Pain Management
Pain Facts; Pain Myths

What is pain?
Pain is the most common reason that people in the United States seek medical care. Every year, pain-related complaints result in:

- Approximately 140 million physician visits
- More than $100 billion in healthcare costs and lost work time.

More than 2.6 million people routinely take prescription medication for pain. But what is pain?

Pain can be defined as "an unpleasant sensory and emotional experience associated with actual or potential tissue damage."

It is important to remember that pain is very subjective. Pain is whatever the patient says it is. It is experienced differently by different people.

A number of factors can influence the way that different people experience pain:

1. Previous experience with pain
2. Meaning of pain for the individual
3. Beliefs about pain
4. Usual coping mechanisms
5. Psychological state

Family and social expectations can also play a role. The experience of pain may be influenced by the way that the patient was brought up to view and deal with pain, and by the expectations of the patient's culture or society. Finally, some people are physically more or less sensitive than others to actual or anticipated injury.

Acute and chronic pain
Pain is often described as either acute or chronic. These terms describe the duration of the pain and the way it may respond to treatment. They do not describe how severe the pain is.

Acute pain
Acute pain is caused by a specific physical condition. It includes such things as:

- Pain following surgery
- Pain of a sore throat
- Pain of an injury.

Acute pain has a well-defined onset, is temporary, is predictable, and is treatable. Once the condition causing the pain no longer exists, the pain will go away.

Chronic pain
Chronic pain is different because it may not have a specific onset or timecourse. Chronic pain:

- Lasts more than a month
- May not respond predictably to treatment
May not result from a particular injury or event.

Pain resulting from an injury or surgery may also be classified as chronic pain, if the pain continues much longer than the normal healing period.

Cancer Pain

Cancer pain is sometimes considered as a separate type of pain. Cancer pain can be acute or chronic. If the cancer is not curable, the pain may get worse and worse as the disease progresses. Cancer pain may be caused by:

- The disease itself
- Treatments (such as surgery, chemotherapy, and radiation)
- Infections.

Nociceptive and neuropathic pain

Pain can arise in two different ways:

1. Nociceptive pain - injury to body tissues which is transmitted to the brain by nerves
2. Neuropathic - direct damage to the nerves that transmit pain signals

Nociceptive pain results from actual damage to tissues. There are two sub-types: somatic pain and visceral pain.

Somatic pain involves injury to skin, joints, bones, or muscle. Patients commonly describe somatic pain as:

- Throbbing
- Aching
- Dull
- Pressure
- Sharp.

Somatic pain is very localized, meaning the patient can point to the spot that hurts.

Visceral pain is another kind of nociceptive pain. It involves damage or obstruction in the larger organs and it is generally difficult to localize. Visceral pain may be described as:

- Cramping
- Gnawing.

It may also be described similarly to somatic pain.

Neuropathic pain

Neuropathic pain comes from damage to the nerves that transmit pain signals. This can make areas more sensitive or result in pain that occurs suddenly with no warning. Patients commonly describe neuropathic pain as:

- Burning
- Shooting
- Tingling
- Numbing
Examples of neuropathic pain include such conditions as "phantom-limb syndrome," which occurs when a limb has been amputated but the brain still receives pain impulses from it, or diabetes related nerve damage, which can make it feel as though one is walking on nails. Neuropathic pain may not respond well to traditional pain treatments.

**Effects of pain**
Every patient has the right to adequate pain control. In addition to discomfort, lack of pain relief can affect:

- Immune system function
- Activities of daily living, such as sleep, nutrition, and mobility
- Ability to work
- Length of hospital stay.

Chronic pain and cancer pain can cause the most serious problems by:

- Interfering with the patient's lifestyle and activities
- Reducing the patient's quality of life
- Wearing the patient down
- Causing the patient to give up hope
- Causing the patient to consider suicide.

**Myths about pain**
There are many MYTHS about pain. These can have a negative influence on effective pain management.

One common MYTH is that pain medication (especially opioids like morphine, Demerol, or codeine) should not be used for long-term illness until there is no other choice, because they are addictive. This may mean, for example, that an opioid medicine may not be ordered for someone with cancer pain until the patient is dying, in order to prevent addiction. In some cases, pain medication may be withheld even at the end of life, because of side effects.

Other common MYTHS are:

1. Chronic pain cannot be managed
2. Sleep is a sign that a patient has no pain
3. Pain in the absence of obvious injury or other factors is a sign of serious illness
4. People of certain ethnic or cultural backgrounds will over-report pain and other groups will under-report pain
5. Someone in pain will always have changes in vital signs.

**Assessment of Pain**

**When to assess pain**
Pain is now considered the fifth vital sign. As with the traditional vital signs, steps must be taken to correct the situation when assessment shows something wrong.

