptoms. Conclusions differ as to whether acetaminophen trials affect behavior, well-being, or psychopharmacological medication use.[70] [71] [72]

- **Dosing of Acetaminophen**

For mild to moderate acute and chronic pain, start with a relatively low dose (e.g., 500–650 mg q8–12h PRN or standing) and increase as needed to provide relief (**Table 24**). For more-severe pain (e.g., flare-up of osteoarthritis, painful arm bruise from a fall), start with a higher or more-frequent dose if not contraindicated. Intravenous acetaminophen is an alternative (e.g., postoperatively). Rectal suppositories are also available.

Generally—and especially for older adults—do not exceed a combined standing and PRN dose from all sources of 3000 mg/day (2000 mg/day for individuals with impaired or at-risk liver function). In calculating total daily exposure, keep in mind that acetaminophen is a part of several medication combinations (e.g., hydrocodone/acetaminophen).

- **Challenges of Acetaminophen**

Liver failure is the main contraindication to the use of acetaminophen; hepatic insufficiency may be (but is not necessarily) a relative contraindication. Periodic monitoring of liver function is advised for those at risk and those who consistently take a higher daily dose (above 2500 mg/day). The risk of hepatotoxicity may increase in patients who also receive other medications that can affect liver function (e.g., anticonvulsants, statins).[73]

Nonsteroidal Anti-Inflammatory Drugs

- **Potential Applications**

If acetaminophen fails to adequately relieve acute, postoperative, or chronic pain, or if the patient's pain is related to an acute or chronic inflammatory condition, a trial of nonselective NSAIDs or cyclo-oxygenase 2 (COX-2) selective inhibitors may be indicated. Patients may benefit from trials of different NSAIDs to achieve a satisfactory combination of symptom relief and tolerable adverse effects. Although acetylsalicylic acid (aspirin) has analgesic effects, it is rarely used routinely for acute pain and is not recommended for long-term pain treatment.

NSAIDs are best for acute inflammatory or traumatic conditions (e.g., acute fracture, gout, sprain) rather than for generalized or somatic pain. NSAIDs are only modestly superior to acetaminophen for patients with osteoarthritis pain at rest, at night, or after activity. Combining acetaminophen with an NSAID may allow for a lower dose of both medications, may be more effective than either medication alone, and may be an alternative to opioid analgesics for moderate to severe acute pain. NSAIDs may also relieve short-term low-back pain.

To the extent possible, NSAID orders for acute pain should be limited to approximately 7 to 10 days or discontinued sooner if indicated or if the patient experiences clinically significant adverse effects. For chronic pain, NSAIDs may be appropriate if other, less-problematic therapies have failed or are only partially effective or if assessment suggests that the therapeutic benefits outweigh the risk of complications.

- **Dosing of NSAIDs**

NSAIDs come in different versions (e.g., naproxen, meloxicam) and both short-acting and long-acting forms. Dosing depends on the specific version or brand (*see* **Table 24**).

- **Challenges of NSAIDs**

- NSAIDs carry a significant risk of GI, cardiac, and renal complications, as well as drug interactions. Absolute contraindications include current active peptic ulcer disease, chronic kidney disease, and heart failure. Relative contraindications and cautions include hypertension, a history of peptic ulcer disease, and concurrent use of corticosteroids or selective serotonin reuptake inhibitors (SSRIs).
- Both selective and nonselective NSAIDs increase the risk of cardiovascular complications, especially with prolonged use and in people who have heart disease. Minimize the long-term use of full-dose, longer half-life, nonselective NSAIDs such as naproxen.
- NSAIDs may cause ulcers and GI bleeding at any time during treatment. Risk factors that increase the likelihood of GI bleeding include age over 75, female sex, a history of prior GI events or cardiovascular disease, rheumatoid arthritis, and concomitant use of corticosteroids or anticoagulants.[74]
- In patients who are receiving anticoagulant therapy, limit NSAID use, or avoid long-term use, or monitor platelets and watch closely for signs of bleeding.
- In patients who are taking aspirin for cardiovascular protection, avoid NSAIDs due to an increased risk of GI bleeding and interference with aspirin's antiplatelet effects. Alternatively, if feasible, substitute a different antiplatelet agent for aspirin.
- Patients should not take more than one nonselective NSAID or selective COX-2 inhibitor at a time for pain control.
- In older adults, avoid chronic NSAID use unless other alternatives are not effective and the patient can take a gastroprotective agent (e.g., proton pump inhibitor, misoprostol).[51]
- In patients with chronic kidney disease (creatinine clearance less than 30 mL/min/1.73 m^2), avoid NSAIDs or use them only for the short term (i.e., up to 4 weeks).
- Periodically assess all patients who are taking nonselective NSAIDs and COX-2 selective inhibitors for GI and renal toxicity, hypertension, heart failure, and drug–drug and drug–disease interactions.[75]

Other Anti-Inflammatory Medications

Corticosteroids may help acute pain that is due to swelling or major irritation or inflammation (e.g., shoulder pain due to joint damage, back pain due to nerve-root compression). Long-term systemic corticosteroids should be reserved for patients with major pain-associated inflammatory disorders or metastatic bone pain. Osteoarthritis should not be considered an inflammatory disorder.

Dexamethasone is a preferred medication for metastatic cancer-related bone pain. It is the most potent steroid, with a longer half-life than other steroids.

Pharmacological Interventions–Adjuvant Medications

Antidepressants

- **Potential Applications**

Several SNRIs may help with chronic pain management. Duloxetine may be effective for fibromyalgia and for pain due to diabetic peripheral neuropathy. Venlafaxine and desvenlafaxine are also sometimes used for chronic neuropathic pain, but with less evidence of overall effectiveness. Milnacipran and levomilnacipran are approved treatments for fibromyalgia.

TCAs (e.g., amitriptyline, desipramine, doxepin, imipramine, nortriptyline) are sometimes used to treat neuropathic pain and chronic headaches. These medications should be used cautiously because of their higher risk of adverse effects (e.g., anticholinergic effects, cognitive impairment).

If this category of medication is indicated, nortriptyline and desipramine are preferred over amitriptyline and imipramine in older adults. Amitriptyline should be avoided entirely in older adults. Therapy should begin with the lowest possible dose and increase slowly based on response and side effects.[51] [76] [77] [78]

- **Dosing of Antidepressants**

Dosing will depend on multiple factors, including the antidepressant that is being used, current active diagnoses, and the total current medication regimen (**Table 25**).

- **Challenges of Antidepressants**

All antidepressants used to treat pain have significant psychiatric and behavioral effects and various side effects. They must be used cautiously, especially when a patient is already receiving an antidepressant or other psychopharmacological medications for other reasons. For example, a patient who has depression as well as neuropathic pain may benefit from receiving duloxetine to treat both conditions simultaneously. However, if a patient with depression is already receiving a different antidepressant, the addition of duloxetine must be done with caution; it may be necessary to reduce or replace the other antidepressant and adjust doses of other medications (e.g., buspirone, opioids, trazodone) in the current regimen to avoid possible adverse effects from the combination (e.g., cardiac conduction abnormalities, serotonin syndrome).

Anticonvulsants (Including Gabapentinoids)

- **Potential Applications**

Anticonvulsants are widely used to treat neuropathic pain and sometimes used to treat nonspecific generalized or localized somatic pain. Individual anticonvulsants have specific approved indications. Evidence for the effectiveness of anticonvulsants in treating generalized or other forms of pain beyond their approved indications or in other situations (e.g., musculoskeletal and joint pain) is very limited and conflicting.

Valproate may be helpful in patients with migraine. Carbamazepine may help to treat pain due to trigeminal neuralgia. Lamotrigine may be helpful in treating HIV-related neuropathy and central post-stroke pain.[50] Pain-related indications for pregabalin include post-herpetic neuralgia, neuropathic pain associated with diabetes or spinal cord injury, and fibromyalgia.[79]

Gabapentin may provide pain relief to some individuals with post-herpetic neuralgia and peripheral diabetic neuropathy, although its only FDA-approved pain-related indication is for the treatment of post-herpetic neuralgia. Around 3 or 4 out of 10 individuals on higher doses of gabapentin (e.g., 1800–3600 mg/day) may achieve at least a 50% reduction in pain intensity, compared with 1 or 2 out of 10 for placebo. However, these doses pose a substantial risk for major side effects. More than half of those treated with gabapentin will not obtain worthwhile pain relief but may experience adverse effects.[53]

- **Dosing of Anticonvulsants**

Dosing will depend on multiple factors, including the chosen medication and other current medications (*see* **Table 25**).

- **Challenges of Anticonvulsants (Including Gabapentinoids)**

As noted earlier, all anticonvulsants have substantial interactions and adverse effects (e.g., dizziness, somnolence, behavioral and psychiatric symptoms). This is of particular concern in patients who receive anticonvulsants for additional reasons (e.g., seizures, behavior) and/or other psychopharmacological medications. Anticonvulsants added for pain management can readily interact or interfere with the effects of other medications (e.g., antidepressants). Also, anticonvulsants can cause hepatotoxicity and bone marrow suppression.[80]

Anticonvulsants must be prescribed cautiously and always with close attention to interactions and side effects. There should be clear evidence of significant effectiveness and minimal side effects to warrant their use and before increasing doses or adding more anticonvulsants.[81] For example, carbamazepine is not a simple analgesic and should not be used to relieve minor aches and pains (Medscape Drugs & Diseases. Carbamazepine [Rx]. **https://reference.medscape.com/drug/tegretol-xr-equetro-carbamazepine-343005**). In addition, the simultaneous use of gabapentin and opioids may increase the risk of death.[82] In 2019, the FDA issued a warning about the potential of gabapentin alone for dependency, abuse, and respiratory depression.[83]

Muscle Relaxants

Skeletal muscle relaxants are sometimes effective as an adjunctive treatment for pain due to muscle spasms. Their effectiveness in low back pain is questionable.[84] Some of these medications act centrally and may be helpful in spasticity due to spinal cord injury, while others act peripherally at the neuromuscular junction and may be preferred for other types of spasticity. Spasticity is sometimes due to both central and peripheral nervous system factors.

