



PAIN MANAGEMENT RESOURCE BOOK

The Pain Management Organizationally Advanced Service Improvement Systems (O.A.S.I.S.) Team has compiled this 2007 revision of the Sparrow Health System Pain Management Resource Book.

Our team name is The Pain Posse



Our mission: To Seek Out and Arrest Pain
Our motto: "Beyond Whiskey and a Bullet"

Information provided in this resource book is based on literature and recommendations of the American Pain Society (APS), the Agency for Health Care Policy & Research (AHCPR), and the International Association for the Study of Pain (IASP), and other authorities on pain. These tools are intended to assist in the effective and appropriate care of patients with pain. They may not be appropriate for all patients.

“P.A.I.N. = Please Address It Now”

Contents

	Section
Providing the Patient with Comprehensive Pain Management	1
Standards for Pain Management in the Acute Care Setting	2
Definitions	3
Physiology of Acute and Chronic Physical Pain	4
Pain Assessment	5
Treatment of Pain	6
Evaluation of the Effectiveness of Treatment	7
Barriers To Effective Pain Control	8
Suffering	9
Pain From A Pastoral Care Perspective	10
Appendices	11

LIST OF APPENDICES

Appendix: A

Joint Commission On Accreditation Of Healthcare Organizations Pain Assessment And Management Standards—Hospitals

Appendix: B

Clinical Principles Of Pain Management

Appendix: C

Additional Pain Physiology Information

Appendix: D

Type Of Pain

Appendix: E

Pain Assessment Tools Adopted By Sparrow

Appendix: F

Multi-Language Pain Control Guides

Appendix: G

Behaviors Potentially Indicative Of Pain

Appendix: H

Opioid Use In Patients With Substance Abuse History
Principles and Strategies for Opioid Use in the Patient with Substance Abuse Problems

Appendix: I

World Health Organization Ladder Of Analgesia

Appendix: J

Pharmacologic Interventions

Appendix: K

Effects Of Opioid Receptor Stimulation

Appendix: L

Cancer Pain Management Reference Card

Appendix: M

Complimentary Alternative Medicine (CAM) - Physical Interventions, Cognitive - Behavioral Interventions

Appendix: N

PCA (Patient Controlled Analgesia) And PCEA (E=Epidural) Tip Sheet

Appendix: O

Opioid Equivalencies

LIST OF APPENDICES

Appendix: P
Barriers To The Assessment And Treatment Of Pain

Appendix: Q
Reasons For Good Pain Control

Appendix: R
Pain Impact On The Dimensions Of Quality Of Life

Appendix: S
Pain Internet Resources

Providing the Patient with Comprehensive Pain Management

Sparrow Health System is committed to comprehensive pain management services for all patients. Our aim is to provide comfort, improve quality of life and minimize the occurrence of adverse physiological and psychological consequences associated with unrelieved pain.

Our goal is that the Sparrow Health System becomes a place, an institution, where patients' pain and suffering is believed and relieved.

Good effective pain management is not simple, but it is possible. It takes knowledge, and it takes, most of all, the will to do it.

The Sparrow Health System patient information booklet given to each patient, "Patient Rights, Responsibilities and Durable Power of Attorney" contains the following paragraph on Page 5:

The Right to Effective Pain Relief

“ You have the right to have your pain controlled, which includes receiving pain medication on a timely basis, receiving answers and information about risks, benefits and side effects of pain medication and treatment; and participating in decisions about your pain control, including suggesting changes in management or refusing treatment, if you wish.”

Pain Care Bill Of Rights

As a Person with Pain, You Have:

The right to have your report of pain taken seriously and to be treated with dignity and respect by doctors, nurses, pharmacists and other healthcare professionals.

The right to have your pain thoroughly assessed and promptly treated.

The right to be informed by your doctor about what may be causing your pain, possible treatments, and the benefits, risks and costs of each.

The right to participate actively in decisions about how to manage your pain.

The right to have your pain reassessed regularly and your treatment adjusted if your pain has not been eased.

The right to be referred to a pain specialist if your pain persists.

The right to get clear and prompt answers to your questions, take time to make decisions, and refuse a particular type of treatment if you choose.

American Pain Foundation. Available at <http://www.painfoundation.org>

Standards for Pain Management in the Patient Care Setting

Standard I – Patient Rights

Patients have the right to appropriate assessment and treatment of pain by competent providers.

This right includes the following care/treatment:

- A. Education re: pain and their roles in pain management.
- B. Initial assessment and reassessment of pain.
- C. Treatment based on individual needs.
- D. Evaluation and modification of pain management plan if needed.

Standard II – Patient Education

Patients will be educated on effective analgesia care.

- A. Patients receive information about their rights to and responsibilities in the assessment and management of their pain. Information is delivered via Patients Rights & Responsibility brochure/posters upon entry into the healthcare system.
- B. Patients are educated about the importance of pain assessment and management.
- C. Patients are educated about the use of the appropriate pain management scale (refer to Standard III).
- D. Special learning needs of the patient will be addressed following assessment of barriers to learning.

Standard III – Screening and Assessment

Patients will be screened for pain at the time of initial evaluation and as frequently as indicated but not less than once a shift (every 12 hours).

- A. Initial and on-going screens for pain will be conducted. Depending on patient status/condition, one of the following scales will be used.
 - 1) Adults, adolescents, and older children (including those with language barriers) who can say or point to a number, or who can point to a face:
Numerical Scale (0 – 10) or the Wong-Baker Faces Scale.
 - 2) For stoic or cognitively impaired adults, adolescents, children:
FLACC Scale
 - 3) Children:
Wong-Baker Faces Scale
 - 4) Neonates/Infants:
N-PASS, CRIES, FLACC Scale

Standard IV – Reassessment Post-Intervention

If intervention is required for pain management, pain will be reassessed and documented. Time intervals for reassessment are patient-specific. The following table describes the suggested time frame for reassessment based on the route that an intervention is provided:

1. IV or sublingual administration	15-30 minutes post intervention
2. IM, SC or PO administration	30-60 minutes post intervention
3. Transdermal administration *	12-16 hours post intervention
4. Non-pharmacologic techniques	30-60 minutes post intervention

* Also see section 7 in the SHS Pain Management Resource Book

If the nurse is not able to control the discomfort with the medication prescribed by the provider, then she or he will contact the provider and seek other analgesic orders.

Standard V – Patient Advocacy

If pain relief is inadequate (based on current orders), the nurse will collaborate with the physician, charge nurse, and if necessary follow the chain of command to get the patient's pain under control.

Standard VI – Documentation

Nursing diagnoses/problem focus and a plan of care for pain will be identified and documented.

- A. Plan of care will take into account patient's special needs:
 - 1) History of substance abuse
 - 2) Cognitive impairments
 - 3) Developmental age
 - 4) Socioeconomic and sociocultural components of pain

- B. Special patient populations, such as the chemically dependent, may require additional assessment, closer monitoring and more patient, family, and healthcare provider education.

Also see Appendix A for Joint Commission on Accreditation of Healthcare Organizations (JCAHO) Pain Assessment and Management Standards – Hospitals

Definitions

Like many other aspects of medical care, the management of pain is complex, difficult, and vitally important. Effective pain management requires effective communication with patients, extensive knowledge of human physiology and psychology, as well as extensive knowledge of the properties of the pharmaceutical agents used for pain relief.

Pain

“Pain is an unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage.”

- International Association for the Study of Pain

That definition covers everything from stubbing a toe, to post-surgical pain, to a heart attack, to chronic back pain or metastatic cancer pain. For persons with all-encompassing pain, whether or not associated with life-limiting disease, Dr. Cicely Saunders, founder of the modern hospice movement, described the concept of “total pain,” consisting of four interacting types of pain:

- Physical pain, which can be multiple individual physical pains
- Emotional or psychic pain
- Social or interpersonal pain, and
- Spiritual or existential pain.

Acute versus Chronic Pain

It is useful to distinguish between two basic types of pain, acute and chronic, and they differ greatly.

- **Acute pain**, for the most part, results from disease, inflammation, or injury to tissues. This type of pain generally comes on suddenly, for example, after trauma or surgery, and may be accompanied by anxiety or emotional distress. The cause of acute pain can usually be diagnosed and treated, and the pain is self-limiting, that is, it is confined to a given period of time and severity. In some rare instances, it can become chronic.
- **Chronic pain** is widely believed to represent disease itself. It can be made much worse by environmental and psychological factors. Chronic pain persists over a longer period of time than acute pain and is resistant to most medical treatments. It can — and often does — cause severe problems for patients. “Pain: Hope Through Research”, 2001, NINDS

Pain Management

“Pain management covers a number of methods to prevent, reduce, or stop pain sensations. These include the use of medication; physical methods such as ice and physical therapy; and psychological methods.” – Encyclopedia of Children’s Health

The best pain management would be to remove the cause of the pain: take the thorn from the lion’s paw, splint the fracture, remove the tumor or the hot appendix, and heal the infection. But removing the cause (other than the thorn) rarely provides instant pain relief. Other methods of pain relief are needed while healing takes place, or for causes which cannot be healed.

Also see Clinical Principles of Pain Management (APPENDIX B).

Purpose of Pain Management

“Pain serves as an alert to potential or actual damage to the body. Pain that acts as a warning is called productive pain. After the message is received and interpreted, further pain offers no real benefit. Pain can have a negative impact on a person’s quality of life and impede recovery from illness or injury. Unrelieved pain can become a syndrome and cause a downward spiral in a person’s health and outlook. Managing pain properly facilitates recovery, prevents additional health complications, and improves a person’s quality of life.”

– Encyclopedia of Children’s Health

Physiology of Acute and Chronic Physical Pain

Pathophysiology of Pain

Pain is usually a valuable and necessary ally for ensuring the survival of an organism. It is extremely useful for alerting the body that something is wrong, that there is a problem needing immediate attention. However, when pain ceases to be a warning signal valuable for survival, it becomes “the” problem.