Every patient has the right to effective pain management. Treatment of pain is also important to the patient's recovery. Uncontrolled pain can:

- Lengthen the patient's hospital stay
- Decrease the patient's activity level
- Cause the patient's body unnecessary stress.
Like the other vital signs, pain needs to be assessed at certain times during treatment. This should begin when the patient is first admitted. After admission, follow-up pain assessments should take place:
- At regular intervals
- After any intervention to decrease pain (to find out if the intervention helped)
- At discharge.

The Joint Commission on Accreditation of Healthcare Organizations (JCAHO) has standards for the assessment and management of pain. Under JCAHO standards:
1. All patients are screened for pain when admitted
2. Patients are re-assessed regularly for pain
3. Patients are taught about pain control
4. Patients are given discharge instructions about pain management.

Physical signs of pain
There are a number of physical signs that can show that someone may be in pain. Physical signs include:
- Grimacing
- Crying
- Moaning
- Tension
- Withdrawal
- Restlessness
- Guarded movements
- Rubbing area of pain.

Increased pulse, respirations, and blood pressure may also be signs of pain. These may not be accurate signs, however, so they should only be used when the patient is not able to report pain verbally.

Record any physical signs you see, as well as the patient’s report of any pain. This will help you and other staff to be alert for the signs later. Remember that every patient experiences pain differently. Any signs you observe apply only to that patient.

How to assess pain
Even though there may be some physical signs, the best indication of pain is what the patient says.

To assess pain, your facility has a pain assessment tool. The tool will have some kind of a rating scale. For example, it might ask patients to rate their pain on a scale from 1 to 10, with 1 being no pain and 10 being the worst pain imaginable. Some facilities use a graphic scale with faces that range from a smiley face to one with a big grimace of severe pain. You need to become familiar with the assessment tool your facility uses.

When a patient does report pain, you need to know the following information:

1. **Onset:** When did the pain begin?
2. **Duration:** Is the pain continuous, or does it come and go? If the pain is not continuous, how long does it last?
3. **Location:** Where does it hurt?
4. **Description:** What kind of pain is it (for example: burning, stabbing, cramping, aching, biting, dull, sharp, gnawing)?
5. **Severity:** How severe is the pain (using your facility's pain assessment tool)? What kinds of things make the pain worse? Is the pain associated with any particular activity (for example: eating)?

6. **Relief:** Does anything relieve the pain and, if so, for how long? What prescribed or over-the-counter medications (including dosage and frequency) has the patient taken to relieve the pain?

7. **Effects:** How does the pain interfere with the patient's normal activities of daily living?

In addition to assessing patients for pain, you should discuss your facility's policy regarding pain control. Explain to the patient and family the facility's commitment to pain management, and tell them whom to notify if:

- The patient experiences pain
- The pain is not relieved after an intervention.

**Pain scales for pre- and non-verbal patients**

Most organizations employ one or more of a variety of visual pain scales. The patient can identify the severity of pain by indicating its location on a continuum.

<table>
<thead>
<tr>
<th>No Pain</th>
<th>Moderate Pain</th>
<th>Worst Pain</th>
</tr>
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<tbody>
<tr>
<td>0</td>
<td></td>
<td>10</td>
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**Management of Pain**

**Pain management concepts**

Pain management decisions are not made by healthcare professionals alone. Patients and families are also involved in the process. Opportunities should be provided for patients and families to discuss:

- The pain experience
- Expectations and beliefs about pain
- Effectiveness of pain management interventions.

When developing a pain management strategy, it is important to anticipate the patient's pain needs and to take a **preventive approach**. This is especially true when the patient is undergoing procedures that are known to be painful, such as surgery.

It is also important to recognize that pain can increase because of:

- Social and emotional factors
Changes in disease state.

Remember: It is easier to manage pain BEFORE it becomes severe.

A preventive approach to pain management can help to minimize stress on the patient and family. This approach also reduces problems associated with poor pain management, such as:

- Longer hospital stay
- Reduced mobility
- Increased stress on immune system
- Decreased energy reserves.

Pain is a unique experience for each individual, and pain management strategies should be designed to meet the needs of each individual patient. Patient education is also an important part of the process. Effective pain management includes:

1. Involving patients and families in all pain management decisions
2. Explaining how the treatment plan works and what kinds of things the patient should report
3. Rejecting MYTHS about opioid use and fears of addiction
4. Informing the patient and family of the facility's commitment to pain relief and how to get help if needed
5. Teaching the patient about continuing pain management as a part of the discharge process.