- **Potential Applications**

- Cyclobenzaprine is the best-studied muscle relaxant in musculoskeletal disorders, and may help in fibromyalgia.
- Lioresal may help with pain due to spasticity (e.g., in patients with multiple sclerosis).
- Tizanidine, carisoprodol, dantrolene, methocarbamol, chlorzoxazone, and orphenadrine are other options to treat muscle spasms.
- Diazepam may have potential applications as an antispasmodic in limited situations.
- Overall, baclofen, tizanidine, and cyclobenzaprine may be preferred over other options.

- **Dosing of Muscle Relaxants**

Prescribing muscle relaxants should be consistent with prescribing information concerning dosing, warnings, adverse effects, and interactions. Muscle relaxants should be prescribed at the lowest possible doses and for the briefest possible duration and combined with nonpharmacological interventions whenever feasible. Acute spasticity may require larger and more-frequent doses, at least temporarily.

Because of limited effectiveness and additive risks, it is prudent to discontinue an ineffective muscle relaxant and try alternatives instead of giving multiple antispasmodics simultaneously. However, in some patients with chronic spasticity due to an irreversible cause (e.g., post-stroke, multiple sclerosis), more prolonged use of one or more antispasmodics may be helpful.

- **Challenges of Muscle Relaxants**

Especially, but not solely, in older adults, all muscle relaxants may carry significant side effects, including blurred vision, cognitive impairment, delirium, dizziness, falls, headache, mood changes, nausea, sedation, and vomiting. In individuals with dementia, they may cause agitation and other psychiatric symptoms. These adverse effects are often exacerbated by other current medications with similar effects and risks.

All of these medications should be used judiciously and patients should be monitored closely for effectiveness and adverse effects. In addition to striving to use the lowest possible doses, periodic trials of attempted reduction or discontinuation are appropriate in many instances.

Diazepam has a very long half-life and many psychiatric and behavioral side effects (e.g., aggression, disinhibition, hallucinations). It should generally be avoided in older adults.

In 2012, the U.S. Drug Enforcement Administration reclassified carisoprodol as a controlled substance because of its potential for abuse and dependency. It should be used with caution due to limited effectiveness, abuse potential, and risk for accumulation of active metabolites.

Cannabinoids

- **Potential Applications**

At this time, evidence that cannabinoids effectively manage chronic pain is evolving and remains inconclusive.[85] Only a few cannabinoids have high-quality evidence to support their use and are FDA-approved for medicinal use.[86] Although medical use of cannabinoids has expanded, it is still limited by current legal restrictions on its prescribing and use.

Most studies of the effectiveness of cannabinoids (i.e., dronabinol, nabilone, medical marijuana) for pain are for neuropathic pain, with relatively few high-quality studies examining other types of pain. It is also challenging to compare claims or apply results, as various studies look at different forms of cannabinoids such as extracts or oils.[87]

- **Challenges of Cannabinoids**

Large numbers of patients must receive treatment with cannabinoids for a few to benefit, while not many need to receive treatment to result in harm.[88] Both acute and chronic cannabis use may be associated with impaired cognition and diverse psychiatric side effects. Given the questionable effectiveness, product availability, and limitations of related studies about cannabinoid use in managing pain, clinicians must be on high alert to avoid replacing or exacerbating the opioid problem with a cannabis problem.[89]

TABLE 24

Dosing Information for Commonly Used Non-Opioid Analgesics

Compound	Strengths	Typical Dose Ranges and Dosing Interval
Acetaminophen – oral, rectal	325 mg, 500 mg, 650 mg	Starting dose: 325–500 mg q4h or 500–650 mg q6h Maximum dose: 3000 mg/24 h (dosing q4–8h)
Acetaminophen – intravenous	10 mg/mL IV solution	Less than 50 kg: 15 mg/kg q6h or 12.5 mg/kg q4h (max 75 mg/kg/day up to 3750 mg) 50 kg or more: 1000 mg q6h or 650 mg q4h (max 4000 mg/day)
Etodolac – generic	IR: 200 mg, 300 mg caps; 400 mg, 500 mg tabs ER: 400 mg, 500 mg, 600 mg tabs	IR: 200 mg–400 mg q6–8h (max 1000 mg/day) ER: 400 mg–1000 mg 1x/day (max 1200 mg/day)
Ibuprofen	100, 200, 400, 600, 800 mg tabs/caps 100 mg/5 ml oral suspension	200 mg 3x/day (max 3200 mg/24 h) Dosing every 6–8 h
Naproxen – generic	IR: 250, 375, 500 mg tabs Delayed release: 375, 500 mg enteric-coated tabs 25 mg/mL oral suspension	Starting dose: 250 mg 2x/day 250 mg q6–8h or 500 mg q12h (max 1250 mg/day 1, then 1000 mg/day)
Naproxen sodium	220 mg, 275 mg, 550 mg tabs	Starting dose: 220 mg 2x/day 275 mg q6–8h or 550 mg q12h (max 1375 mg/day 1, then 1100 mg/day)
Diclofenac	50 mg tabs	50 mg q8–12h (max 200 mg/day)
Choline magnesium trisalicylate	500 mg, 750 mg, 1000 mg tabs 500 mg/5 mL oral solution	Starting dose: 500–750 mg q8h (long half-life may allow daily or 2x/day dosing after steady state is reached) Maximum dose: 3000 mg/24 h (dosing q8–12 h)
Meloxicam – generic	7.5, 15 mg tabs; 7.5 mg/5 mL PO susp	Starting dose: 7.5 mg/day (7.5–15 mg 1x/day) Maximum dose: 15 mg/day Not recommended if CrCl is 20 mL/min or lower
Diflunisal	250 mg, 500 mg tabs	500 mg q8–12h (max 1500 mg/day)
Celecoxib	50 mg, 100 mg, 200 mg, 400 mg caps	Starting dose: 100 mg/day Maximum dose: 400 mg/24 h Acute pain: 400 mg once, then 200 mg q12h

CrCl: creatinine clearance; ER: extended release; IR: immediate release

NOTE: Dose ranges are approximate, and starting and maximum doses may vary due to multiple factors, including a patient's age, comorbidities, and total medication regimen. Strengths may vary by manufacturer and brand. Medical practitioners should familiarize themselves with prescribing information and individualize their approaches.

Sources: Medical Letter, 2019[90]; NEJM Knowledge+ Team[91]; Medscape Drugs & Diseases[92]

TABLE 25

Dosing Information for Adjuvant Medications Commonly Used to Treat Pain

Compound	Strengths	Typical Dose Ranges and Dosing Interval
Serotonin and norepinephrine reuptake inhibitors (SNRIs)		
Duloxetine – generic	20 mg, 30 mg, 60 mg delayed-release caps	30–120 mg daily
Venlafaxine – generic	25 mg, 37.5 mg, 75 mg, 150 mg tabs/caps 225 mg tabs	75–375 mg/day in divided doses
Venlafaxine extended release – generic	25 mg, 37.5 mg, 50 mg, 75 mg, 100 mg tabs	75–150 mg 1x/day
Milnacipran	12.5 mg, 25 mg, 50 mg, 100 mg tabs	50 mg 2x/day (max 200 mg/day)
Tricyclic antidepressants		
Nortriptyline – generic	10 mg, 25 mg, 50 mg, 75 mg caps 10 mg/5 mL PO solution	75 mg 1x/day or divided
Imipramine HCl – generic	10 mg, 25 mg, 50 mg tabs	50–100 mg 1x/day or divided
Amitriptyline – generic	10 mg, 2 mg, 50 mg, 75 mg, 100 mg, 150 mg tabs	25–100 mg 1x/day
Anticonvulsants		
Gabapentin – generic	100 mg, 300 mg, 400 mg caps 600 mg, 800 mg tabs 250 mg/5 mL oral solution	600–2400 mg daily in divided doses (max 3600 mg/day) Dose adjustment based on renal function
Pregabalin	25 mg, 50 mg, 75 mg, 100 mg, 150 mg, 200 mg, 225 mg, 300 mg caps	50–300 mg daily in divided doses
Pregabalin extended release	82.5, 165, 330 mg tabs	165–330 mg 1x/day
Carbamazepine – generic	200 mg tabs 100 mg chewable tabs 100 mg/5 mL PO susp	200–400 mg daily (max 1200 mg/day)
Carbamazepine extended release – generic	100 mg, 200 mg caps and tabs 300 mg caps 400 mg tabs	200–400 mg 2x/day (max 1200 mg/day)
Oxcarbazepine – generic	150 mg, 300 mg, 600 mg tabs 300 mg/5 mL oral suspension	300–600 mg 2x/day

NOTE: Dose ranges are approximate, and starting and maximum doses may vary due to multiple factors, including a patient's age, comorbidities, and total medication regimen. Strengths may vary by manufacturer and brand. Medical practitioners should familiarize themselves with prescribing information and individualize their approaches.

Sources: Medical Letter, 2019[90]; NEJM Knowledge+ Team[91]; Medscape Drugs & Diseases[92]

Implications: Various non-opioid medication options are available for pain management. It is important to be familiar with their indications, contraindications, side effects, dosing, and duration of action. All analgesics must be used in the context of a patient's entire medication regimen, comorbid conditions, and risk factors. To the greatest extent possible, non-opioid medications (alone or combined with nonpharmacological interventions) are a desirable starting point for most acute and chronic pain. However, there are situations where they may be only partially effective or ineffective. It is important to select these medications systematically, based on the details obtained and analyses performed by following the steps of this CPG.

QUESTION 17: What are the indications, specific considerations, and challenges related to opioid analgesics?

Pharmacological Options–Opioid

Perspectives on Opioid Use

There are several divergent perspectives on the role of opioids in pain management. One perspective is that these agents have a prominent place in managing a broad scope of more-severe acute and chronic pain that is not relieved by, or is unlikely to respond to, other categories of analgesics.[93] Another perspective is that although opioids have a place in pain management, the rise in opioid prescribing has outweighed the evidence supporting their long-term use to treat pain.

All things considered, opioids have an important place in pain management (Table 26). The strongest indications for opioids are chronic cancer-related pain, end-of-life pain, and selected cases of more-severe chronic visceral, somatic, or neuropathic pain in patients with co-existing severe illnesses (see Step 6).