Pain is often defined as an unpleasant sensation originating from a discrete body part. It is usually associated with processes that are capable of causing damage to body tissue. Pain can be *acute*, such as one might experience in the case of a burn, an inflamed appendix, or a fractured bone. If pain persists beyond the customary time it takes the affected part to heal or recuperate, the pain is termed *chronic*.

- Acute pain typically occurs when a noxious stimulus activates sensitive peripheral endings of the primary afferent nociceptors. The noxious stimulus is then turned into a form of electrochemical energy by a process called *transduction*, whereupon the message is transmitted via peripheral nerves to the spinal cord and then on to the brain, where the inputs are modulated, and pain is consciously perceived.

Note: It is clear that pain is more than a mere sensation: It has two components: sensory and affective. Regardless of the cause of the pain, both these components must be considered.

- However, in chronic pain states, particular attention needs to be paid to the latter, as anxiety, anger, and even depression are often unwelcome accompaniments to chronic pain. Formerly very active and productive people stricken with chronic, disabling, painful conditions become restricted in almost all aspects of life, including personal relationships and employment. Even sleep can become difficult. Sexual activity may cease. Often the patient’s life inexorably becomes drastically altered. There is no panacea for all chronic pain conditions. Although there may be no cure for chronic pain, good treatment is available.

Reference: Management of Chronic Pain, Thomas J. Romano MD, PhD, Anesthesia Today Vol 12, No 2, Summer 2001

See additional physiology - Basic Mechanisms Underlying the Causes and Effects of Pain in (APPENDIX C)

Pain Assessment

Initial Assessment

Assess for pain at initial evaluation. If pain is present and treatment is given, pain is reassessed shortly after treatment.

If no treatment is needed, pain is reassessed at each subsequent patient evaluation (with no greater than 12 hours between initial assessment and each subsequent reassessment.)

Medication reconciliations are completed for all new patients. This is particularly crucial for chronic pain patients. If a chronic pain patient's pain has been controlled on a home regimen of medication, that regimen should be continued. If the treatment regimen cannot be continued exactly as at home for some reason, it is essential that equivalent analgesia is provided as the patient's beginning baseline.

If a chronic pain patient is admitted because pain is worse and uncontrolled, then the beginning inpatient level of analgesia will need to exceed the home regimen.

Ask the severity and location of pain, and patient's goal for pain alleviation –Using an appropriate scale for the patient, determine whether there is no pain, or mild, moderate or severe pain. Remember that pain should be assessed not just when the patient is lying perfectly still in bed, but at the times of turning over, getting up, getting on a bedpan, etc. The highest level of pain is what needs to be controlled.

Severe pain requires prompt treatment before a thorough assessment can be completed – See “Treatment of Severe Pain” in SECTION 6.

Assess:

1. Location of pain - Ask, “Where in your body is the pain?” – if patient can't locate, or says “everywhere” or “all over” consider pain to be severe and treat.
2. Patient's goal for pain alleviation – If a patient's pain is 8, 9, or 10, the patient may be greatly relieved if it can be reduced to a 4 or 5.
3. Onset – “When did your pain start?”
4. Duration – “Is the pain always there, or does it come and go?”
5. Type or quality of pain – “What kind of pain is it?” - sharp, aching, dull, throbbing, burning, stabbing, etc. (See APPENDIX D)
6. Factors that alleviate and aggravate pain – “What makes the pain worse?” “What makes it better?”
7. Effect of the pain on the function and quality of life – “Does it affect your sleeping, or eating, or ability to move around?”
8. Response to past interventions – “What have you tried for the pain, and how has it worked?”

Assessment Scales

1. For adults, adolescents, and older children (including those with language barriers) who can say or point to a number, or who can point to a face.
 - a) Numerical Scale – 0 to 10
 - b) Wong-Baker Faces Scale
2. For stoic or cognitively impaired adults, adolescents, and children use the FLACC Scale
3. For Neonates/Infants
 - a) N-PASS
 - b) CRIES
 - c) FLACC Scale
4. See APPENDIX E for examples and other scales
5. Foreign language numerical scales are located in APPENDIX F

Clinical Indicators

Clinical Indicators along with the patient's reported pain intensity (per pain score) are evaluated. The patient is the authority on his/her pain. The patient's self report is the **most reliable** indicator. **Lack of visible signs does not mean lack of pain.**

Clinical indicators include:

- Diagnosis that is usually associated with pain: heart attack, fracture, metastatic cancer, pancreatitis, etc.
- Physiologic Indicators – Respiratory rate, heart rate, blood pressure, physical examination, etc. (Vital signs may remain normal during pain)
- Behavioral Indicators – vocalization, grimacing, inactivity (See APPENDIX G)
- Affective Indicators – mood
- Spiritual Indicators – meaning of pain
- Socioeconomic – return to work
- Socio-cultural – family dynamics
- Review of laboratory & imaging studies

Risk Factors for Under-Treatment

- Pediatric patients
- Geriatric patients (Reference: Cultural Influences on Pain Management in the Elderly, Kenneth Sakauye, MD, clinical geriatrics, Volume 10, Number 7, July 2002)
- Communication barriers
- Cultural factors
- History of substance abuse (See APPENDIX H)
- Knowledge and beliefs of patient, family and caregivers (including health care providers)

Consistency of Assessment

Since pain is not measurable by any blood test or meter, inevitably it is the patient who has the pain who must be assessed. In some cultures (including Western culture), withstanding pain without complaint is admired.

Therefore, many patients will be ashamed to admit pain. They may consider doing so a moral defect, and taking pain medicine a moral defeat or even a sin. In a religious context, pharmaceutical pain relief can be seen as attempting to avoid a cross the patient has been given to endure.

In assessing the pain of stoic patients who deny or minimize pain, the assessor should record both the patient's report, and also one of the non-verbal scales, such as, the FLACC scale to record an observed level of pain. (See Appendix E)

Ideally, the assessment of pain will be the same whether performed by an R.N., a CNP, a PA, an MD or a DO. Some of these practitioners are able immediately to write orders to address it. For others, if they do not have anticipatory orders to treat the pain, there is the additional step of calling another provider to obtain appropriate orders.

For this reason it is important that all health care providers understand and perform pain assessment similarly, and understand the indications for treatment, and the effects and side effects of treatment.

Treatment of Pain

Intervention is required for any patient with a pain score equal to or greater than 4 or any patient who indicates their pain intensity is unacceptable. For patients who deny or minimize pain the assessor should collaborate with the patient to develop an acceptable pain goal.

Pharmacological

Treatment of Severe Pain

A patient assessed as having severe pain (level 7-10) constitutes a pain crisis or a pain emergency. Any other test or treatment such as an x-ray, EKG, or CT scan, can proceed concurrently with pain relief. Severe pain (like severe dyspnea) is a symptom that usurps a patient's whole attention, effort and energy. Such a patient will be able to attend to little else, and needs to have the pain relieved before much meaningful communication can take place.

The World Health Organization (WHO) Three-Step Analgesic Ladder – (APPENDIX I) recommends treating persons in severe pain with morphine or other strong opioids. Most patients at this level should be treated with parenteral opioids for speed of onset of effect, and the ability to rapidly titrate the dose. (See APPENDIX J)

Morphine is the gold standard, with well-known effects and side effects. In an opioid-naive adult, an intravenous or subcutaneous dose of 1-2 mg of morphine will distribute and be able to have its effect evaluated in 5-15 minutes. If it has little or no effect, the dose can be doubled every 10 minutes until relief is obtained.

For a person already on opioids and in severe pain, the ineffective dose can be increased by 50%, evaluated, and increased again as needed.

All patients treated with opioids need to have the respiratory rate recorded as treatment is begun for comparison as treatment is monitored.

General principles for patients treated with opioids

Anticipate and treat side effects.

Side effects are related to which opioid receptors in the brain, spine and gut are being stimulated by a specific opioid medication. Three types of receptors have been studied extensively; many more are being studied.

Morphine interacts with mu1 and mu2 receptors, which mostly provide pain relief, but which also affect respiratory function and sedation. Morphine also interacts with kappa receptors, which slow gastrointestinal transit time and therefore can cause nausea and vomiting, and constipation. Some patients will have no nausea, others may have nausea that is easily controlled with anti-nausea medication, and the nausea usually stops within a few days of treatment. The constipation, however, is nearly universal and permanent, so most patients will need constant offsetting treatment with a bowel stimulant.

(For more medication – receptor information, APPENDIX K, Opioid receptor effect chart.)

Treatment of patients with `Patient Controlled Analgesia (PCA) or Patient Control Epidural Analgesia (PCEA)

The success of PCA therapy depends on self-administration by a patient who is able to participate in their pain management. (See additional information APPENDIX N)

Monitor pain relief and respiratory rate frequently, until a patient is relatively pain-free on a steady dose.

A normal alert adult's resting respiratory rate is 14-20 breaths per minute (BPM), which can go down to 12 when sleeping. Patients in severe acute pain, or anxious, or with pneumonia, diabetic crisis, or pleural effusions may have much more rapid breathing. One of the factors that increases the risk of death from pneumonia is a respiratory rate of 30 or more.

Patients with both pain and dyspnea will have both relieved with opioid use, sometimes with no change in respiratory rate.

For an adult patient in severe pain whose beginning respiratory rate is, for instance, 22 BPM, subsequent respiratory rates down to 12 would be acceptable even if he or she were sleeping.

Opioid overdose is rare when opioid effects and side effects are monitored frequently. Patients on long-term opioid use have remained alert and lucid with respiratory rates as low as 6 or 8 BPM for days to weeks.

If an adult patient is both sedated and has a respiratory rate of 6 or less, the opioid should be held for a while, until some of the drug wears off – i.e., the respiratory rate picks up **or** the patient is alert. The opioid can then be resumed at a lower rate.

