



**QUICK LOOK
NURSING**



PAIN MANAGEMENT

Second Edition

**Margaret Saul Laccetti
Mary K. Kazanowski**



Quick Look Nursing: Pain Management

Second Edition

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How to use

Quick Look Nursing: Pain Management, Second Edition

This guide is intended as a quick reference. Each chapter begins with the following two features:

- **Quick Look at the Chapter Ahead**—summarizes the key information in each chapter
- **Terms**—glance at a checklist of key terms appearing within the chapter and check them off as you learn their definitions

Each chapter has learning features to help highlight key information—these are the “take home points” you shouldn’t miss!



Closer Look—closely examines key points in greater depth



Quick Facts—highlights important tidbits and facts



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Questions to Ask—lists questions you should ask patients and caregivers



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*Once again, this is dedicated to my men:
Tony, Andy, and Benjamin.
You are my life, my loves, and my reasons for being.*

Margaret Saul Laccetti, PhD, RN, AOCN, ACHPN

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*I dedicate this book to all the patients and family caregivers
who have taught me so much about the experience of pain.*

Mary Kazanowski, PhD, APRN, BC, CHPN

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Thank you to all of the patients, families, students, and fellow healthcare professionals who continue to teach me how magical it is to be able to care for others.

Margaret Saul Laccetti PhD, RN, AOCN, ACHPN

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Mary Kazanowski, PhD, APRN, BC, CHPN

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INTRODUCTION

Pain, defined as an unpleasant sensory or emotional experience arising from actual or potential tissue damage, is one of the most common reasons a patient interacts with a healthcare professional. It is experienced by individuals across the lifespan, and all along the trajectory of illness. Even otherwise healthy individuals may experience pain, as a warning system or protective mechanism. It is a subjective symptom; experienced by the patient, pain may occur with no visible objective signs or symptoms.

There are multiple and varied causes of pain. The experience can be related to trauma, stress, surgery, illness, hormonal changes, childbirth, inflammation, and ischemia. Manifestations of pain can be inconsistent, varying with the cause, site, and type of pain, as well as with patient-related variables. These variables can include physiologic, psychosocial, and cultural elements. Developmental or age-related physical changes, like myelination in infants or decreases in peripheral sensation in elder adults, may interfere with pain as a protective mechanism. Cognitive development, discussed later in this book, also affects the experience of pain. Cognitive impairment may reduce the patient's ability to express pain, resulting in undertreatment. Anxiety, fear, or identification of pain with serious illness may exacerbate a patient's pain experience. Family perceptions of pain or the meaning of the pain may also alter the experience or the patient's way of expressing or describing pain. Gender, ethnicity, socioeconomic status, access to health care, and previous painful episodes all affect pain.

Frequently, severe pain that restricts activity or otherwise interferes with daily living is the precipitating factor for seeking out medical care. When daily living is not seriously affected, self-treatment for pain is a common choice. When self-care is not successful, medical care is an alternative.

Due to the complex nature of pain, providing relief is a challenging and multifaceted undertaking. Pain management is an ongoing process. It is frequently a negotiation between patient and healthcare provider. A comprehensive pain assessment is an essential step in designing interventions appropriate for each specific instance of pain. A plan of care must be constructed and implemented for each individual. Then, evaluation and modification of the plan will promote optimal pain management. In addition to considering patient-specific factors, a variety of management options should be considered and incorporated, including both pharmacologic and nonpharmacologic methods, as appropriate.

To be adequately prepared, healthcare professionals must pursue continued education regarding multiple methods of assessing and managing pain. In addition, personal biases, cultural elements, and financial considerations are important aspects included in plans for pain management.

The Joint Commission has identified pain as the fifth vital sign, an element necessary to assess in evaluating any patient's state of health. Historically, pain has been inappropriately managed or under-managed in the American healthcare system. A primary reason for this is fear of narcotic addiction. Through developing an understanding of the mechanics of the pain phenomenon, as well as of the pharmacology of medications, healthcare professionals will improve pain management. Incorporating nonpharmacological methods will add to the development of new and innovative strategies to relieve or prevent pain.