As discussed in Step 5, opioids are not automatically indicated or necessarily effective for more-severe pain. In addition, even when opioids are indicated, nonpharmacological interventions and non-opioid medications should be tried first or used concurrently[20 94] and may help to reduce the dosage, frequency, or duration of opioid treatment.

Safe and effective use of opioids requires a thoughtful process, including detailed assessment and differential diagnosis as well as prudent drug and dose selection, monitoring of effectiveness and adverse effects, and meaningful efforts to taper and switch to non-opioid alternatives wherever possible. Prescribing to manage severe or intractable pain due to underlying causes such as metastatic cancer is not necessarily comparable to managing acute and chronic non-cancer pain or non-malignant pain in individuals with cancer.

TABLE 26

Examples of Situations in Which Opioids May Be Beneficial

- High-intensity acute pain
- Initial and short-term treatment of postoperative pain
- High-intensity cancer-related pain
- Daily or almost daily frequent or continuous severe pain related to serious underlying conditions
- High-intensity neuropathic pain due to partially or totally uncorrectable underlying causes (e.g., spinal nerve-root compression).

Potential Uses of Opioids

- **Acute Pain**

As discussed in Step 6, depending on the confirmed or likely cause of pain, non-opioid medications may be preferred for mild to moderate acute pain. For example, in acute extremity pain, single-dose treatment with acetaminophen or ibuprofen may be just as effective as three different opioid and acetaminophen analgesic combinations.[95] However, short-acting opioids can be useful in more-severe acute somatic and visceral pain (e.g., acute nephrolithiasis, fracture). Avoid long-acting opioids for acute pain.

- **Cancer-Related Pain**

Opioids are widely used and often very beneficial for cancer-related pain. As discussed in Step 6, specific choices of opioids and doses depend on the details of the patient's pain and other issues (e.g., side effects, patient acceptance, risk factors, interactions with other current medications).[60,96]

- **Chronic (Persistent) Non-Cancer Pain**

As discussed in Step 6, opinions diverge regarding the effectiveness of opioids and the best opioid options to treat chronic non-cancer pain.[20,97] Long-term use of opioids in persistent non-cancer pain unrelated to serious underlying illness (e.g., chronic low-back pain) has not been shown to improve pain levels or function.

For example, in regard to chronic musculoskeletal and joint pain, the SPACE randomized controlled trial found that opioids were not superior to non-opioid medications at improving pain-related function over 12 months. Adverse effects were significantly more common in the opioid group compared with the non-opioid group. These results did not support the initiation of opioid therapy for moderate to severe chronic back pain or hip or knee osteoarthritis pain.[72] Overall evidence for the long-term effectiveness of opioids for persistent non-cancer pain in all age groups is insufficient, although in some patients opioids may be the best available treatment for more-severe and complicated chronic non-cancer pain.[98]

- **Nonspecific Symptoms**

As discussed in Step 4, in the PALTC setting it is reasonable to consider pain as a possible cause of nonspecific symptoms (e.g., restlessness, combativeness with care). However, these situations require a careful assessment to differentiate pain from other possible causes of nonspecific symptoms (e.g., akathisia, delirium).

Even when nonverbal or nonspecific symptoms (e.g., grimacing, restlessness) probably reflect pain, non-opioid analgesics, topical treatments, and nonpharmacological interventions should be tried and adjusted first. Opioids are not necessarily indicated or beneficial.

When opioids are used empirically in verbally or cognitively impaired individuals, re-evaluate periodically whether the medications continue to be indicated or beneficial. Consider whether any apparent decrease in nonspecific symptoms is due to pain reduction or to side effects of opioids (e.g., apathy, sedation). When nonspecific symptoms persist despite initiating opioids or increasing opioid doses, reconsider the diagnosis or choice of treatments.

Opioid Prescribing Options

Multiple short- and long-acting opioid options are available. At equianalgesic doses, all opioids achieve similar pain-relieving effects, pharmacology, and side effects, but they differ in potency, duration of action, and relative risks.

Table 27 identifies general principles for prescribing opioids. Table 28 summarizes dosing information for commonly used opioid analgesics.

- **Morphine**

Although several pure opioid agonists exist, morphine is widely considered the standard for comparing other opioids. Morphine may be given orally, parenterally, rectally (off-label), sublingually, topically (off-label), or via inhalation (off-label). It is available orally in both immediate- (pills, capsules, or liquid) and sustained-release forms, including once-daily dosing.

In patients with significant renal impairment, some morphine metabolites may cause neurotoxicity (e.g., myoclonus) and other adverse effects. Alternative opioids (e.g., oxycodone) should be considered for these patients.

- **Hydromorphone**

Hydromorphone is a semi-synthetic, high-potency opioid that is available in both immediate- and extended-release forms. It is used primarily in its oral form, although it is also available in an injectable form and as a rectal suppository. It is used primarily to treat high-intensity acute and chronic pain that requires a more-potent opioid. Its effectiveness per dosage equivalent is comparable to other opioids. It could be considered for use in people with cancer pain who are experiencing sleep disturbance.[99]

Hydromorphone has risks and adverse effects similar to those of other opioids. It must be used cautiously in patients with respiratory disease causing clinical respiratory compromise or gastrointestinal obstruction or ileus. It can cause serotonin syndrome when combined with other serotonergic medications It is more potent than oxycodone while causing less somnolence.[100]

TABLE 27

General Principles for Prescribing Opioids

- Prescribing PRN and standing opioids should follow the principles discussed in the section **PRN and Standing Analgesic Orders**.
- Identify the pain relief goal of opioid therapy, as discussed in the section on **Clarifying Patient Expectations and Pain Management Goals**.
- Patients on opioid therapy, or for whom it is being considered, should have a risk assessment for substance use disorder, possibly including a validated risk assessment tool.
- Use the simplest analgesic dosage schedules and least-invasive pain management modalities.
- Liquid forms may be useful when lower opioid doses are indicated and standard tablet doses are not feasible.
- The optimal dose of an opioid is the lowest dose that sufficiently and safely relieves a patient's pain and does not cause unacceptable adverse effects or risks, based on established pain relief goals.
- Reassess patients taking opioid analgesics periodically for attainment of therapeutic goals, adverse effects, and safe and responsible medication use.
- Specify the frequency of monitoring for beneficial and adverse opioid effects and specify notification parameters.
- If neither PRN nor standing opioids are substantially effective despite increasing doses or changing medications, the diagnosis and overall treatment approach may need to be reconsidered instead of adding medications or increasing doses.
- All other things being equal, choose less expensive opioids whenever possible.
- Dosing should consider the patient's entire medication regimen as well as factors that influence opioid activity, metabolism, and excretion.

- **Hydrocodone**

Hydrocodone may be helpful in some cases of high-intensity acute or chronic pain. It is metabolized in the liver and eliminated by the kidneys. Its active metabolite is hydromorphone. It has a short half-life and consequently can be used to titrate doses. The long-acting version can be taken once daily. Hydrocodone is typically manufactured in combination with acetaminophen, which may limit dosing to avoid acetaminophen toxicity. When a patient is using a hydrocodone/acetaminophen combination intermittently over time to manage occasional or mild to moderate pain, it is reasonable to consider whether acetaminophen alone has been tried or might provide adequate relief without the opioid component.

- **Oxycodone**

Oxycodone is available in both short- and long-acting forms. It is metabolized differently from morphine, which may give it an advantage in patients with impaired renal function. Its effectiveness appears to be comparable to that of other strong opioids (e.g., in treating cancer pain).[101] It carries a substantial risk of addiction and abuse compared with many other opioids.[102]

- **Fentanyl, Transdermal**

Fentanyl is approximately 80 to 100 times more potent than morphine. It has been used to treat cancer pain and as an anesthetic agent. The fentanyl transdermal patch is an option for patients who need a long-acting opioid analgesic and cannot take oral or enteral medications. The patch is available in various doses, starting at 12.5 mcg/hour, and is generally applied for up to 72 hours before being changed. Even after removal of the patch without replacement, the effects may last for several days or more due to residual fentanyl in the skin. Older adults and patients with reduced creatinine clearance should receive a lower dose.

Fentanyl's abuse potential and adverse effects—including death—have led the FDA to issue major warnings about its use. It should be

- Used only in patients whose pain severity warrants substantial, continuous opioid doses and who are already receiving opioid therapy, have demonstrated opioid tolerance, and require a total daily dose equivalent to at least 25 mcg/hour
- With rare exception, not initiated in opioid-naïve patients
- Avoided in frail, cachectic adults

It is essential that practitioners know and follow these warnings and recommendations for the appropriate use of fentanyl. Frequently, in the prescribing and use of fentanyl in the PALTC setting, they have not been followed.[103]

- **Methadone**

Methadone is an opioid with a long half-life that has been used extensively to treat substance use disorder and also to treat chronic pain. It is significantly more potent than morphine with long-term use. It may be effective in treating refractory pain, including cancer-related and neuropathic pain. It has minimal renal excretion and thus may be an option in patients with advanced renal insufficiency.

In addition to its long half-life, methadone has complex medication interactions that can result in life-threatening adverse effects and fatalities. Inappropriate use of methadone can lead to death due to gradual buildup over weeks or months. It should not be used in opioid-naïve patients. It should be prescribed only by (or in consultation with) appropriately licensed practitioners who have experience and expertise in its prescribing and use.

- **Tramadol**

Tramadol is a centrally acting synthetic opioid, with opioid-like effects and many similar side effects.

Potential Applications

Tramadol may be an option for nociceptive or neuropathic pain that is not adequately relieved by acetaminophen or NSAIDs, or when these two categories of agents are not indicated or are contraindicated. Tramadol can be used either alone or in combination with acetaminophen or NSAIDs to manage high-intensity chronic somatic pain.[104] Lower doses of tramadol in combination with acetaminophen may provide better pain relief than higher doses of tramadol alone. However, only limited high-quality evidence supports the effectiveness of tramadol for chronic non-cancer pain in older adults or its use to manage pain for more than 3 months.