It is only when a patient has a respiratory rate of less than 6 and other signs of overdose, such as a decreased level of consciousness, myoclonic twitching, constricted pupils, skeletal muscle flaccidity, and cold or clammy skin, that partial reversal should be considered.

The standard instruction for treatment of opioid overdose with Narcan is for complete reversal, which is inappropriate in the setting of a patient with severe pain. Complete reversal will cause a traumatic return of agonizing pain, which will be impervious to treatment until the Narcan is metabolized.

We recommend as the better practice the method in the Palliative Care manual published by the American Academy of Hospice and Palliative Medicine: “Dilute 1 amp (0.4 mg of naloxone) in 10 ml of saline and give 1 ml of this diluted mixture (0.04 mg) IV every 5 minutes until partial reversal occurs. Repeating the process may be necessary because naloxone has a shorter half-life than most opioids”

Unipac 3: Assessment and Treatment of Pain, page 40 in Hospice/Palliative Care Training for Physicians, A Self-Study Program, Second Edition, 2003

Pharmacological / Non-Pharmacological

Treatment of Moderate Pain

As the WHO analgesic ladder shows, a person with moderate pain (4-6) may get relief with milder opioids such as hydrocodone or codeine, or even with non-opioid analgesics.

A person who is on long-acting opioids and still in moderate pain should be assessed for pain, which may be amenable to other medications. For instance, the pain of arthritis, and the pain of bony cancer metastases can often be helped with steroids or non-steroidal anti-inflammatory medications (NSAIDs). As with opioids, side effects, such as stomach irritation, must be anticipated and either pretreated or treated as needed. (See APPENDIX L)

A person in moderate pain who “never takes pain medicine” may find significant relief with non-opioid medications such as acetaminophen, aspirin and NSAIDs.

Whether moderate pain is the worst pain this patient has experienced, or a great relief from previous severe pain, the patient may be able to go through the entire exploration of the specifics of his or her pain, such as type, source, timing, radiation and alleviating factors.

Non-pharmaceutical measures can also be employed. Physical and occupational therapy can alleviate the pain of deconditioning and disuse. Relaxation (APPENDIX M), massage, music, distractions such as games, movies, or visitors may all help.

Treatment of Mild Pain

Some patients will want no medicine for mild pain (1-3), and that’s surely all right, but they will need to be reassessed to confirm that the pain hasn’t worsened and that they still want no medication. Most, however, will be happy to have a mild analgesic on a PRN or scheduled basis. They, too, can often have their comfort increased and their pain relieved with non-pharmacological means: baths, massage, exercise, aromatherapy, music, distractions such as reading, television, games, and visitors.

Non-Pharmacological Interventions in Acute and Chronic Pain

Non Invasive Physical and Cognitive Approaches to Pain Treatment, and Psychological Approaches to Pain Control

Fortunately, there are many non-pharmacologic interventions to give pain relief, especially when used in conjunction with pharmacologic measures. Described as physical and cognitive-behavioral interventions, many of these approaches are noninvasive, low-risk, inexpensive, easily performed and taught, and within the scope of nursing practice.

1. **Physical interventions** give comfort, increase mobility, and alter physiologic responses.
2. **Cognitive-behavioral interventions** alter the perception of pain, reduce fear, and give clients a greater sense of control.

Many of the modalities used in an integrative model are what are considered CAM - Complementary and Alternative Medicine. (See APPENDIX M)

Complementary and Alternative Medicine (CAM)

Complementary and alternative medicine (CAM), as defined by National Center for Complementary and Alternative Medicine (NCCAM), is a group of diverse medical and health care systems, practices, and products that are not presently considered to be part of conventional medicine.^{1,2} While some scientific evidence exists regarding some CAM therapies, for most there are key questions that are yet to be answered through well-designed scientific studies--questions such as whether these therapies are safe and whether they work for the diseases or medical conditions for which they are used.

In CAM, **complementary medicine** is used together with conventional medicine, and **alternative medicine** is used in place of conventional medicine. While some scientific evidence exists regarding some CAM therapies, for most there are key questions that are yet to be answered through well-designed scientific studies--questions such as whether these therapies are safe and whether they work for the diseases or medical conditions for which they are used. **Integrative medicine**, as defined by NCCAM, combines mainstream medical therapies and CAM therapies for which there is some high-quality scientific evidence of safety and effectiveness.

The list of what is considered to be CAM changes continually, as those therapies that are proven to be safe and effective become adopted into conventional health care and as new approaches to health care emerge.

Health Conditions Prompting CAM Use

People use CAM for a wide array of diseases and conditions. According to a recent survey, Americans are most likely to use CAM for back, neck, head, or joint aches, or other painful conditions; colds; anxiety or depression; gastrointestinal disorders; or sleeping problems. It appears that CAM is most often used to treat and/or prevent musculoskeletal conditions or other conditions involving chronic or recurring pain.

NCCAM classifies CAM therapies into five categories or domains:

1. **Biologically based practices** use substances found in nature, such as herbs, special diets, or vitamins (in doses outside those used in conventional medicine) or the use of other so-called natural but as yet scientifically unproven therapies (for example, using shark cartilage to treat cancer).³
2. **Energy medicine** involves the use of energy fields; there are two types:
 - **Biofields therapies-** intended to affect energy fields that purportedly surround and penetrate the human body. The existence of such fields has not yet been scientifically proven. Some forms of energy therapy manipulate biofields by applying pressure and/or manipulating the body by placing the hands in, or through, these fields. Examples include qi gong, Reiki, and Therapeutic Touch.
 - **Bioelectromagnetic-based therapies** involve the unconventional use of electromagnetic fields, such as pulsed fields, magnetic fields, or alternating current or direct-current fields.

3. **Manipulative and body-based practices** Manipulative and body-based methods in CAM are based on manipulation and/or movement of one or more parts of the body. Some examples include chiropractic or osteopathic manipulation, and massage.
4. **Mind-body medicine** Mind-body medicine uses a variety of techniques designed to enhance the mind's capacity to affect bodily function and symptoms. Some techniques considered CAM in the past have become mainstream (for example, patient support groups and cognitive-behavioral therapy). Other mind-body techniques are still considered CAM, including meditation, prayer, mental healing, and therapies that use creative outlets such as art, music, or dance.
5. **Whole medical systems** Alternative medical systems are built upon complete systems of theory and practice. Often, these systems have evolved apart from and earlier than the conventional medical approach used in the United States. Examples of systems that have developed in non-Western cultures include traditional Chinese medicine and Ayurveda. Examples of alternative medical systems that have developed in Western cultures include homeopathic medicine and naturopathic medicine.

Notes: ¹ Conventional medicine is medicine as practiced by holders of M.D. (medical doctor) or D.O. (doctor of osteopathy) degrees and by their allied health professionals, such as physical therapists, psychologists, and registered nurses. Other terms for conventional medicine include allopathy; Western, mainstream, orthodox, and regular medicine; and biomedicine. Some conventional medical practitioners are also practitioners of CAM.

² Other terms for complementary and alternative medicine include unconventional, non-conventional, unproven, and irregular medicine or health care.

³ Some uses of dietary supplements have been incorporated into conventional medicine. For example, scientists have found that folic acid prevents certain birth defects and that a regimen of vitamins and zinc can slow the progression of an eye disease called age-related macular degeneration (AMD).

Information compiled from www.nccam.nih.gov

Psychotherapy and Social Support

Psychotherapy and social support can help a patient cope with pain. Psychotherapy may be useful for anyone whose pain is difficult to manage, who has developed clinical depression or anxiety or who has a history of psychiatric illness.

Goals of Psychotherapy might include:

1. Emphasis on the patients past strengths
2. Support previously successful coping strategies
3. Teach new coping strategies
4. Create a bond to decrease the patient's sense of isolation
5. Foster self worth

Pain Psychologist and Chronic Pain

A pain psychologist can help patients better understand the nature of chronic pain and teach how to better control pain through many techniques. The psychologist can help patients learn the tools they need to decrease the impact of pain on the patient, the family and lifestyle. The pain psychologist also helps with everyday stress. Some of the approaches the pain psychologist may use include:

Sleep Restoration Training People with chronic pain do not sleep very well which can impair memory and concentration, cause mood disturbances, fatigue, increased muscle tension and pain.

Relaxation Training Learning ways to relax muscles and decrease pain can be taught and learned through biofeedback. Biofeedback teaches the patient how to relax through controlling muscle tension.

Behavior Modification People with chronic pain try to do “normal” activities as they did prior to the pain.

Information was obtained in part from: American Holistic Nurses Association www.ahna.org, National Institutes of Health-NCCAM www.nccam.nih.gov

Evaluation of the Effectiveness of Treatment

Subsequent evaluations of a patient's pain after treatment are essentially the same as the initial assessment. Again the health care provider takes into account any non-verbal cues as well as the patient's verbal or indicated report. Once again a numerical score is assigned to the patient's pain by one of the scales, documented, and action taken accordingly.

If pain is relieved, the patient should be more relaxed, maybe smiling instead of frowning. The patient may be awake or sleeping. A patient who has become sleep-deprived because of pain may sleep for an extended period after pain is relieved. This is not "sedation," but "catching up on sleep". Even if a patient is sedated, sedation precedes respiratory depression, which can be assessed easily and frequently. Be sure to continue treatment in a sleeping patient, so the patient does not again wake up in severe pain.

Evaluation of Effectiveness of Medication

When reassessing the patient's response to the pain medication the clinician should use the appropriate pain measuring scales, i.e. Numeric, Wong-Baker face scale, FLACC scale, N-PASS or the CRIES scale.

Reassessing the patient after giving the pain medication using the Opioid Pharmacokinetics for analgesic onset and duration, remember that these are parameters and that they may vary with population and other variables. (See APPENDIX O)

- For severe pain (7-10) treated with parenteral opioid analgesics, assess every fifteen to thirty minutes (15-30) until the discomfort is under control
- For moderate pain (4-6) treated with a weak opioid and a non-opioid assess fifteen to sixty minutes (15-60) until the discomfort is under control.
- For mild pain (1-3) treated with non-opioid analgesics assess every 30-60 minutes (30-60) until discomfort is under control. (NSAID/Aspirin/Acetaminophen)
- Zero (0) equals no pain.