This text can be used to enhance the healthcare professional's ability to assess and manage pain competently. It will allow students and both new and experienced professionals to review the causes and physiology of pain, implications of developmental stages, age, and physical and psychosocial aspects of pain management. Both pharmacologic and non-pharmacologic methods of managing pain are presented and reviewed, in hopes that both will be of use in caring for the patients and families experiencing pain. Finally, selected pain experiences are used to illustrate assessment, management, and evaluation measures. It is the hope of both authors that this information will be useful in assessing, managing, and preventing pain as an integral part of health care.

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CONTENTS

Acknowledgments	vii
About the Authors	viii
Introduction	ix
Chapter 1 Pain Theory	1
Review Questions.....	17
Answers and Rationales	19
Chapter 2 Pain Assessment	21
Review Questions.....	37
Answers and Rationales	39
Chapter 3 Interventions for Pain	41
Review Questions.....	62
Answers and Rationales	65
Chapter 4 Acute Pain in the Adult Client	67
Review Questions	80
Answers and Rationales	82
Chapter 5 Pain in the Surgical Client	84
Review Questions.....	99
Answers and Rationales	101
Chapter 6 Escalating Pain in the Adult with Cancer	103
Review Questions.....	114
Answers And Rationales.....	115
Chapter 7 Pain in the Adult with HIV	117
Review Questions.....	129
Answers and Rationales	130
Chapter 8 Low Back Pain in Adults	132
Review Questions.....	144
Answers and Rationales	145
Chapter 9 Pain Management in Children	147
Review Questions.....	162
Answers and Rationales	164
Chapter 10 Pain and the Elderly	166
Review Questions.....	187
Answers and Rationales	189

Chapter 11	Treatment of Pain at the End of Life	191
	Case Study Questions.....	203
	Case Study Answers.....	204
	Review Questions.....	205
	Answers and Rationales.....	207
Chapter 12	The Variable Treatment of Pain	209
	Review Questions.....	219
	Answers and Rationales.....	220
Chapter 13	Strategies to Assist Family Caregivers Treating Pain and Suffering at the End of Life.....	222
	Review Questions.....	234
	Answers and Rationales.....	235
	Index.....	237



QUICK LOOK AT THE CHAPTER AHEAD

Pain is a subjective symptom experienced by individuals for a wide variety of reasons. Pain can be acute or chronic. Manifestations of pain can be inconsistent, varying with the cause, site and type of pain, as well as with patient-related variables.

Physiology of pain includes both the central nervous system (CNS) and the peripheral nervous system (PNS), mediated through a variety of chemical substances called neurotransmitters. Pain management includes methods addressing both the CNS and the PNS.

Different types of pain include superficial, visceral, somatic, neuropathic and pain resulting from metabolic need or metabolic excess.

1

Pain Theory

TERMS

- acute pain
- central nervous system
- chronic pain
- depression
- intermittent claudication
- neuropathic pain
- neurotransmitters
- nociceptors
- objective
- pain
- peripheral arterial disease
- peripheral nervous system
- phantom pain
- prostaglandins
- referred pain
- subjective
- superficial pain
- visceral pain

CASE STUDY

Ms. P., a 27-year-old married woman, comes to the emergency department of a local community hospital complaining of severe pain in her back and right flank. She is pale and nauseated, and her skin is warm and dry. Skin turgor is poor. She appears dehydrated. On assessment, she localizes her pain in the right flank as well as in the central portion of her back. It is unrelieved by changing position. Prior to coming to the hospital, she attempted to relieve the back pain through use of a heating pad. This was not successful.



PAIN: A SUBJECTIVE SYMPTOM

Pain is a universally experienced phenomenon. It is **subjective**, a perception of the individual. Pain has been described as being just what the individual experiencing it says it is. Being a subjective experience, severity, duration, and meaning are determined by the individual. Pain is characterized by some **objective** signs and symptoms; however, it cannot be assumed that all people will exhibit these objective signs as a part of the pain experience. Clients describe the experience as acute or chronic discomfort. In descriptive assessment, the type and severity of the pain are often characterized as agony, pulling, pressure, burning, stinging, searing, stabbing, dull, aching, and so on. More than one type, sensation, or source of pain may coexist for one client at one time. It is a phenomenon that *must* be carefully assessed to plan interventions.