Challenges of Tramadol

Tramadol's effectiveness and adverse effects vary considerably among individuals. It has some significant side effects and interactions that are similar to—but may be more common than—those of other opioids. It should be used sparingly and cautiously in frail older adults, especially those with significant cognitive impairment, due to considerable variability in response, the risk of significant drug–drug and drug–disease interactions, and other adverse effects.

In prescribing tramadol, it is essential to recognize the risks, use the lowest possible doses (e.g., 25 mg q8–12h standing or PRN), and monitor closely for adverse consequences—especially when taking higher (above 150 mg/day) or more-frequent standing or PRN doses, or for a longer duration. Among its adverse effects, tramadol use is associated with a significant risk of psychiatric side effects (e.g., agitation, anxiety, emotional lability, euphoria, hallucinations, nervousness) and adverse interactions with many psychopharmacological medications.[105]

Tramadol can precipitate seizures in patients who have a seizure disorder or are at risk for seizures. The seizure risk is higher in individuals with a history of seizures, with conditions that increase the risk of seizure (e.g., stroke, traumatic brain injury), and when combined with other medications that increase seizure risk (e.g., bupropion). Drugs that reduce tramadol's metabolism (e.g., amitriptyline, erythromycin, fluoxetine, ketoconazole, paroxetine, quinidine) may also increase the risk of seizures.

Serotonin syndrome is a potentially problematic adverse effect of medications that increase serotonin levels in the brain. Because of its significant serotonergic activity, tramadol can cause serotonin syndrome by itself or when prescribed for a patient who is also receiving other medications with serotonergic effects (e.g., buspirone, other opioids, SNRIs, SSRIs, TCAs).

TABLE 28
Dosing Information for Commonly Used Opioid Analgesics

Compound	Strengths	Typical Starting Dose and Dosing Interval	Duration (approximate)
Shorter acting			
Hydrocodone	5 mg, 10 mg, 15 mg, 20 mg, 30 mg, 40 mg	2.5-10.0 mg q4–6h	4–8 h
Hydromorphone	2 mg, 4 mg, 8 mg tabs 1 mg/mL PO solution	2-4 mg q4–6h	3-5 h
Morphine IR	15 mg, 30 mg tabs; 10 mg, 20 mg, or 100 mg/5 mL PO solution 20 mg/1 mL concentrate	10 mg q4h	3–6 h
Oxycodone IR	5 mg, 10 mg, 15 mg, 20 mg, 30 mg tabs 5 mg caps 1 mg/1mL oral solution	5–10 mg q4–6h	3–6 h

TABLE CONTINUED

TABLE 28 continued

Dosing Information for Commonly Used Opioid Analgesics

Compound	Strengths	Typical Starting Dose and Dosing Interval	Duration (approximate)
Oxymorphone	5 mg, 10 mg tabs	5–10 mg q4–6h	4–6 h
Tapentadol	50 mg, 75 mg, 100 mg tabs	50–100 mg q4–6h	4–6 h
Tramadol	50 mg, 100 mg tabs 5 mg/1 mL solution	25–50 mg q6–8h	4–6 h
Longer acting			
Morphine ER	15 mg, 30 mg, 60 mg, 100 mg, 200 mg tabs	15 mg q8–12h	8–24 h
Hydromorphone ER	8 mg, 12 mg, 16 mg, 32 mg tabs	8–64 mg total q day	24 h
Hydrocodone ER	10 mg, 15 mg, 20 mg, 30 mg, 40 mg, 50 mg, 60 mg, 80 mg, 100 mg, 120 mg	10 mg q12h	12—24 h
Oxycodone ER	10 mg, 15 mg, 20 mg, 30 mg, 40 mg, 60 mg, 80 mg tabs 9 mg caps	10 mg q12h tabs 9 mg q12h caps	8—12 h
Tapentadol ER	50 mg, 100 mg, 150 mg, 200 mg, 250 mg tabs	50 mg q12h	12h
Tramadol ER	100 mg, 200 mg, 300 mg tabs and caps	100 mg daily	24 h
Oxymorphone ER	5 mg, 7.5 mg, 10 mg, 15 mg, 20 mg, 30 mg, 40 mg tabs	5 mg q12h	12 h
Methadone	5 mg, 10 mg tabs 5 mg/5mL, 10 mg/5 mL PO solution 10 mg/mL PO concentrate	2.5–10 mg q8–12h	4–8 h with a single dose 22–48 h with repeat dosing
Transdermal			
Fentanyl transdermal – generic	12.5 mcg/h, 25 mcg/h, 37.5 mcg/h, 50 mcg/h, 62.5 mcg/h, 75 mcg/h, 87.5 mcg/h, 100 mcg/h patches	Starting dose determined by previous opioid dose 12.5 mcg—25 mcg applied q72h	48–72 h
Buprenorphine transdermal	5 mcg/h, 7.5 mcg/h, 10 mcg/h, 15 mcg/h, 20 mcg/h patches	5 mcg/h patch applied once every 7 days	Up to 96 h

NOTE: All dose ranges are approximate, and starting and maximum doses may vary with multiple factors, including a patient's age, comorbidities, and total medication regimen. Strengths may vary with the manufacturer and brand. Medical practitioners should familiarize themselves with prescribing information and individualize their approaches.

Adapted from Medical Letter, 2019[106]; Medscape Drugs & Diseases[92]; Elsevier Clinical Pharmacology. Opioid Agonists.

Initiating and Titrating Opioid Doses

Table 29 lists the steps and considerations in initiating and titrating opioids. It may be helpful to obtain consultative support (e.g., pain or palliative care consultant) for more-complicated situations.

TABLE 29
Approaches to Opioid Titration

Category	Examples
Beginning opioid therapy	■ In patients who have not previously taken opioids—especially opioid-naïve frail older adults—start with a low dose of a PRN immediate-release preparation and titrate slowly. ■ After it is clear that the patient benefits from and can tolerate PRN dosing, PRN doses can be added to the total daily dose and, if indicated, converted to longer-acting forms.
During the titration phase for oral opioids, assess pain relief and adverse effects at the time of peak opioid effectiveness	■ Select a titration schedule based on opioid pharmacology and patient response. ■ A patient with continuous pain will need approximately 4–5 doses of a short-acting opioid to achieve steady analgesia. ■ Peak effects of immediate-release opioids are generally seen after 30–60 minutes (approximately 10–15 minutes for intravenous forms). Consequently, for high-intensity pain, additional doses of an immediate-release oral opioid could be given as often as every 30–60 minutes until pain relief is achieved or adverse effects are noted.
Periodically evaluate the use of PRN medication to manage breakthrough pain and adjust routinely administered medication accordingly	■ Consider ordering at least one routine, scheduled analgesic if pain is persistent and an available PRN medication is partially helpful but is insufficient to prevent significant breakthrough pain. ■ If the patient routinely requires more than 2–4 doses daily for breakthrough pain, and the current long-acting medication is substantially effective and still indicated, it may be appropriate to increase the scheduled dosage accordingly.
Consider using long-acting opioids	■ Review PRN usage patterns and calculate total dose used over a 24-hour period ■ For a patient with relatively consistent PRN opioid usage over 24-hour periods and who is expected to continue to need opioids, establish the total daily PRN dose needed to control the patient's pain, then consider converting the total daily dose to an equivalent dose of a sustained-release preparation that is given every 8–24 hours.

TABLE CONTINUED

TABLE 29 continued
Approaches to Opioid Titration

Category	Examples
Manage breakthrough pain	■ When long-acting opioid preparations are prescribed, anticipate and treat breakthrough pain (i.e., pain that occurs between the administration times of the scheduled medication) with immediate-release opioids and/or nonpharmacological interventions and non-opioid analgesics. ■ PRN dosing for breakthrough pain should be approximately 10%–15% of the patient's total daily opioid dose but may vary, depending on the severity of breakthrough pain. ■ Define patient's patterns of PRN opioid use (e.g., occasionally or many times per day, use of all available doses) ■ When doses of the long-acting opioid are adjusted, also adjust doses of the PRN medication for breakthrough pain as necessary. ■ Periodically reevaluate need for continuing PRN opioids (see **Standing versus PRN Analgesic Orders** section and **Table 22**) ■ In general, it is desirable to use the same opioid for breakthrough pain as for long-acting dosing; however, different opioids may also be used.

Additional Factors Affecting Opioid Dosing

Opioids are available for oral, parenteral (intravenous, intramuscular, subcutaneous), rectal, buccal, transdermal, and enteral administration. Patient-controlled analgesia is another option, details of which are covered in various references.[107]

Because all opioids are metabolized by the liver, significant liver disease may result in decreased opioid clearance and increased bioavailability and half-life. Codeine is contraindicated for patients with liver failure because of inadequate conversion to its active form. Other opioids should be started at half of the usual starting dose. With more-advanced liver disease, opioid dosing frequency may need to be reduced (e.g., from every 4 hours to every 6–8 hours or longer). However, liver disease may have less impact on the metabolism of morphine and methadone.[60]

In patients with renal failure,[108] morphine and codeine may be problematic, oxycodone should be used with caution and close monitoring, and hydromorphone may be less problematic. However, the severity of the renal failure and other factors (e.g., the patient's total medication regimen, comorbidities, opioid dose, idiosyncratic reaction to a particular agent) may also influence the choice and dose of opioids.

Opioid Rotation

Consider opioid rotation (switching from one opioid to another) for patients receiving chronic opioid therapy who need an alternate delivery route or who experience intolerable adverse effects or inadequate relief despite dose increases.[109]

Opioid Conversion Tables

Equianalgesic tables are used to convert from one opioid to another or to convert opioid doses from one route of administration to another. They indicate the relative potencies of different opioids and can be used to calculate approximate equivalent doses. Morphine is the usual standard for comparison (in milligram morphine equivalents, or MMEs). For example, oral hydrocodone is approximately 4 times more potent than morphine. **Table 30** is an example of approximate conversion equivalents for selected opioids.

Conversions must be tailored to individual patients. For example, a conversion factor of 4 for hydromorphone relative to Morphine means that an equivalent daily hydromorphone dose would be approximately one-fourth of the Morphine daily dose. In addition, the effects and adverse effects of seemingly comparable doses of different medications cannot be fully anticipated. Therefore, when converting to a different opioid, the calculated amount should be reduced initially by approximately 25% to 50% to provide a margin of safety.