Reassessment by Route of Administration Post-Intervention

The following table describes the suggested time frame for reassessment based on the route that an intervention is provided:

1. IV or transmucosal administration	15-30 minutes post intervention
2. IM, SC or PO administration	30-60 minutes post intervention
3. Transdermal administration*	12-16 hours post intervention
4. Non-pharmacologic techniques	30-60 minutes post intervention

If the nurse is not able to control the discomfort with the medication prescribed by the provider, then she or he will contact the provider and seek other analgesic orders.

* **Transdermal Administration:** Many medications, such as fentanyl, nitroglycerines, hormones and antihypertensives, are now compounded in transdermal forms like pastes and patches. These medications have different durations of onset and effectiveness.

In this pain resource book, the medication we are most concerned with is the fentanyl patch, which usually has a 12-to-24-hour time to maximum effectiveness, and duration of analgesia of about 72 hours. When a patch of the right dosage is used to replace other opioids, the patient will continue to need additional short-acting opioid doses for the first 12 to 24 hours.

The main danger of a fentanyl patch is overdose. If the patch is placed upon an opioid-naïve patient, or even on a patient who has been using less than 30mg of morphine a day (for the smallest 12mcg patch), or 60mg of morphine a day (for the common starting 25 mcg patch), there is danger of overdose.

If the patch is underdosed, the patient will need additional doses of short-acting opioids to control the pain after the first 24 hours.

Evaluation of non-pharmacological modalities for relief of acute or chronic pain

Patients respond differently to various non-pharmacologic modalities. (Applications of heat and cold, music, relaxation techniques, positioning etc...) All therapies should be evaluated for effectiveness.

Barriers To Effective Pain Control

Familiarity Breeds Contempt

Health care providers who work day in and day out with patients in pain may become inured to their patients' suffering. Perhaps in self-defense, nurses and doctors can become deaf and blind to the evidence of pain and suffering.

Misinformation and entrenched attitudes about patients in pain and pain medications

“Health care providers may under-treat pain for many reasons, including insufficient education. Patients and health care providers may share some misconceptions, such as the belief that patients may be addicted, that pain is an inevitable and untreatable consequence of the disease and treatment, and that reporting pain is a sign of weakness.” (from Clinton Memorial Hospital Document PPS00040, Pain Management, 7/06)

It is important for caregivers to recognize that their own knowledge and attitude about pain influences their treatment of others' pain. For example, if one's pharmacologic therapies are not evidence- (research-) based, patients may not receive the most effective treatment.

So long as health care providers believe pain is inevitable, or that they can do nothing about it, or that other people's pain isn't real, (since no objective measure exists), patients with pain will be at risk for under treatment.

Fear of addiction

Beliefs such as “opioid treatment always leads to addiction” may also prevent patients from effective pain relief.

“A recent study demonstrates that fewer than one percent of pain patients receiving opioids become narcotics abusers. No patient in pain should hear that relief is barred because “you will become an addict”. No patient in pain should reject opioids out of fear of becoming addicted. There is a critical difference between addiction and tolerance.”

(From “Dispelling the Myths on Narcotics for Pain,” from Hospice & Palliative Care Associates/www. painlaw.org 2003.)

For other misconceptions creating barriers to effective assessment and treatment of pain. (See Appendix P) For reasons for good pain control (See Appendix Q)

Suffering

Suffering can be defined as “the state of severe distress associated with events that threaten the intactness of the person.” EJ Cassel, Diagnosing Suffering: a perspective.

In Dr. Cassel’s classic 1982 New England Journal of Medicine article, “Suffering and the Goals of Medicine” he notes that “The relief of suffering is considered one of the primary ends of medicine by patients and lay persons, but not by the medical profession.” Times have changed since 1982, in part due to Dr. Cassel’s work. Suffering is now addressed both by the medical profession – doctors and nurses – as well as by the interdisciplinary team with whom they work: social workers, physical therapists, financial counselors, psychotherapists, occupational therapists, speech therapists, prosthesis specialists, art therapists, massage therapists, music therapists, bereavement counselors, and chaplains.

Suffering can occur in any aspect of a person – that is, every area from which a person draws worth, meaning, pleasure or joy can be a source of suffering when it is threatened or lost. To ourselves, we are the sum of all our parts, all that we are and can do in the world.

Suffering can certainly arise from pain – when a person who previously could walk, talk, laugh, dance, calculate equations, can do nothing but attempt to bear overwhelming pain. (See Appendix R, “Pain Impact on the Quality of Life”) But suffering can also occur from fear of the financial future; loss of meaningful work, or loss of or estrangement from loved ones.

The Assessment of Suffering

When a patient freely talks about money worries, or fear for a wayward child, or a frail elderly relative instead of their own pain or disease, suffering is diagnosed and the need for social work involvement is apparent.

When a patient talks about thoughts of suicide or murder, the need for psychiatric involvement is apparent.

When a patient talks about spiritual despair or distress – that God has abandoned or is punishing him or her; the need for spiritual support is evident.

If a doctor or nurse senses there is non-physical pain the patient is not talking about, here are some “examples of open-ended questions that may elicit information about psychosocial and spiritual pain:

- “When people become seriously ill, they usually find themselves wondering why it happened to them. When you wonder about it, what comes to mind?”
- How has this illness/injury affected you emotionally? What has been particularly difficult? Has anything been more (or less) difficult than you thought it might be?
- “When you think about the next few weeks or months, what are some of the concerns that come to your mind first? What things concern you more than others?”

- “When you think back over the years, what are some of your happiest times? Saddest?”
- “What has given you strength in the past? What gives you strength now? What do you wish could happen to give you more strength?”
- “How is your family coping with this illness? Can you tell me something about what is going on with them? What are some of your concerns about your family?”

Unipac 3: page 22 in Hospice/Palliative Care Training for Physicians, A Self-Study Program, Second Edition, 2003

Pain From A Pastoral Care Perspective

When we talk about pain in the health care setting, we are most often talking about the physical pain, which a patient is experiencing as the result of trauma, surgery, or some medical condition. The treatment prescribed is often in the arena of medication or some other physical application.

In the Pastoral Care Department, as in many other health care areas, we have an understanding of pain which encompasses both physical pain and emotional/spiritual/social pain which may or may not be experienced in relationship to a physically based pain. Because we believe that one is a whole person, pain in one dimension may be felt in another. Illness in one area of the person may cause illness in another. The stresses of the unknown, combined with being hospitalized in a strange environment with little privacy or freedom can cause anxiety, fear, and pain. In addition, those who are ill are often experiencing a loss (such as mobility or independence), which can increase their feelings of hopelessness and helplessness.

Certainly the care for those in pain should include any necessary medical treatments. In addition, however, a pastoral care visit may help to relieve symptoms of pain. Members of the Pastoral Care Department at Sparrow have specialized training and are Board Certified Chaplains. As they meet with a patient and begin to develop a relationship with him or her, they assess the needs of the patient, and begin shaping and implementing a plan of care to meet those needs.

Often the presence of a chaplain who gives complete attention to listening to the patient's story tremendously relieves the pain. For some patients, religious ritual is very comforting. Other patients want to vent their feelings of anger and hurt. Another patient may be comforted by the regular visits of a chaplain who sits quietly and companionably at the bedside. Still another patient may want the chaplain to telephone someone, or talk with a loved one who is struggling with the patient's illness, prognosis, or disability.

Sometimes a patient may believe that she or he is being punished for something they have done, and a chaplain's visit may be a life-changing event in which the patient confesses something which has been a source of guilt for years, and hears the words of forgiveness. Occasionally, a patient will discuss a relationship which has been strained, and through conversation with the chaplain may find the courage and impetus to mend it. Giving voice to fears, particularly near the end of life, may help a patient to face death at peace. Some patients with a terminal diagnosis may find it helpful to do a life review with a chaplain, and begin planning for their final days. It is not unusual for a terminal patient to want to plan their own funeral or memorial service.

Sometimes in the course of a conversation with a patient, the chaplain may realize that a referral to another member of the health care team is necessary. Those referrals are frequently made. In addition, if the patient gives permission, the chaplain will call the patient's own clergy to come and visit, thereby encouraging the relationships which will continue after the patient leaves the hospital.

In all of these ways, chaplains can support the health care staff and the patient in alleviating pain. Referrals can be sent to the Pastoral Care Department Monday through Friday between 8am and 5pm – Sparrow and St Lawrence Campus. Someone is available 24 hours a day for emergencies, and may be contacted through the operator.

-Senia Taipale, Director Sparrow Pastoral Care

APPENDICES

JOINT COMMISSION ON ACCREDITATION OF HEALTHCARE ORGANIZATIONS (JCAHO) PAIN ASSESSMENT AND MANAGEMENT STANDARDS—HOSPITALS

ETHICS, RIGHTS AND RESPONSIBILITIES

Standard RI.1.2.160

Patients have the right to pain management.

Rationale for RI.1.2.160

Patients may experience pain. Unrelieved pain has adverse physical and psychological effects. The hospital respects and supports the right of patients to pain management. In accordance with the hospital's mission, this may occur through referral.

Element of Performance for RI.1.2.160

- B** 1. The hospital plans, supports and coordinates activities and resources to ensure that pain is recognized and addressed appropriately and in accordance with the care, treatment, and services provided including the following:
- Assessing for pain
 - Educating all relevant providers about assessing and managing pain
 - Educating patients and families, when appropriate, about their roles in managing pain and the potential limitations and side effects of pain treatments.

PROVISION OF CARE, TREATMENT AND SERVICES

EDUCATION

Standard PC.6.10

The patient receives education and training specific to the patient's needs and as appropriate to the care, treatment, and services provided.