There are multiple and varied causes of pain. The experience can be related to trauma (major or minor), stress, surgery, illness, hormonal changes, childbirth, inflammation, and ischemia. Episodes of pain occur in the client in clinical as well as nonclinical situations. Frequently, severe pain that restricts activity or otherwise interferes with daily living is the precipitating factor for seeking medical care. When daily living is not seriously affected, self-treatment for pain is a common choice. When self-care is not successful, medical care may become an alternative choice.



Pain is just what the individual experiencing it says it is.

Acute Pain or Chronic Pain?

Acute pain usually occurs with an identifiable precipitating factor. It varies in type and severity, and it may be constant or intermittent. Description of pain as *acute* does not refer to severity; rather, it describes the time period in which the particular pain is experienced. Episodes of pain that are resolved in less than 6 months are considered to be acute. **Chronic pain** refers to episodes that take more than 6 months to resolve. This does not presume that relief for acute or chronic pain cannot be successfully initiated within that time frame. Rather, it indicates that the cause or precipitating factor is identified and successfully eliminated or controlled before or after a 6-month time span.

Symptoms of acute and chronic pain frequently differ on objective assessment (**Figure 1-1**). The client in acute pain more closely fits the stereotypical or traditional picture of pain. Activities such as grimacing, splinting, guarding, moaning, or crying are often observed, although they may not directly correlate with severity. The client with acute pain usually exhibits a change in routine level of activity, with progressively severe pain preventing successful completion of activities of daily living (ADLs). The client may become anxious or agitated with acute pain. This type of

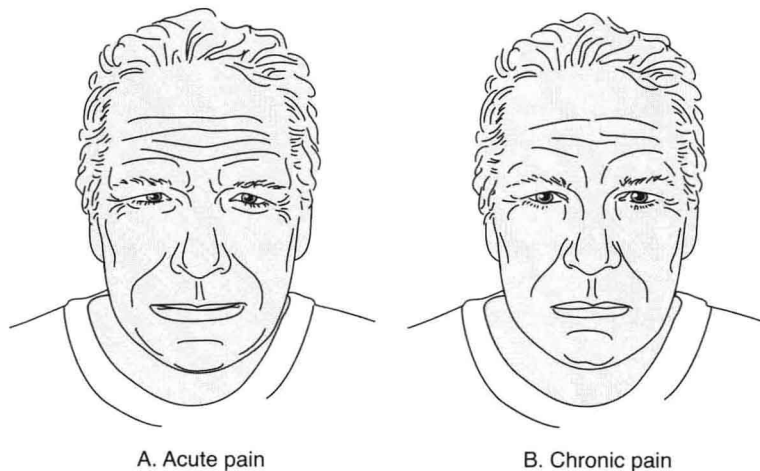


Figure 1-1 A. Acute pain denoted by obvious distress, autonomic symptoms, grimacing, and crying. B. Chronic pain denoted by not-so-obvious distress and flattened affect.

pain is seen as predictable. It can usually be controlled or eliminated; it is expected and self-limiting with the cause or precipitating factor. Physical assessment of the client in acute pain usually reveals an increase in vital signs, specifically pulse and respirations (hyperactivity of the autonomic nervous system). Blood pressure may be seen to either increase or decrease, with a decrease indicating potential for shock. The client in acute pain is frequently pale and diaphoretic.



Symptoms of acute and chronic pain frequently differ on objective assessment.

Chronic pain manifests quite differently. The client does not look like someone in pain by traditional standards. The chronicity of the painful experience has caused the expression of pain to differ, especially in relation to restrictions with ADLs. Chronic pain is not predictable and has no anticipated end point. It is frequently undertreated because the healthcare provider does not assess the client as being in significant pain. There is commonly no remarkable deviation in vital signs or other observable physiological parameters upon assessment. Fatigue and social isolation are common sequelae of chronic pain. Rather than grimacing or agitation, the client in pain may exhibit slack facial features, reduced activity levels, and a flattened affect. **Depression** may accompany chronic pain. It is essential for the healthcare provider to recognize, acknowledge, and treat chronic pain as the client describes it. Treatment of chronic pain includes long-term use of prescribed interventions. With this in mind, interventions should be cost effective or affordable, easy to understand and practice, readily available, and believable. By considering these factors for each individual client, compliance with treatment will be more commonly assured. It is also important to frequently reassess the chronic pain client.