In addition, dosing must be individualized by incorporating other relevant factors (e.g., age, body habitus, renal and hepatic function, current total medication regimen, tolerance) into these calculations and selection of a specific alternative. After converting opioids, monitor patients closely for effectiveness, safety, and possible need for additional dose adjustments.

It is important to review and incorporate the disclaimers and footnotes accompanying opioid conversion tables. Only some of the medications listed in various conversion tables are appropriate for the patient population or for specific patients. A consultant pharmacist or palliative care or pain specialist can advise about and guide these conversions and dosage selection.

An online tool for equianalgesic conversion is available at **https://globalrph.com/medcalcs/advanced-opioid-conversions-equianalgesic-morphine-equivalents/**.[110] The following are other reference sites about opioid conversion:

- American Academy of Family Physicians. Opioid Conversion Table. **https://www.aafp.org/dam/AAFP/documents/patient_care/pain_management/conversion-table.pdf**. [111]
- Arnold A, Weissman DE, 2019.[112]

TABLE 30

Approximate Equianalgesic Dosing for Some Commonly Used Opioids

Calculating morphine milligram equivalents (MME)	
Opioid (doses in mg/day except where noted)	**Conversion Factor**
Codeine	0.15
Fentanyl transdermal (in mcg/hr)	2.4
Hydrocodone	1
Hydromorphone	4
Methadone	
1-20 mg/day	4
21-40 mg/day	8
41-60 mg/day	10
⩾ 61-80 mg/day	12
Morphone	1
Oxycodone	1.5
Oxymorphone	3

These dose conversions are estimated and cannot account for all individul differences in genetics and pharmacokinetics.

Source: CDC[113]

Challenges of Opioids

Even when opioids are indicated and effective, they may cause significant adverse effects that go well beyond the familiar ones.[114] Risks of opioid-related complications and toxicity are affected by liver, cardiac, renal, pulmonary, and neurological disease.

With chronic use, many patients eventually become tolerant to some opioid adverse effects (e.g., nausea, sedation, respiratory depression), although not to constipation. Many adverse effects can be addressed by symptom management, adjusting doses and dosing intervals, and possibly opioid rotation. However, with rare exceptions, adverse effects warrant a careful review and reconsideration of the number, doses, frequency, and duration of opioids that a patient is receiving.

Codeine presents additional considerations, mainly because its conversion to an active form is often unpredictable and unreliable, thus potentially either reducing its effectiveness or causing toxicity. Instead, it is preferable to choose a different opioid.

- **Constipation**

Opioids have pharmacological effects throughout the GI tract. They decrease gastric emptying; stimulate pyloric tone; and may also cause anorexia, nausea, and vomiting.

Constipation is a universal, predictable opioid side effect. Unlike some other common side effects (e.g., nausea, sedation), constipation due to opioids persists and requires adequate interventions. Unless contraindicated, all patients receiving an opioid for any length of time should be

placed on a scheduled bowel regimen to prevent constipation. The bowel regimen may need to be modified as the patient's opioid dose is increased.[115]

- **Psychiatric and Behavior Issues**

Major psychiatric and behavioral side effects are a common and all-too-often overlooked complication of opioids, both alone and via interaction with medications in other categories (e.g., benzodiazepines, anticonvulsants, muscle relaxants).[116] Examples of such symptoms include agitation, anxiety, dementia, depression, dysphoria, euphoria, hallucinations, nightmares, paranoia, and psychosis.[117] In many patients, these adverse effects often lead to a vicious cycle of additional, potentially avoidable psychopharmacological medications and additional preventable complications.

For example, in patients with non-cancer pain, opioid initiation has been shown to markedly increase the risk of depression recurrence.[118] Prescription opioids may limit depression recovery or worsen residual symptoms. Repeated depression screening during opioid therapy may be warranted. In addition, lethargy and apathy due to medications or another cause must be distinguished from a mood disorder.

- **Respiratory Depression**

Respiratory depression is often listed as a major complication of opioids. In patients with normal respiratory function, respiratory depression is usually not a clinically significant problem, even after initial doses of opioids. Patients with respiratory impairment (e.g., chronic obstructive pulmonary disease, CO_2 retention, pneumonia) are at greater risk for respiratory depression and must be monitored closely, especially after receiving initial doses of opioids. Fentanyl carries a strong warning that it can cause "serious, life-threatening, or fatal respiratory depression."[119] If other options (e.g., using non-opioid medications and nonpharmacological interventions, reducing doses and frequency of opioids) are not viable, establish a protocol for using naloxone to manage opioid-induced respiratory depression.

- **Other Adverse Consequences**

Other substantial adverse effects of opioid use may include abdominal pain, anorexia/weight loss, apathy, confusion, delirium, dizziness, falls,[98] impaired function, lethargy, pruritus, sedation, urinary retention, and death. In older adults, opioid use—particularly the use of codeine combination agents—increases the risk of injury.[120] [121] Sensitization caused by opioid exposure may cause or exacerbate pain (e.g., allodynia, hyperalgesia).[122] In addition, opioids can cause adverse neurological effects such as myoclonus.[123] Opioids' adverse effects are often exacerbated by the use of multiple opioids or of opioids in combination with medications in other classes, including but not limited to anticholinergics, anticonvulsants, antidepressants, antipsychotics, benzodiazepines, and muscle relaxants.[82]

- **Dependence, Tolerance, and Addiction**

Opioid **dependence** (i.e., the body's physical dependence on opioids to function normally) is common. A withdrawal syndrome can result from abrupt cessation, rapid dose reduction, a decrease in blood levels of the opioid, or administration of an antagonist. Gradual opioid dose reductions (e.g., 10% to 25% weekly) are needed to minimize or avoid withdrawal symptoms.

Dependence does not equal addiction. Even low-risk patients can become dependent, or can overdose, if they receive high enough doses of opioids for a prolonged period of time. Therefore, the source of risk is more the drugs themselves than the patients.[124]

Tolerance is a state of adaptation to ongoing exposure to a drug, resulting in reduced effectiveness over time. Patients may be considered opioid tolerant when they have been taking, for a week or longer, at least 60 mg of oral morphine daily, or at least 30 mg of oral oxycodone daily, or at least 8 mg of oral hydromorphone daily, or an equivalent dose of another opioid.

Addiction is a chronic, relapsing biopsychosocial disorder characterized by compulsive drug seeking, continued use despite harmful consequences, and long-lasting changes in the brain. It is considered to be a severe form of a substance use disorder and is both a complex brain disorder and a medical illness caused by repeated misuse of a substance or substances.[125] It is characterized by behaviors such as impaired control over medication use, compulsive use, continued use despite harm, and craving.

Opioid Risk Mitigation

Table 31 summarizes strategies for mitigating the risks of opioids.[126]

- **Medical Practitioner Responsibilities in Prescribing Opioids**

Medical practitioners have a responsibility to treat pain and manage its causes while also recognizing the risks of treatment and to anticipate and to address interactions and adverse effects of medications.[127] [128] Practitioners must become familiar with reliable information about the indications, benefits, risks, and limitations of opioids, and apply this information in everyday practice.[82] [129] [130] [131]

As with all medications, a key risk reduction strategy is to base decisions to initiate or continue opioids on a thoughtful review of the patient by the medical practitioner and the IPT.[131] [132] Before prescribing opioid therapy, or while opioids are used to manage pain over time, patients should have a risk assessment for substance use disorder, even if they have a negative risk history.[133] A validated risk assessment tool may be helpful in more complex cases.

When prescribing opioids, medical practitioners should consider both dose and duration of action and should favor short-acting opioids whenever possible. Extended-release opioids may be more likely to cause unintentional overdose injury.[134] Even for patients who benefit from taking them, opioids should be limited in dose and duration to the greatest extent possible.[135]

When prescribing opioids, avoid or minimize doses of high-risk medication combinations (e.g., opioids plus gabapentinoids or benzodiazepines). If high-risk combinations are not entirely avoidable, try to minimize the number and doses of other medications with similar or additive adverse effects. Adverse effects could be present in a patient who has a significant unresolved symptom or an acute change of condition while receiving opioids.

When a patient who is receiving opioids claims to be receiving inadequate relief despite substantial or increasing doses, always consider whether the current opioid regimen is indicated and beneficial or may need adjustment or replacement. For example, patients may receive minimal pain relief on a given opioid regimen because

- Opioids are not indicated or are ineffective for their pain
- Pain is undertreated (e.g., inadequate dosing for breakthrough pain)
- The underlying cause of pain has not been identified accurately
- The situation requires a substantially different approach

- **Using Opioids in Older Adults in the PALTC Setting**

Opioids may have a place in the short-term management of high-intensity acute pain in older adults.[136] [137] Except in advanced and otherwise unmanageable pain situations, opioids should be used to treat chronic pain in older adults only after pertinent non-opioid medications and non-pharmacological interventions have failed to manage pain adequately.

If opioids are indicated in older adults, use those with a short half-life (e.g., hydrocodone, hydromorphone, morphine, oxycodone). Initiation of long-acting opioids (especially fentanyl patches) persists in PALTC facilities, often contradicting recommendations about appropriate use, limited prescribing, and high vigilance for adverse effects.[138]

Older adults should receive a lower starting dose than would be ordered for otherwise healthy or younger opioid-naïve patients (i.e., those not previously exposed to opioids). They should also be monitored closely for adverse consequences and interactions related to these medications.

- **Continuing Opioids Begun Elsewhere**

Many patients enter the PALTC setting either from the hospital or the community, with existing opioid orders. Medical practitioners in these settings only sometimes receive enough information about why opioids were started in another setting or by another practitioner, whether other approaches were tried, whether underlying causes were adequately addressed, what causes were identified, why certain doses were chosen, what adverse effects may have resulted, or what to anticipate about the patient's subsequent course.