Rationale for PC.6.10

Patients must be given sufficient information to make decisions and to take responsibility for self-management activities related to their needs. Patients and, as appropriate, their families are educated to improve individual outcomes by promoting healthy behavior and appropriately involving patients in their care, treatment and service decisions.

Elements of Performance for PC.6.10

- B** 1. Education provided is appropriate to the patient's needs.
- C** 2. The assessment of learning needs addresses cultural and religious beliefs, emotional barriers, desire and motivation to learn, physical or cognitive limitations, and barriers to communication as appropriate.

- B** 3. As appropriate to the patient's condition and assessed needs and the hospital's scope of services, the patient is educated about the following:
- The plan of care, treatment, and services
 - Basic health practices and safety
 - The safe and effective use of medications
 - Nutrition interventions, modified diets, or oral health
 - Safe and effective use of medical equipment or supplies when provided by the hospital.
 - Understanding pain, the risk for pain, the importance of effective pain management, the pain assessment process, and methods for pain management
 - Habilitation or rehabilitation techniques to help them reach the maximum independence possible

PAIN

Standard PC.8.10

Pain is assessed in all patients.

Rationale for PC.8.10

The identification and treatment of pain is an important component of the plan of care. Individuals are assessed based upon their clinical presentation, services sought, and in accordance with the care, treatment, and services provided.

Elements of performance for PC.8.10

- C** 1. A comprehensive pain assessment is conducted as appropriate to the patient's condition and the scope of care, treatment, and services provided.
2. Not applicable
- C** 3. Regular reassessment and follow-up occur according to criteria developed by the hospital.
4. Not applicable
5. Not applicable
- C** 6. The assessment methods are appropriate to the patient's age and/or abilities.
- C** 7. When pain is identified, the patient is treated by the hospital or referred for treatment.

Copyright 2007 by the Joint Commission on Accreditation of Healthcare Organizations

CLINICAL PRINCIPLES OF PAIN MANAGEMENT

1. Pain causes immediate emotional and physical harm.
2. Prolonged or severe under treated pain may cause secondary chronic illness, which is difficult to treat.
3. Prevention of pain is more effective than treating uncontrolled pain. Therefore, administer analgesics regularly (not only PRN) if pain is present most of the time.
4. Patients vary in their response to pain and pain treatment.
5. Most pain can be effectively treated with simple, inexpensive, safe methods.
6. Using Opioids properly to treat pain will lead to physical dependence, may cause tolerance, but rarely causes addiction (Incidence, <1%).
7. Side effects from analgesics can be managed.
8. Patients need to be involved in communicating and understanding their pain, as well as in selecting and evaluating their pain relief measures.
9. When patients have difficulty communicating their pain, clinicians should take a more active role in anticipating, preventing, and treating pain.
10. Intense pain requires immediate evaluation to rule out medical emergencies (i.e., sepsis, pulmonary embolus, MI, DVT).

ADDITIONAL PAIN PHYSIOLOGY INFORMATION

1. PHYSIOLOGY OF PAIN

Though a person is not consciously aware of the process, the experience of pain involves a complex sequence of biochemical and electrical events or processes beginning with tissue damage, followed by transduction, transmission, perception, and modulation. See Figure 1-1.

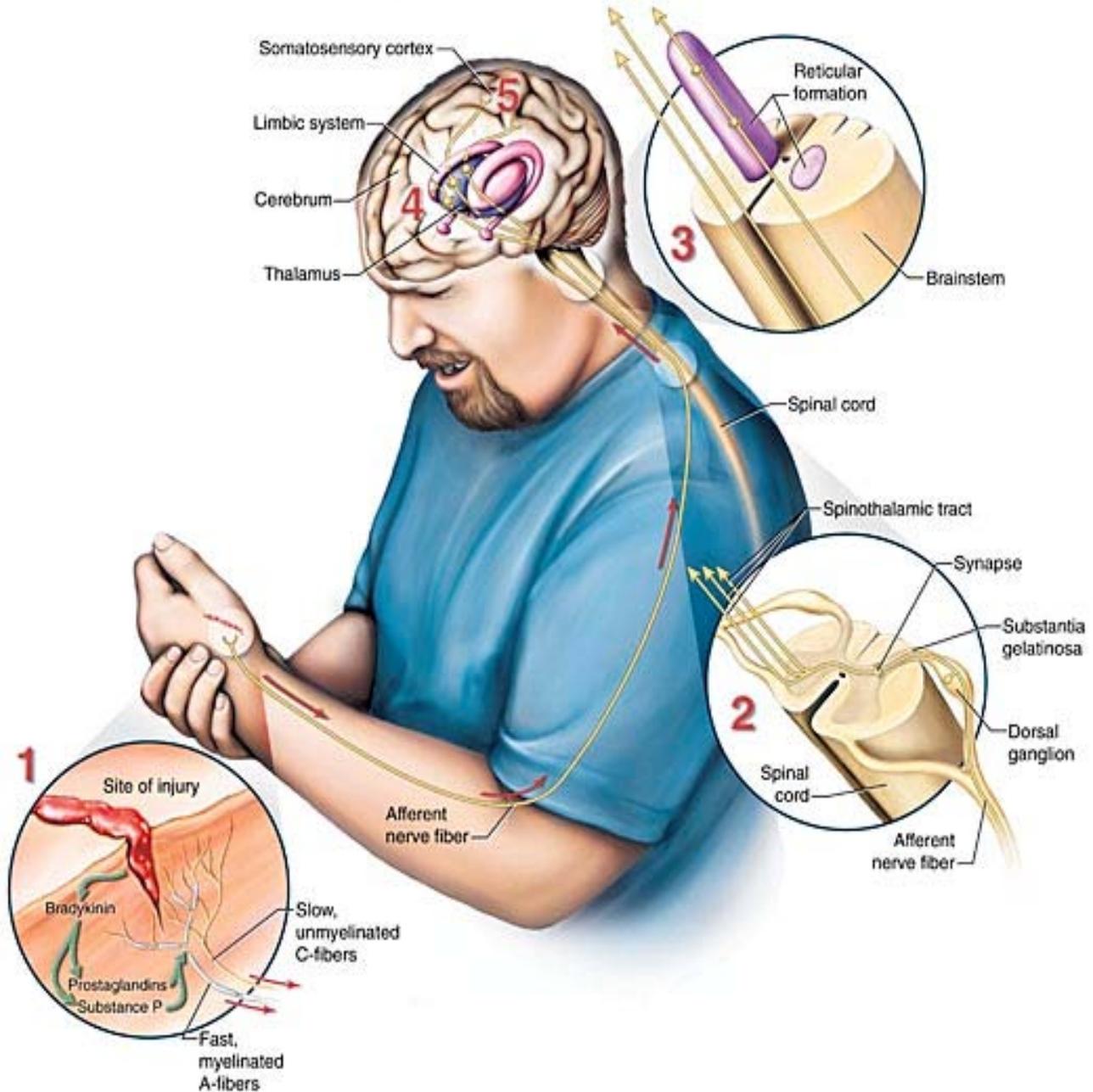


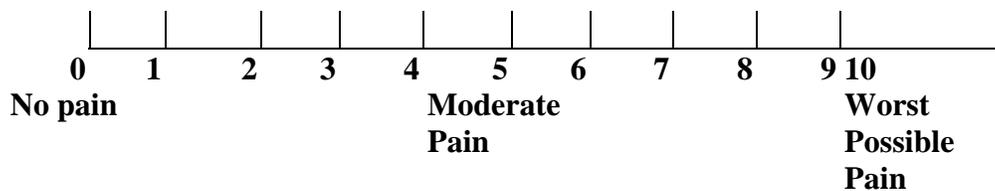
Figure 1-1 Neurological transmission of pain stimuli. Illustration by Jason McAlexander. Copyright © Wild Iris Medical Education. (2006 permission to use granted)

TYPES OF PAIN

Type of Pain	Patient's Description	Cause
Somatic	Well-localized Aching Throbbing Gnawing	Activation of pain receptors in the skin and deep tissues.
Visceral	Deep aching Crampy Pressure Poorly localized Difficult to describe	Activation of pain receptors resulting from stretching, distention, or inflammation of a viscous.
Neuropathic	Burning Shooting Stabbing Paroxysmal Shock-like	Injury to peripheral and/or central Nervous system.
Spastic	Cramping Gripping Clenching	Spasm of smooth or skeletal muscle.

PAIN ASSESSMENT TOOLS ADOPTED BY SPARROW

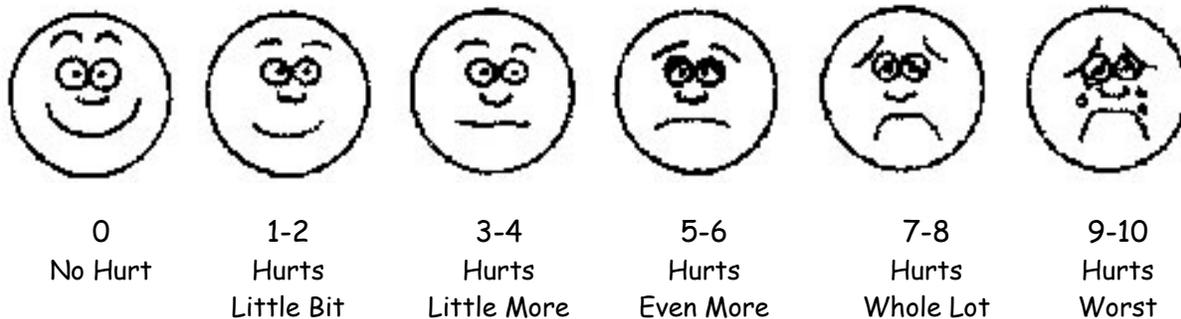
0 – 10 Numeric Pain Scale



Wong-Baker FACES Scale

This rating scale is recommended for children years of age and older. Point to each face using the words to describe the pain intensity. Ask the children to choose the face that best describes their own pain and record the appropriate number.