Types of interventions
Pain control measures must be selected to meet the individual needs of each patient. This requires an assessment of the pain and an assessment of the effectiveness of previous interventions.

Pain control measures fall into two categories:

1. Pharmacological interventions
2. Non-pharmacological interventions

Pharmacological interventions are pain control methods that use medications. These include:

1. Opioids, such as morphine and codeine
2. Non-opioids, such as acetaminophen
3. Adjuvants, a variety of drug types that are usually used to supplement opioids or non-opioids.

Non-pharmacological interventions are alternative measures that do not use drugs. The methods that are selected will depend on the needs of the patient. Non-pharmacological pain management methods include:

1. Relaxation and distraction techniques
2. Physical interventions.

Relaxation and distraction techniques
These techniques work best if they are practiced before they are needed for pain relief. They include:

- Deep breathing (with focus on breathing techniques)
- Listening to music
- Guided imagery
- Biofeedback
- Hypnosis.
Physical Interventions
Physical interventions that can help in the treatment of pain include:

- Massage
- Exercise (especially for chronic pain)
- Application of heat or cold (not longer than 20 minutes; be careful of extremes of heat or cold that could damage tissue)
- Acupuncture
- Position change
- TENS unit (trans-electrical nerve stimulation therapy).

A TENS unit controls pain by stimulating the nerves at the pain location and helping to block pain signals.

A mechanism of action of acupuncture has not been determined. There is no evidence for the "energy fields" mechanism commonly described, and much evidence against its existence. The effect may simply be placebo, but in any case, many patients report pain relief with acupuncture and it is widely accepted as a legitimate physical intervention for pain.

Non-opioid medications
When using drugs to control pain, the best strategy is to use the least strong drug which still gives adequate pain relief. If the intervention does not relieve the pain, it may require:

- An increase in dosage
- An increase in frequency
- An increase to the next level of drug.

Usually, pain control measures begin with non-opioid (non-narcotic) drugs. Non-opioids, such as acetaminophen (Tylenol) are generally available in both over-the-counter and prescription strengths. Non-opioids are usually taken orally or by suppository. The most common side effect of acetaminophen is hepatotoxicity (liver involvement). This is most common with an overdose.

Non-opioids also include NSAIDS (non-steroidal anti-inflammatories), such as Advil and Motrin. These may also be used in combination with opioids. The most common side effects of NSAIDS are:

- Gastric irritation
- Prolonged bleeding time.

Opioids and adjuvants
The name, opioids, refers to drugs that are based on opium. They can be either natural or synthetic. Opioids are used for moderate to severe pain.

Pure agonists
One class of opioids, known as "pure agonists", which refers to their specific mechanism for pain relief, includes:

- Morphine
- Hydromorphone (Dilaudid)
- Fentanyl
- Codeine.

Increased dosage of pure agonists provides increased analgesia (pain relief) and increased side effects. Side effects include:
Euphoria
Sedation
Constipation
Nausea
Vomiting
Itching
Urinary retention
Hypotension
Respiratory distress.

Over time, patients may develop a tolerance for opioids, meaning they require higher dosages to achieve the same pain relief. However, the usual reason for increasing dose is because of disease progression. Patients who have received opioids for a long period of time may experience withdrawal when the drug is stopped. This means that patients should not be taken off the drug suddenly but should gradually decrease the drug level over several days.

There are two important things to remember about opioids and other pain drugs:

1. Drug-seeking behavior is NOT a sign of addiction.
2. Drug-seeking behavior IS a sign of inadequate pain relief.

Other opioids
Other types of opioids, nalbuphine (Nubain) and butorphanol (Stadol), provide less analgesia, but also fewer side effects. There is also a limit to their effectiveness. After a point, higher doses do not increase analgesia. These drugs are sometimes used to reverse analgesia and side-effects caused by pure agonists.

Administration of opioids
Opioids can be given orally. As pain level increase, they are administered in other ways which deliver a higher level of pain relief:

- Sublingually (under the tongue)
- Buccally (placed in the cheek area if patient unable to swallow)
- Dermal patch (for continuous release)
- Intravenous (IV) by continuous infusion or intermittent dosage
- Patient-controlled analgesia (PCA) using intravenous delivery
- Intramuscular or subcutaneous injection
- Suppository.

Adjuvants
Other drugs that may help in pain control are called adjuvants. These include:

- Corticosteroids
- Antidepressants
- Local anesthetics
- Anticonvulsants.

These drugs are used to:

1. Enhance the effectiveness of a primary analgesic
2. Limit the side effects of a primary analgesic (usually an opioid)
3. Treat concurrent symptoms that increase pain
4. Provide analgesia for certain types of pain that are not relieved by opioids.

End of Pain Management Lesson