These patients often need prompt assessment and pain relief when a practitioner may not be on site or know the patient and feel comfortable addressing the issue. In the absence of adequate information, practitioners cannot assume that because someone else ordered opioids for a patient, they had a good reason for doing so, made the right diagnosis, or exhausted viable alternatives. Practitioners should try to identify whether the treatment is appropriate or should be limited or ultimately changed. This is especially important when current treatment may be ineffective or unnecessary or may be causing complications.

- **Opioid Prescribing Influenced by Demand or Expectation**

Practitioners and staff are often challenged by patient or family requests or demands for specific medications, including opioids.

Every PALTC facility should encourage and expect open dialogue with patients and families about their questions and concerns. However, opioids should not be prescribed or dispensed based primarily or solely on patient or family demand, but rather on appropriate indications and at pertinent doses.

Facility staff may inform a practitioner of a request by a patient or family for a specific analgesic, but should not initiate requests for opioids or additional opioid doses. Instead, they should provide objective details about the patient's symptoms that help the practitioner to identify safe and effective treatment for the patient.

TABLE 31

Opioid Risk-Mitigation Strategies

- Define the pain problem and identify causes as precisely as possible.
- Become familiar with reliable information about opioids.
- Consider dose and duration of action when prescribing opioids.
- Recognize factors (e.g., renal and liver failure) that affect analgesic selection and dosing, and adjust treatment accordingly.
- Favor short-acting opioids whenever possible.
- Anticipate, assess for, identify, and address opioid-associated adverse effects and interactions.
- Screen patients for substance use disorder before and during treatment with opioids.
- Consider significant unresolved symptoms or an acute change of condition while receiving opioids as possible adverse consequences of opioids.
- Try to minimize the number and doses of other medications with similar adverse effects and additive side effects.
- Do not assume that opioids are indefinitely indicated or necessary in current doses.
- When initiating or increasing doses or numbers of opioids does not materially improve symptoms, reconsider the situation before increasing doses further or adding medications.

Implications: Various opioids are available for pain management. Their safe and effective use requires familiarity with their indications, contraindications, side effects, dosing, and duration of action. Pain severity alone is not a sufficient criterion for their use, especially in chronic pain. Opioids should be used prudently and reserved for situations where nonpharmacological interventions and non-opioid options are unavailable or inadequate. They should be selected based on a systematic thought process. They must always be managed in the context of a patient's entire medication regimen, comorbid conditions, and risk factors. They should only be prescribed by practitioners who are familiar with these issues.

STEP 9 — Obtain appropriate support for pain management as indicated

QUESTION 18: When is a pain consultation indicated in managing pain, and how should the staff and practitioners interact with pain consultants?

PAIN CONSULTATION

In most cases, pain can be managed successfully by following the basic steps described in this CPG. A pain consultation may be helpful when

- The diagnoses or conditions contributing to the patient's pain remain unclear.
- The primary practitioner cannot manage a patient's pain without unacceptable side effects or high dose opioids.
- The patient's pain is complex or not improving adequately after multiple treatment attempts, including multiple analgesics and increasing doses.
- Less familiar or higher-risk medications or more-complex approaches or procedures are needed to treat the patient's pain.
- Advanced knowledge or skills are required for definitive diagnosis and treatment (e.g., a dental consultation may be appropriate when oral or dental disease is suspected).
- Opioids are being considered for patients with underlying issues (e.g., advanced heart disease, COPD) that increase the risk of medication-related complications.
- More involved or higher-risk procedures (e.g., a baclofen pump, nerve blocks, or lidocaine infusion) are contemplated.
- A specialist in pain or palliative medicine may provide insights into the causes and treatment of refractory pain.
- A patient is receiving methadone for pain and/or has a substance use disorder.
- Pain management is part of a broader picture involving functional, psychosocial, spiritual, and financial complications of serious illness (i.e., palliative care).

Before making a referral, it is important to either rule out or attempt to manage simple underlying causes of pain, including identifying and adjusting medications that may cause or exacerbate pain (*see* **Table 12** and **Table 13**).

When making a referral to a consultant, pain clinic, or a palliative care or other specialist, staff and practitioners should provide ample objective details (e.g., the patient's daily function, pain characteristics and patterns, identified or suspected causes of pain, any concerns about a known or suspected substance use disorder, effectiveness and significant adverse effects of current medications).

Even when consultants are involved, the primary medical practitioner and the IPT retain ultimate responsibility for ensuring that the patient's pain management plan is appropriate and that prescribed treatments are pertinent, safe, and effective. Sometimes pain consultation can introduce additional complexity because multiple practitioners are involved in the patient's care and each may have a significantly different approach to pain management and understanding of the patient's symptoms. All analgesic recommendations made by a consultant or other specialist must be coordinated with the rest of the patient's treatment regimen.

It is also important that staff and practitioners have periodic meaningful interactions (i.e., actual conversations, not just reading consultation notes) with consultants and other specialists, so that the consultants can ask and answer questions and learn about the effectiveness of and any complications related to the patient's current treatments. Telehealth visits are one way to have these discussions and provide input to the consultant at the same time that the patient is evaluated.

QUESTION 19: What is the role of hospice in managing pain, and how should facilities and practitioners interact with hospice providers?

HOSPICE AND PAIN MANAGEMENT

Hospices cover aspects of care toward or at the end of life. An emphasis on pain management and patient comfort is an integral part of the hospice philosophy.

This CPG repeatedly emphasizes that pain management must be integrated into patients' overall care; it should not be managed in a "silo." This principle applies whether or not hospice is involved in managing a patient's pain. Hospice practitioners and staff should coordinate care and prescribing with the facility staff, the patient, and the patient's primary care practitioners.

Medical practitioners and staff must remain involved in managing patients with pain, even when hospice or other consultants are involved. Regular communication should occur between all those involved in the care of the patient who is receiving hospice services. Otherwise, medication-related adverse effects can be unnecessarily debilitating for patients in hospice care. Unless the plan of care has identified appropriately that the desired goal is pain relief regardless of adverse effects, these effects should be identified, addressed, and minimized to the extent possible.

It is widely known that opioids are used more liberally for those at the end of life to provide adequate pain control and relieve suffering. However, opioids are often ineffective for chronic non-cancer pain while causing adverse effects.[90] Medications in general are humane when they are indicated and helpful but can be problematic when they are not (e.g., when they cause major adverse effects).[127] When death is imminent, pain control and desirable sedating side effects may supersede concerns about medication-related adverse effects.

Implications: Most pain can be managed successfully by knowledgeable practitioners and staff who follow pain management steps diligently. In more complex situations, consultative support may be necessary. Pain consultations should be obtained based on identified criteria for such support. Pain management should not be done in a vacuum or a silo. Primary care practitioners and consultants should always collaborate and communicate adequately.

MONITORING

QUESTION 20: What should be monitored regarding pain and how should it be done?

STEP 10 — Monitor all patients being treated for pain

MONITORING PAIN OVER TIME

Monitor pain over time by continuing to collect and analyze key information (Table 32). Both nursing staff and medical practitioners should use the same systematic approaches to monitoring as to initial assessments. Review of nursing progress notes (or periodic summary notes) over time, as well as a periodic discussion between the practitioner and the patient and staff, should enable medical practitioners to determine the effectiveness of current treatments and adjust the pain regimen accordingly. As with the initial assessment, direct-care staff should be informed about how, where, and how often to monitor and document information related to patients' acute and chronic pain.

TABLE 32
Components of Ongoing Pain Monitoring

- Characteristics (e.g., frequency, intensity, and duration) of pain over time
- Overall effectiveness of current interventions (pharmacological and nonpharmacological) over time, including standing and PRN analgesics
- Impact of pain on function (e.g., interferes with activity)
- Progress toward attaining patient-centered goals
- Analgesic-related side effects and interactions
- Mood indicators (e.g., PHQ-9 from Minimum Data Set)
- Patient, staff, and family observations about function and quality of life
- Extent and ease of activity participation
- Any evidence of substance use disorder or drug diversion

STEP 11 — Review and revise pain treatments as indicated

QUESTION 21: How should decisions be made about changing, adding, or stopping analgesics?

MODIFYING THE TREATMENT REGIMEN

Periodically, the IPT (including the medical practitioners) should discuss patients with pain in some detail (e.g., at care-plan or service-plan meetings). Details about a patient's pain (*see* **Table 9**) enable more-informed decision making about optimizing treatment.

Changes in treatment may be proposed when

- **Pain goals** are not being achieved,
- The prognosis or goals of care change, or
- A significant change (i.e., improvement or worsening) occurs in an underlying cause of pain or its treatment.

Even longstanding medications may become less effective over time, and adverse effects and problematic interactions with other medications may arise or worsen. **Table 33** provides examples of situations in which to consider modifying a patient's pain treatment regimen.

TABLE 33

Examples of Situations in Which to Consider Modifying the Pain Treatment Regimen

Possible Dose Increases	Possible Dose Reductions
■ Current medication and dosing are providing partial relief without significant side effects. ■ Dosing guidelines provide "room to move." ■ A dose increase may be desirable to help identify whether a particular medication is effective.	■ The underlying cause of the patient's pain has been addressed. ■ Pain is not responding as anticipated to the current regimen, suggesting that this regimen may be ineffective or may not be indicated for the situation. ■ The patient is experiencing significant medication-related side effects or drug interactions. ■ Significant signs are noted of misuse of, or excessive dependency on, prescribed medications. ■ The patient has skipped doses without adverse impact. ■ The patient's pain is currently controlled and a medication reduction trial has not yet occurred. ■ Risks of continued treatment outweigh the anticipated benefits.

Implications: Monitoring pain and adjusting treatments follow the same steps and principles as initially. Objective details are needed to identify the effectiveness and adverse effects of treatment and to identify to what extent pain management has attained desired goals. Treatment adjustments should be based on knowledge of the details (e.g., onset and duration of medication effect, recommendations for adjusting doses and frequency of dosing). Guessing is ineffective and imprudent. Consultative support should be obtained as needed and used judiciously.

QUALITY, RISK MANAGEMENT, SAFETY, AND SURVEY CONSIDERATIONS IN PAIN MANAGEMENT

QUALITY OVERSIGHT

QUESTION 22: How should a facility oversee and review its pain management approaches, including the use of opioids to treat pain?