Which face shows how much hurt you have now?



From Wong, D.L. Hockenberry-Eaton, M., Winkelstein, M.L., Ahman, E., DiVito-Thomas, P.A.: *Whaley and Wong's Nursing Care of Infants and Children*, ed. 6, St. Louis, 1999, p. 2040/ Copyrighted by Mosby, Inc. Reprinted with permission.

FLACC Scale:

OBSERVATION	0	1	2
FACE	No particular expression or smile	Occasional grimace or frown, withdrawn, disinterested	Frequent to constant frown, clenched jaw, quivering chin
LEGS	Normal position or relaxed	Uneasy, restless, tense	Kicking or legs drawn up
ACTIVITY	Lying quietly, normal position moves easily	Squirming, shifting back and forth, tense	Arched, rigid, or jerking
CRY	No cry (awake or asleep)	Moans or whimpers, occasional complain	Crying steadily, screams or sobs, frequent complaints
CONSOLIBILITY	Content, relaxed	Reassured by occasional touching, hugging or "talking to"	Difficult to console or comfort

PAIN ASSESSMENT TOOLS ADOPTED BY SPARROW

N-PASS: Neonatal Pain, Agitation, & Sedation Scale

Pat Hummel MA, RNC, NNP, PNP, APN/CNP & Mary Puchalski MS, RNC, APN/CNS

Assessment Criteria	Sedation		Normal	Pain / Agitation	
	-2	-1	0	1	2
Crying Irritability	No cry with painful stimuli	Moans or cries minimally with painful stimuli	Appropriate crying Not irritable	Irritable or crying at intervals Consolable	High-pitched or silent-continuous cry Inconsolable
Behavior State	No arousal to any stimuli No spontaneous movement	Arouses minimally to stimuli Little spontaneous movement	Appropriate for gestational age	Restless, squirming Awakens frequently	Arching, kicking Constantly awake or Arouses minimally / no movement (not sedated)
Facial Expression	Mouth is lax No expression	Minimal expression with stimuli	Relaxed Appropriate	Any pain expression intermittent	Any pain expression continual
Extremities Tone	No grasp reflex Flaccid tone	Weak grasp reflex ↓ muscle tone	Relaxed hands and feet Normal tone	Intermittent clenched toes, fists or finger splay Body is not tense	Continual clenched toes, fists, or finger splay Body is tense
Vital Signs HR, RR, BP, SaO₂	No variability with stimuli Hypoventilation or apnea	< 10% variability from baseline with stimuli	Within baseline or normal for gestational age	↑ 10-20% from baseline SaO ₂ 76-85% with stimulation - quick recovery ↑	↑ > 20% from baseline SaO ₂ ≤ 75% with stimulation - slow recovery ↑ Out of sync with vent

Loyola University Health System, Loyola University Chicago 2002

All rights reserved. No part of this document may be reproduced in any form or by any means, electronic or mechanical without written permission of the authors. This tool is currently undergoing testing for validity and reliability, and the authors cannot accept responsibility for errors or omission or for any consequences resulting from the application or interpretation of this material

Used by permission 2006



+3 if < 28 weeks gestation / corrected age.
+2 if 28 - 31 weeks gestation / corrected age.
+1 if 32 - 35 weeks gestation / corrected age.

PAIN ASSESSMENT TOOLS ADOPTED BY SPARROW

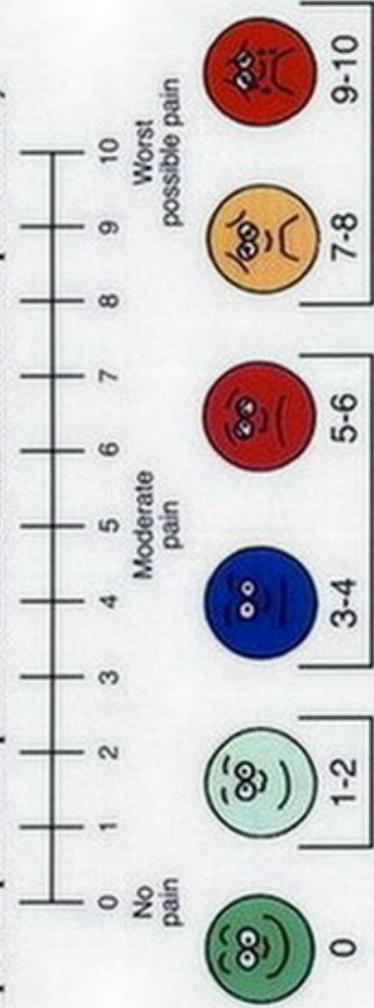
CRIS SCALE:

OBSERVATION	0	1	2
Crying	No	High pitched	Inconsolate
Requires O2 for Sat > 95	No	<30%	> 30%
Increased vital signs	HR & BP or Pre-op	HR or BP < 20% Of Pre-op	HR & BP ↑ > 20% Of Pre-op
Expression	None	Grimace	Grimace/grunt
Sleeplessness	No	Wakes at frequent intervals	Constantly awake

PAIN ASSESSMENT TOOLS ADOPTED BY SPARROW

UNIVERSAL PAIN ASSESSMENT TOOL

This pain assessment tool is intended to help patient care providers assess pain according to individual patient needs. Explain and use 0-10 Scale for patient self-assessment. Use the faces or behavioral observations to interpret expressed pain when patient cannot communicate his/her pain intensity.



WONG-BAKER FACIAL GRIMACE SCALE

ACTIVITY TOLERANCE SCALE	NO PAIN	CAN BE IGNORED	INTERFERES WITH TASKS	INTERFERES WITH CONCENTRATION	INTERFERES WITH BASIC NEEDS	BEDREST REQUIRED
SPANISH	NADA DE DOLOR	UN POQUITO DE DOLOR	UN DOLOR LEVE	DOLOR FUERTE	DOLOR DEMASIADO FUERTE	UN DOLOR INSOPORTABLE
FRENCH	AUCUNE DOULEUR	LÉGÈRE DOULEUR	DOULEUR MODÈRE	FORTE DOULEUR	TRÈS FORTE DOULEUR	DOULEUR EXTREME
GERMAN	KEINE SCHMERZEN	LEICHTE SCHMERZEN	MÄSSIGE SCHMERZEN	STARKE SCHMERZEN	SEHR STARKE SCHMERZEN	EXTREME SCHMERZEN
JAPANESE	痛みなし	軽い痛み	中程度の痛み	ひどい痛み	非常にひどい痛み	最悪の痛み
TAGALOG	HINDI MASAKIT	KAUNTIG SAKIT	MEDYO MASAKIT	TALAGANG MASAKIT	MASAKIT NA MASAKIT	PINAKAMASAKIT
HINDI	DARD NAHI HAI	BAHUT KAM	HILNE SE TAKLEF HOTI HAI	SOCH NAHIN SAK TE	KUCH NAHIN KAR SAKTE	DARD BAHUT HAI

<http://www.anes.ucla.edu/pain/FacesScale2.print.jpg>

Used by permission 2006

E-4

MULTI-LANGUAGE PAIN CONTROL GUIDES

18 Multi-language Pain Assessment Scales

Pain knows no international boundaries. And the Joint Commission on Accreditation of Health Care Organizations now asserts, "Patients have the right to appropriate assessment and management of pain"¹ and mandates that "Pain [be] assessed in all patients."¹ It's easier to assess pain when the patient can fully understand what is being asked.

Guidelines² for teaching patients and families how to "use" a pain rating scale suggest that you:

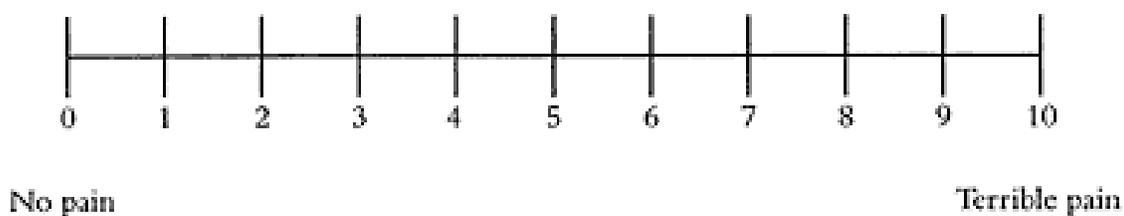
1. **Show the scale and explain its purpose:** "This is a pain rating scale that many of our patients use to help us understand their pain and to set goals for pain relief. We will ask you regularly about pain, but anytime you have pain you must also let us know. We don't always know when you hurt."
2. **Explain how to use the numbers to rate pain:** "On this pain rating scale, 0 means no pain and 10 means the worst possible pain. The middle of the scale, around 5, is moderate pain. Pain at the 2 or 3 would be mild pain, but a 7 or higher would be severe pain."

If English is not a patient's native tongue, one of the following 18 translations of the 0 to 10 numeric pain rating scale may be useful.

Note: Most of the pain rating scales were translated by volunteers. No back and forth translation has been done, so please be advised that errors may occur. However, these scales have been used extensively by the facilities that submitted them to the *Clinical Manual*.

English

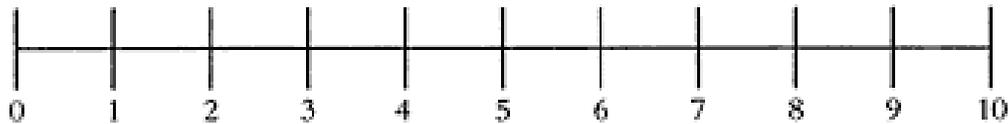
Please point to the number that best describes your pain.



Chinese *

請指出那個數字反映你痛的程度

Please point to the number that best describes your pain.



無痛
No pain

劇痛
Terrible pain

French **

S'il vous plaît, indiquez le chiffre qui décrit le mieux votre douleur.

Please point to the number that best describes your pain.