Physical assessment of the client in acute pain usually reveals an increase in vital signs, specifically pulse and respirations.



PHYSIOLOGY OF PAIN

The sensation of pain involves both the **peripheral** and **central nervous systems**. It is primarily a warning signal to avoid injury. Response to pain is often reflexive. The central nervous system mediates other responses.

Specialized nerve cells, called **nociceptors**, are sensory receptors found in skin, muscle, viscera, and connective tissue. These nerve cells respond to stimulation caused by thermal, mechanical, or chemical injury. The response is release of chemical mediators including **prostaglandins**. The chemical mediators cause the nociceptor to “fire,” carrying the pain impulse to the spinal cord. These impulses travel along afferent nerve fibers, either myelinated A-delta fibers or unmyelinated C fibers.



A diagnosis of chronic pain may be missed by the clinician because there is commonly no significant deviation in vital signs or other observable physiological parameters upon assessment.



Is my patient having severe pain, even if he doesn't look like he is in pain?

Gate Control Theory

The gate control theory, first proposed by scientists in 1965, argues that pain is not transmitted directly from the spinal cord to the central nervous system. Rather, a complex nerve structure in the dorsal horns of the spinal cord can inhibit transmission of the pain message to the brain. These gates operate by means of various **neurotransmitters** including substance P and somatostatin. Prevention of transmission to the brain also prevents the recognized sensation of pain. The response to the injury is reflexive, and the source of the unpleasant stimulus is eliminated. The stimulus only becomes pain as it is sensed consciously.

Sensory information from various areas within the body may converge at spinal neurons. This convergence is responsible for the sensation of referred pain, the pain that is perceived in a part of the body other than where the injury or stimulus has originated. By utilizing the gates in the spinal dorsal horns, a variety of methods to ‘close the gate’ to painful stimuli are utilized to relieve or prevent pain.



TYPES OF PAIN

There is a wide variety of pain and pain sensations. The variety is a product of the multiple causes of pain as well as the unique responses to painful stimuli, especially the components of higher central nervous system responses. Pain, as discussed earlier, can be acute or chronic. Symptoms of these types differ, as do the potential interventions for control and

relief. The emotional reaction of the client also changes in response to acuity or chronicity.

Superficial Pain

Superficial pain is extremely common across the lifespan. It is the result of stimulation of the most superficial nociceptors in cutaneous tissue, such as skin or mucous membranes. These areas are rich in afferent fibers, since one of their functions is to gather information about the world outside of the organism. Given the wealth of receptive nervous tissue in these areas, superficial pain can be experienced by the individual as quite severe or intense. Superficial or cutaneous pain may result from mechanical injury, such as scraping, abrasion, or compression (pinching the tissue). Thermal injury, including both heat and cold, is another cause of superficial pain. Finally, chemical injury causes this type of pain. It is frequently described in two distinct patterns: the first, with rapid, acute onset at the time of injury, is frequently a sharp piercing or stinging sensation; the second is cutaneous pain that arises well after the painful event and may be a deeper burning sensation that is longer-lasting and more difficult to relieve. It is easily localized by the client, who can usually identify the exact location as well as the precipitating event. Potential interventions may be local—such as the application of cold, heat, or pressure—or systemic. Superficial pain is not always accompanied by obvious signs of injury. When there is obvious injury, fear, anxiety, or other intense emotions may complicate the pain and the efforts to offer relief.



Superficial pain is characterized

in two distinct patterns: rapid, acute onset at the time of injury, consisting of a sharp piercing or stinging sensation, or cutaneous pain, occurring well after the painful event, consisting of a deep burning sensation that is longer-lasting and more difficult to relieve.



Fear, anxiety, or other intense emotions may complicate pain management.

Visceral Pain

Pain that arises from stimulation of deeper nociceptors may be visceral (sometimes called organ pain) or somatic (structural pain). **Visceral pain** can arise in the thoracic, abdominal, pelvic, or cranial cavities. It is diffuse, poorly localized, and frequently difficult to identify with diagnosis.