As with all aspects of care, pain management can benefit from facility-wide oversight. Many aspects of pain management can benefit from scrutiny. Table 34 provides examples of possible indicators for reviewing pain management. Additional sources of relevant review criteria may also be considered.[139]

Because pain and its treatment relate to so many other patient-care issues (e.g., behavior, mood, falls, weight loss, unplanned hospital transfers), it may be best addressed as part of a facility's overall clinical quality improvement activities. Some facilities, however, choose to set up a separate pain oversight group or subcommittee. This internal oversight process can also help facilities to comply with state and federal laws and regulations related to opioid use, including the proper application of prescription drug-monitoring program procedures for managing controlled substances (i.e., administration, storage, disposal, prevention, detection of diversion).

The IPT should periodically review pain management practices and processes (not only outcome-related quality measures), using criteria such as those listed in Table 34. For example, patients who are receiving both opioids and psychopharmacological medications should be reviewed because psychopharmacological medications are often used inappropriately to address unrecognized and potentially controllable psychiatric symptoms caused by pain medications.

TABLE 34

Examples of Criteria for Reviewing Pain Management

- Consistency and accuracy of pain assessments
- Quality and content of pain-related documentation by nurses and medical practitioners
- Adequacy of documented clinical rationale for decisions about a patient's current pain management plan and analgesic regimen (e.g., the basis for deciding to prescribe, continue, and increase or add opioid analgesics)
- How well goals for pain relief are identified and met
- How well patients receiving analgesics are monitored for effectiveness and adverse effects
- Use of specific analgesics despite identified risks or published warnings, interactions, or complications
- Review of patients who are declining or not improving as anticipated while on opioid analgesics or multiple short- and long-acting analgesics
- In-depth review of patients who are receiving
  - More than 3000 mg/day of acetaminophen for pain
  - Opioids without a clearly documented clinical rationale
  - More than one long-acting opioid simultaneously
  - Opioid doses of more than 60 morphine milligram equivalents (MME) per day
  - Frequent and/or multiple PRN opioids

Table 35 presents an example of a successful coordinated facility-wide effort to treat pain with opioids reasonably and safely. It incorporates and summarizes many of the ideas discussed throughout this CPG. Every facility can benefit from such a systematic effort that involves the primary care practitioners, patient, families, key management (e.g., medical director, director of nursing), and front-line staff.

TABLE 35

Key Steps to Optimizing Opioid Use in PALTC Facilities

Step 1: Current Patients

- ***Evaluate*** all current use of PRN opioids.
- ***Target*** patients who are receiving 0 or 1 PRN doses of opioids daily and ***consider*** whether it is still beneficial, or discontinue, if not.
- If additional analgesia is needed, ***substitute*** non-opioid medication if possible.

Step 2: New Admissions

- ***Evaluate*** all PRN opioid orders for new short-stay patients.
- ***Discuss*** pain assessment with nursing staff to identify
  - ***Why*** an opioid was initially ordered elsewhere (if known),
  - ***How often*** the patient has been receiving it, and
  - ***Whether*** the patient had been receiving opioids prior to hospitalization.
- ***Consider*** a trial discontinuation of all PRN opioids in post-acute patients who were not taking the medication prior to hospitalization and were not placed on opioids due to fracture, injury, or surgery.

Step 3: Systematic Reduction

- ***Assess*** all scheduled opioids and determine why they are being used.
- ***Document*** the diagnosis for which a patient is receiving an opioid medication.
- ***Assess*** the pain source and offer nonpharmacological alternatives to medication (e.g., heat, ice).
- ***Discuss*** pain with patients who can verbalize their symptoms and explain the importance of reducing the opioid dose.
- ***Offer*** alternative non-opioid pain medication, if appropriate.
- ***Attempt*** to establish a goal of limiting all opioid prescriptions to those patients with the most appropriate indications (e.g., cancer-related pain, end of life).
- ***Consider*** a weaning trial for patients with chronic pain (e.g., reduce dose by 10%-20% every 1–2 weeks) for patients who are not receiving opioids for cancer-related pain or end-of-life care.
- ***Discuss*** alternative methods of pain relief with patients and staff.
- ***Implement*** alternative pain treatments during weaning.
- ***Advise*** the patient to keep a pain diary
- If the patient refuses weaning or alternative treatment, ***document*** the reasons, attempt to educate the patient, and reinforce a commitment to adequate pain relief.
- ***Assess*** all PRN opioid use in patients who cannot verbalize pain and consider weaning trials.
- ***Discuss*** the assessment findings with the patient's family or legally authorized representative.
- If a trial of opioid gradual dose reduction (GDR) fails, ***document*** the reasons for the failure.
- ***Discuss*** GDR failures with nursing staff to try to identify better treatment options for these patients.
- Periodically ***reassess*** the patient's pain and need for the current doses and frequency of opioid use, and make appropriate changes.

TABLE CONTINUED

TABLE 35 continued

Key Steps to Optimizing Opioid Use in PALTC Facilities

Step 4: Staff Education

- ***Provide*** medical practitioners, nursing staff, and other IPT members with information and in-service training about opioid-prescribing guidelines.
- ***Discuss*** IPT members' roles in pain assessment (*see* **Table 5**) and in offering alternative pain-control measures (e.g., heat, ice, massage, range of motion).
- ***Stress*** the importance of IPT members *not* asking medical practitioners to order specific pain medications for patients.
- ***Clarify*** the indications for, limitations, and risks of opioids for managing pain in PALTC patients (e.g., increased risk of falls, confusion, urinary retention, behavior and mood disturbances).
- ***Stress*** the importance of educating patients and limiting opioid use to less than 3 months. .
- ***Explain*** that patients who receive long-term opioids may complain of more pain, not less.

Adapted with permission from a process developed by Jean Storm, D.O., CMD, Erie PA

RISK MANAGEMENT AND SAFETY ISSUES

QUESTION 23: How should a facility monitor for and address issues of opioid-related disorders in patients?

Drug Seeking and Addiction

Given the prevalence of substance dependence and substance use disorders in society generally, PALTC facilities can anticipate caring for individuals with drug dependence and substance use disorders, regardless of whether or not they are in pain.

Patients can be drug seeking while also having pain. The pain may warrant treatment, but not necessarily with the drugs or doses that the patient wants or has been taking.

In addition, inadequate pain management can result in **pseudo-addiction** (i.e., drug-seeking behaviors that may look like red flags for substance use disorder). These behaviors can result when analgesics are prescribed in inadequate doses or at intervals that exceed a medication's duration of action.

In addition to screening patients for substance use disorders,[133] practitioners and staff should screen for mental health issues, including a personal and family history of alcohol or drug abuse. Where relevant, a state or regional Health Information Exchange, Prescription Drug Monitoring Program, or similar resource can also help identify a patient's history of opioid prescriptions.

Staff and practitioners should seek, document, discuss, and address clues to opioid seeking, dependence, and addiction. Although none of the individual clues for identifying these problems (Table 36) alone constitutes proof that drug seeking exists, the presence of several of them together may strongly suggest the possibility.

TABLE 36
Clues to Potential Substance Use Disorders

- Consistently vague, general, nonspecific pain symptoms
- Pain that does not match known anatomy or natural course (e.g., location, radiation)
- No meaningful improvement in symptoms over time despite multiple changes to medications and doses
- Demands for every dose to be given ahead of time
- Insisting routinely that medication be given immediately when due
- Little or no improvement in relief proportionate to the increases in and total amounts of analgesics administered
- Active and happy within minutes of a dose despite ongoing complaints of excruciating pain
- Refusal to try any pain treatment other than opioids, even as a baseline
- Demanding the desired medications and doses with intimidating or threatening behavior toward staff
- Refusal to try dose reductions or substitutions, despite continuing pain complaints

When patients present several clues that suggest possible drug seeking, or have a history of controlled substance use or abuse that puts them at risk for drug seeking, staff and practitioners should clarify the symptoms and physical findings. Possible strategies to address these issues include

- Involving the patient's family,
- Involving the facility ombudsman,
- Using a pain contract, and
- Setting appropriate limits for prescribing opioids for the patient.

A number of references and resources offer recommendations related to managing individuals with substance use disorder, including those with pain.[140] [141]

QUESTION 24: How should a facility monitor for and address issues of drug diversion among staff, residents, and others?

Drug Diversion

Drug diversion is an ongoing concern in all health care settings, including PALTC facilities, for several reasons (e.g., transient staff, numerous opioid prescriptions, minimal supervision on various shifts, many short-stay patients with substance use disorders, many patients unable to report about their medications or their pain).

Every PALTC facility must establish and implement meaningful policies and protocols for the oversight, control, monitoring, and disposal of opioids, consistent with federal and state regulations. Medical practitioners and facility staff and management should remain alert to issues of possible diversion, theft, and illicit use of opioids within the facility. Facilities should review opioid control and drug-diversion issues as part of their Quality Assurance and Performance Improvement process as well as their review of pain management.

Practitioners can help by

- Limiting opioid orders and doses and striving to switch patients to non-opioid analgesics whenever possible,
- Paying close attention to requests from staff to add medications or increase doses of existing medications,
- Requesting and reviewing nursing documentation about a patient's pain to see whether the current treatment regimen and staff or patient requests for medications are warranted
- Carefully identifying parameters for administering PRN opioids, and
- Limiting the duration of opioid prescribing and the number of opioids ordered upon a patient's discharge or transfer.

Implications: All facilities should review their pain management processes and results, based on identified quality criteria (not just outcomes), and make adjustments accordingly. All facilities have a responsibility to have rules for prescribing and to oversee pain management and prescribing practices.

REGULATORY AND SURVEY CONSIDERATIONS

QUESTION 25: How should facilities and practitioners take into account nursing home regulations and surveys in managing pain?

Staff and practitioners in the PALTC setting are concerned about federal and state nursing home regulations related to pain management and about performance on pain-related quality measures. Regulatory expectations for pain management are identified in the Centers for Medicare & Medicaid Services' *State Operations Manual*—primarily §483.25(k) Pain Management, F697. Federal regulations and surveyor guidance do not mandate how to manage pain, and state surveyors vary in their ability to appraise pain management fairly and consistently (e.g., whether appropriate and timely treatment has been prescribed and given, or the validity of patient complaints of inadequate pain relief).