Pas de douleur
No pain

Douleur intense
Terrible pain

German **

Bitte markieren sie die nummeru, die ihren schmerz am besher beschreiben.

Please point to the number that best describes your pain.



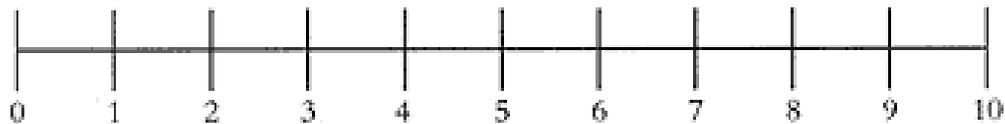
Kein schmerz
No pain

Unertrajlicher schmerz
Terrible pain

Greek **

Παρακαλώ, δείξτε με το δάκτυλό σας τον αριθμό που δείχνει πόσο πόνο έχετε.

Please point to the number that best describes your pain.



Δεν έχω πόνο
No pain

Έχω πολύ πόνο
Terrible pain

Hawaiian *

Ε koho a kuhi 'oe i ka helu pololei ma ke 'ano o ka 'eha i pili ia 'oe, ina 'ole (0) ka 'eha 'ole a 'umi (10) ka 'eha palena 'ole.

Please point to the number that best describes your pain.



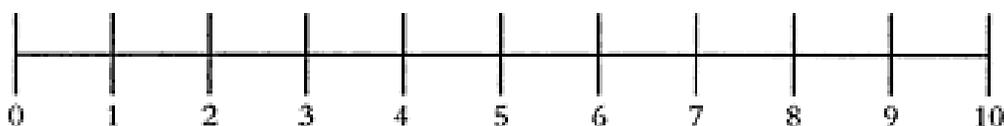
Ka 'eha 'ole
No pain

Ka 'eha palena 'ole
Terrible pain

Hebrew **

בבקשה תשימו אצבע על המספר מאפס עד עשר:
שמראה לנו כמה חזק הכאב

Please point to the number that best describes your pain.



בלי כאב
No pain

כאב חזק
Terrible pain

Ilocano * (spoken in the Philippines)

Paki tudo ti numero nga mangipakita ti kinasakitna.

Please point to the number that best describes your pain.



Awan sakit na
No pain

Nakasaksakit unay
Terrible pain

Italian **

Segna il numero che indica il level del dolore.

Please point to the number that best describes your pain.



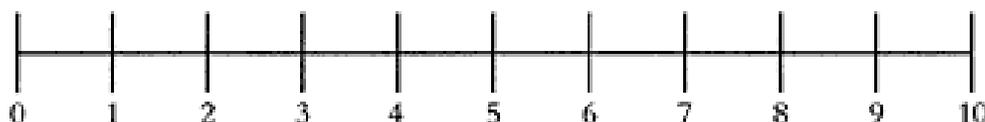
Nessun dolore
No pain

Dolore insopportabile
Terrible pain

Japanese **

痛みの強さの度合を0~10までの階段で示して下さい。

Please point to the number that best describes your pain.



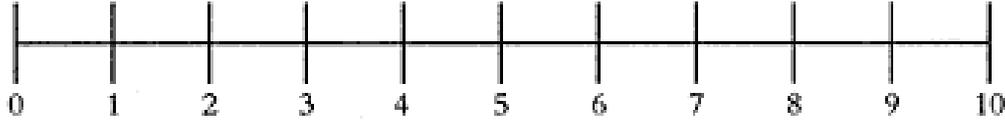
ゼロ 全く痛みがない
No pain

激痛 救痛
Terrible pain

Korean

현재 통증의 강도를 가장 잘 나타내는 번호에 표시하십시오.

Please point to the number that best describes your pain.



통증이 없음

No pain

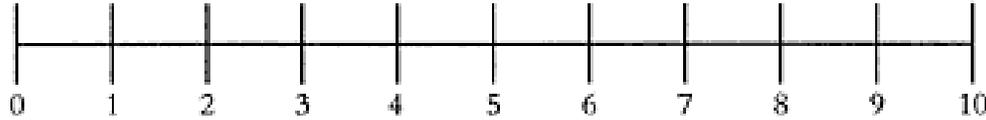
통증이 너무 심함 함

Terrible pain

Pakistan **

برائے مہربانی اپنے درد کی شدت بتانے کے لیے نیچے لکھے ہوئے
نمبروں میں سے کسی ایک کی طرف اپنی انگلی سے اشارہ کریں۔

Please point to the number that best describes your pain.



کوئی درد نہیں ہے

No pain

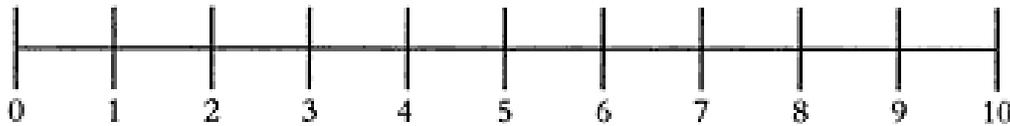
شدید ترین درد ہے

Terrible pain

Polish **

Proszę wskazać numer, który najlepiej określa jak silny jest ten ból.

Please point to the number that best describes your pain.



Nie mam bólu

No pain

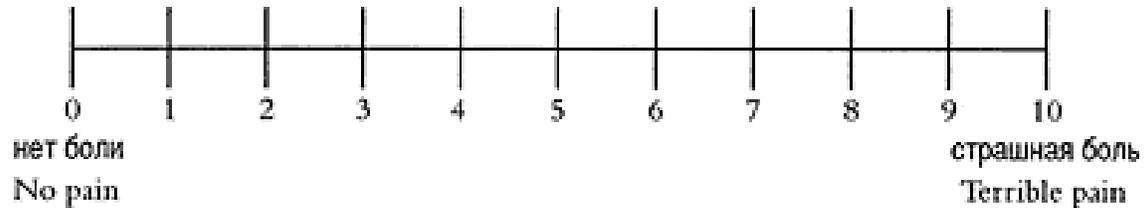
Straszny ból

Terrible pain

Russian **

Выберите число, которое указывает вашу боль по десятибальной системе.

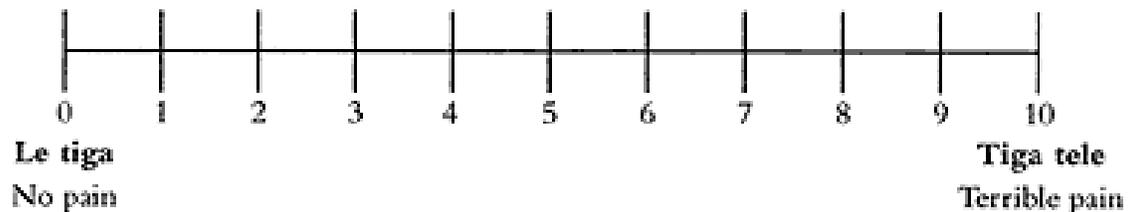
Please point to the number that best describes your pain.



Samoaan *

Fa'amolemole ta'u mai le numera e fa'amatala ai le itu-aiga tiga o loo e lagonaina.

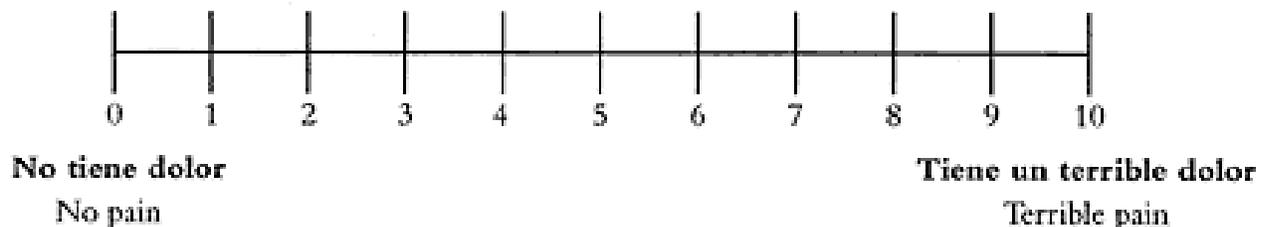
Please point to the number that best describes your pain.



Spanish **

Por favor senale al numero que mejor describe su dolor. (Mas grande el numero mayor su dolor).

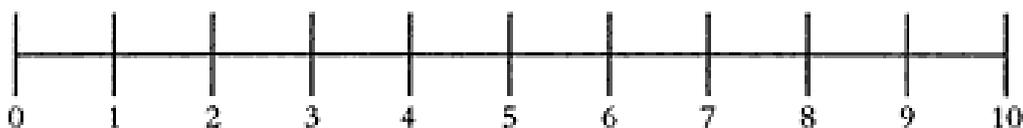
Please point to the number that best describes your pain.



Tagalog ** (spoken in the Philippines)

Ituro po ninyo ang numerong nagpapaliwanag kung gaano kasakit.

Please point to the number that best describes your pain.



Walang masakit
No pain

Napakasakit
Terrible pain

Tongan ** (spoken in Tonga, an island in the south Pacific)

I he ngaahi fika koena, fakailongai mai ai e tuunga ho falangaaki.

Please point to the number that best describes your pain.



Ikai ha felangaaki
No pain

Ikai matuuaki'e langa
Terrible pain

Vietnamese

Xin chỉ số mô tả đúng nhất sự đau nhức của quý vị

Please point to the number that best describes your pain.



Không đau
No pain

Đau rất nhiều
Terrible pain

References: 1. *Comprehensive Accreditation Manual for Hospitals: The Official Handbook (CAMH)*. Patient Rights and Organization Ethics chapter. Joint Commission on Accreditation of Health Care Organization website. Available at <http://www.jcaho.org>. Accessed on September 1, 2000. 2. McCaffery M, Pasero C. *Pain Clinical Manual*, 1999, Mosby, Inc., New York, New York. Pp. 68-73.

* Courtesy of Pain Management Committee, St. Francis Medical Center, Honolulu, HI.