To anticipate and address any survey concerns, medical practitioners and facility staff should recognize that regulatory compliance must start with clinically appropriate care. This can be achieved by following the steps in this CPG and in cited references (e.g., assessing and describing pain, identifying causes, giving treatments, and monitoring results). Simply giving pain medication is not necessarily evidence of either meeting regulatory requirements or "doing the right thing" in regard to pain management.

It is imprudent to prescribe unnecessary or inappropriate medications, including opioids, based primarily or solely on either patient or family threats or intimidation or regulatory and survey considerations. Furthermore, regulatory guidance states that practitioners are not expected to order medically inappropriate interventions on request or demand, as follows:

> **"The resident has the right to request treatment; however, facility staff are not required to provide medical treatment or services if the requested treatment or services are medically unnecessary or inappropriate."[142]**

Table 37 lists the information and documentation pertaining to a patient's pain management that facilities and practitioners should be able to present to surveyors to try to demonstrate compliance with expected care. All of it has been covered in this CPG; therefore, following the basic steps in this CPG should strongly support regulatory compliance.

TABLE 37

Documenting Pain Management Processes for Surveyors

Facility staff and practitioners should be able to present sufficient detailed information and documentation to demonstrate the following to surveyors:

- How they are managing a patient's pain
- How they have decided on a patient's current treatment plan, including the analgesic regimen
- How they decide that a patient needs opioid analgesics
- How pain relief goals are identified
- How they monitor for medication effectiveness and adverse effects
- What they do when adverse effects of pain treatments are identified
- How they decide to adjust the treatments over time

RESOURCES

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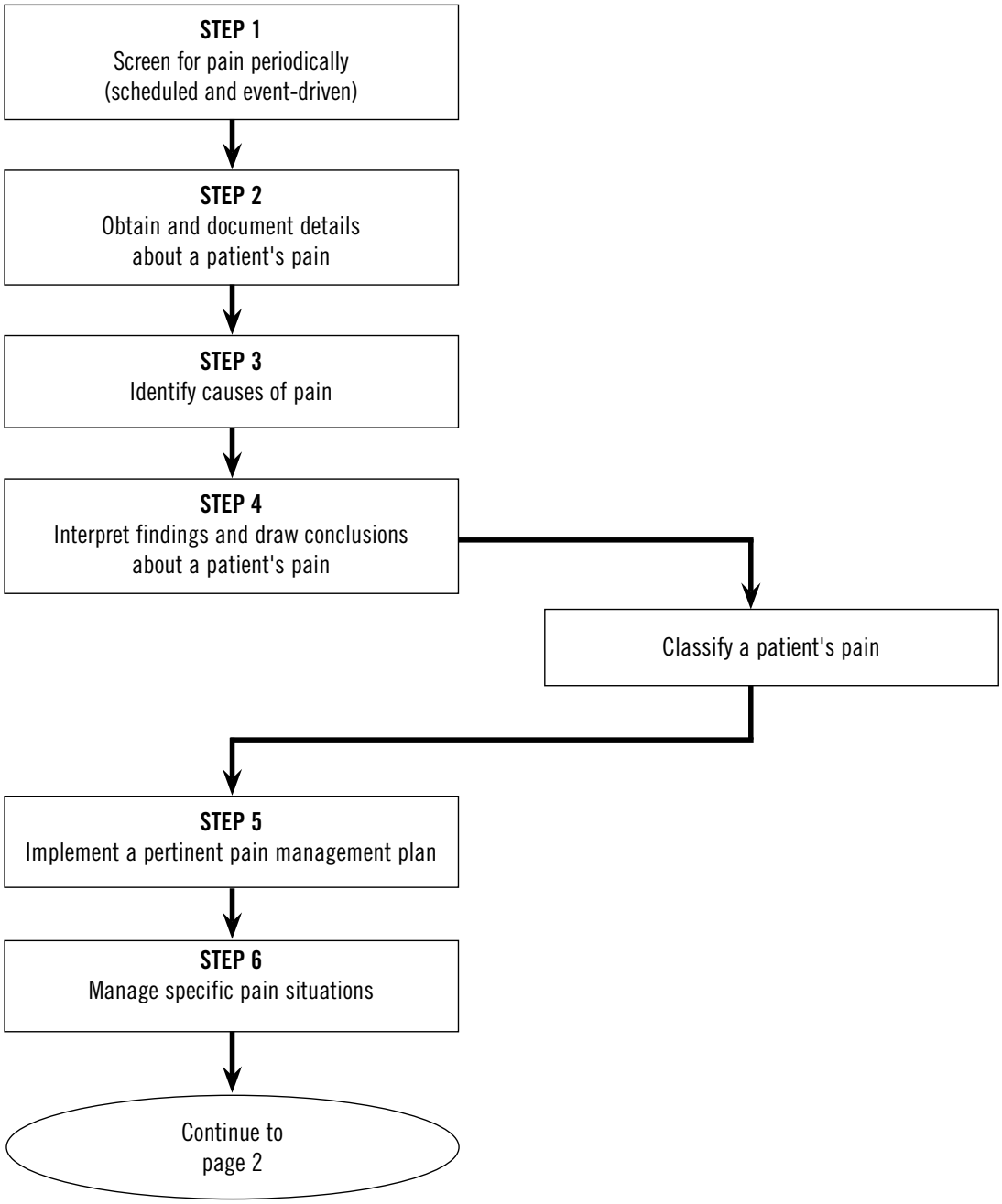
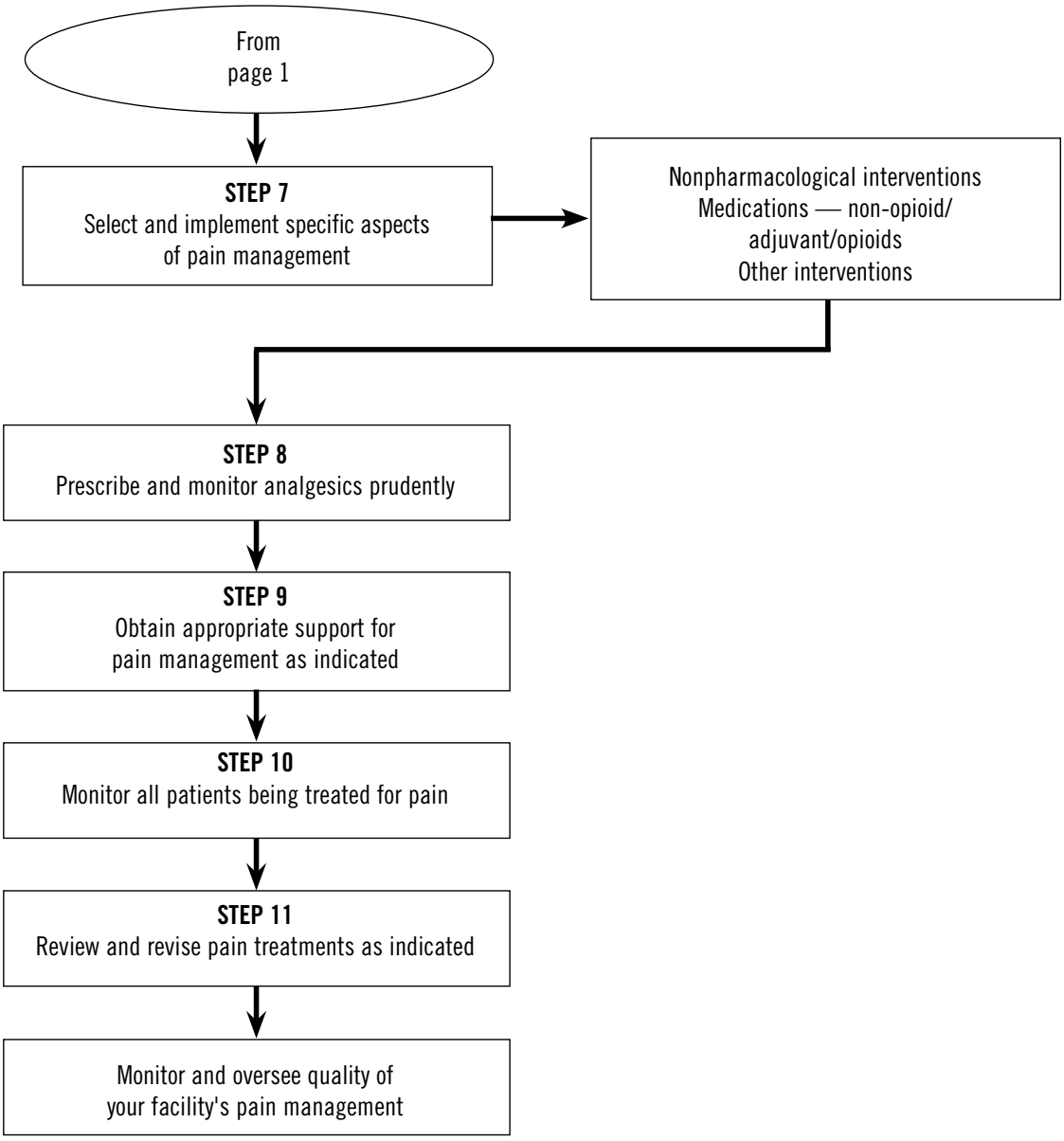
This is the Pain Management in the Post-Acute and Long-Term Care Setting algorithm to be used in conjunction with the written text of this clinical practice guideline. The numbers next to the different components of the algorithm correspond with the steps in the text.

ALGORITHM

Pain Management in the Post-Acute and Long-Term Care Setting **Page 1 of 2**




From page 1
STEP 7
Select and implement specific aspects of pain management
Nonpharmacological interventions
Medications — non-opioid/ adjuvant/opioids
Other interventions
STEP 8
Prescribe and monitor analgesics prudently
STEP 9
Obtain appropriate support for pain management as indicated
STEP 10
Monitor all patients being treated for pain
STEP 11
Review and revise pain treatments as indicated
Monitor and oversee quality of your facility's pain management

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