** Compiled by Josephine Musto, RN, MS, ONC, Nursing Care Manager, Pain Management Service and members of Nursing Department, Saint Vincent's Hospital and Medical Center, New York, NY.

BEHAVIORS POTENTIALLY INDICATIVE OF PAIN

This list is a simple guide to behavioral assessment of pain in patients who are unable or unwilling to provide a self-report of pain. It is not an exhaustive list.

FACIAL EXPRESSIONS	<ul style="list-style-type: none"> • Frown (wrinkled forehead) • Grimace • Fearful • Sad • Muscle contraction around mouth & eyes
PHYSICAL MOVEMENTS	<ul style="list-style-type: none"> • Restlessness • Fidgeting • Absence of movement • Slow movements • Cautious movements • Guarding • Rigidity • Generalized tension (not relaxed) • Trying to get attention (beckoning someone)
VOCALIZATIONS (Noises)	<ul style="list-style-type: none"> • Groaning • Moaning • Crying • Noisy breathing

McCaffery M, Pasero C, Pain: Clinical manual, p. 95.

OPIOID USE IN PATIENTS WITH SUBSTANCE ABUSE HISTORY

Physical dependence and tolerance are predictable consequences of chronic opioid use, but they are NOT synonymous with addiction. When treating pain in a patient with substance abuse history, the following principles should be applied:

1. Patients with a substance abuse history still perceive painful stimuli.
2. Opioid analgesics are appropriate for use in patients experiencing moderate to severe pain.
3. Patients with pain and substance abuse disorders require interdisciplinary assessment and care.
4. Patients with pain and substance abuse disorders may require higher than expected doses of analgesics.

PRINCIPLES AND STRATEGIES FOR OPIOID USE IN THE PATIENT WITH SUBSTANCE ABUSE PROBLEMS

- A. Support the individual in achieving and sustaining addiction recovery
 - Refer for appropriate level of treatment as indicated.
 - Do not withdraw opioids from someone in acute pain, but consider addiction intervention/counseling when pain controlled.
 - When necessary for safety, make opioid analgesia contingent on active involvement in recovery activities.
 - Provide frequent drug screens during long-term opioid use to support recovery and identify relapse.
 - Consider opioid agonist therapy of addiction (methadone maintenance) as a requisite to persistent pain treatment in patients with opioid addiction.
- B. Provide medications in manageable amounts to outpatients
 - Smaller quantities (but adequate doses) at more frequent dispensing intervals.
 - Consider daily dispensing by a trusted individual, if needed, to maintain safety in the presence of impaired control over drug use.
- C. Use opioids in forms and schedules that tend to cause less euphoria or reward when they are effective
 - Oral preferred over parenteral.
 - PCA (small bolus) preferred over larger parenteral bolus.
 - Scheduled doses preferred over PRN.
 - Long-acting medications that provide stable blood levels with slower onset preferred over quick onset short acting.

Note potential for adulteration and abuse of extended—release medications and use by IV, intranasal, or immediate-release oral use (by chewing)

- D. Consider a written treatment agreement signed by both patient and provider*
- E. Obtain permission for communication as appropriate with significant others
 - Addiction treatment team and other medical care providers.
 - Family and friends.
- F. See patient frequently and assess addiction recovery as well as pain control at all visits
- G. If relapse occurs, intensify treatment and tighten structure to maintain safety
- H. If safety concerns outweigh pain benefits and opioid therapy must be discontinued, address pain with non-opioid approaches and continue to encourage recovery

Reference: AMA Module 4, Assessing and Treating Pain in Patients with Substance Abuse Concerns
December 2006

WORLD HEALTH ORGANIZATION LADDER OF ANALGESIA

DRUG THERAPY

Drug therapy remains the central component of pain management in most patients. When used appropriately, drug therapy is inexpensive, works quickly, and is relatively low risk. Recommendations for pharmacologic therapy are based on the *World Health Organization (WHO) Three-Step Analgesic Ladder* (1990).

SEVERE PAIN:
7 – 10 on measurement scale
Opioid for moderate to severe pain ± Non-opioid ± adjuvant treatment

MODERATE PAIN: 4 – 6 on measurement Scale
Opioid for Mild to Moderate pain
± Non-opioid ± adjuvant treatment

MILD PAIN 1-3 on measurement scale
Non-opioid analgesic ± Adjuvant treatment

1. Use the simplest dosage schedule and least invasive modalities necessary to achieve pain relief.
2. Begin treatment at the appropriate step of the analgesic ladder based on the patient's pain intensity.
3. Patients with persistent or chronic pain – administer analgesics on a regular schedule (ATC) to prevent recurrence of pain.
4. Pain that persists should be re-evaluated.

PHARMACOLOGIC INTERVENTIONS

INTERVENTION	COMMENTS
<p>NSAIDS: Oral</p> <p>Oral (adjunct to opioid)</p> <p>Parenteral (ketorolac)</p>	<p>Effective for mild to moderate pain. Begin preoperatively. Relatively contraindicated in patients with renal disease and risk of or actual coagulopathy. May mask fever.</p> <p>Potentiating effect resulting in opioid sparing. Begin pre-op. Cautions as above.</p> <p>Effective for moderate to severe pain. Expensive. Useful where opioids are contraindicated, especially to avoid respiratory depression and sedation. Advance to opioid.</p>
<p>OPIOIDS: Oral</p> <p>Intramuscular</p> <p>Subcutaneous</p> <p>Intravenous</p> <p>Transdermal</p>	<p>As effective as parenteral in appropriate doses. Use as soon as oral medication tolerated. Route of choice.</p> <p>Has been the standard parenteral route, but injections painful and absorption unreliable. Hence, avoid this route when possible.</p> <p>Preferable to intramuscular when a low-volume continuous infusion is needed and intravenous access is difficult to maintain.</p> <p>Parenteral route of choice after major surgery. Suitable for titrated bolus or continuous administration (including PCA's), but requires monitoring. Significant risk of respiratory depression with <u>inappropriate dosing</u>.</p> <p>Useful in patients with chronic pain who have swallowing difficulty. Slow onset – not for patients with rapidly changing level of pain.</p>
<p>OPIOIDS: PCA</p> <p>Epidural & Intrathecal</p>	<p>Intravenous or subcutaneous routes recommended. Good steady level of analgesia. Popular with patients but requires special infusion pumps and staff education. See cautions about opioids above.</p> <p>When suitable, provides good analgesia. Risk of respiratory depression, sometimes delayed in onset. Requires careful monitoring. Use of infusion pumps requires additional equipment and staff education.</p>
<p>LOCAL ANESTHETICS: Epidural & Intrathecal</p> <p>Peripheral Nerve Block</p>	<p>Limited to indications. Effective regional analgesia. Opioid sparing. Addition of opioid to local anesthetic may improve analgesia. Risks of hypotension, weakness, numbness. Requires careful monitoring. Use of infusion pump requires additional equipment and staff education.</p> <p>Limited indications and duration of action. Effective regional analgesia. Opioid sparing.</p>

SHS 2000, revised 2006

EFFECTS OF OPIOID RECEPTOR STIMULATION

Effect	RECEPTOR SUB-TYPES						
	mu1	mu2	kappa			delta	
			kappa1	kappa2	kappa3	delta1	delta 2
<u>Analgesia</u>							
Brain	X				X	X	X
Spine		X	X				X
Respiratory function		X					
Sedation	X-----X		X-----X-----X				
Gastrointestinal		X	X-----X-----X				
Hallucinations			X-----X-----X				
Diuresis			X				
Neurotransmitter release inhibition:							
Acetylcholine	X						
Dopamine		X				X-----X	
Hormone regulation:							
Prolactin	X						
Growth hormone	X					X-----X	

MEDICATION ACTIVITY

Opioid

Morphine	X-----X	X	X
Methadone	X-----X		
Fentanyl	X-----X		

Reference: Chart simplified from Goodman and Gilman's Pharmacological Basis of Therapeutics, 9th edition

CANCER PAIN MANAGEMENT REFERENCE CARD - SIDE 1

SOURCES OF PAIN		
PAIN SOURCE	PAIN CHARACTER	DRUG CLASS/EXAMPLES
Myofacial Somatic Pain	Constant and well localized.	- Muscle relaxants - Acetaminophen/NSAIDS
Visceral Pain	Injury to sympathetically innervated organs. Pain is vague in quality. Deep, dull, aching. Referred Pain.	- Opioids - Corticosteroids
Bone Pain	Axial skeleton with thoracic and lumbar spine most common.	- Radiation Therapy, Radionucleotides - NSAIDs: Celebrex, Bextra, Motrin, Naproxen, Dolobid, Orudis, Trilisate, Toradol - Corticosteroids - Bisphosphonates - Opioids
Neuropathic Pain Nerve Damage Dysesthesia	Injury to some element of the nervous system (plexus or spinal root). Dysesthesia, burning, tingling, numbing, shooting electrical pain. May not respond well to opioid analgesics.	- Tricyclic Antidepressants: Nortriptyline (Pamelor), Desipramine (Norpramin, Pertofrane) for burning pain - Anticonvulsants: Neurontin, Tegretol or Klonopin - Corticosteroids - Anti-arrhythmic (Mexiletine) - Topical Anesthetic Lidocaine Patch 5% (Lidoderm) - Opioids

Nonsteroidal anti-inflammatory drugs for bone pain and antidepressants or anticonvulsants are but two of many potential co-analgesics. Corticosteroids, neuroleptic agents, bisphosphonates and calcitonin, and some anxiolytic agents may be useful in selected patient populations. Avoid benzodiazepines unless primary anxiety disorder persists after pain is relieved.

STEP 3 Severe Pain (rating 8-10)

- Morphine, hydromorphone, oxycodone, fentanyl, or methadone
- Pain may require oral, transdermal, parenteral, or intraspinal routes for adequate analgesia
- Invasive techniques should be considered for patients who do not respond to Step 3.

STEP 2 Moderate Pain (rating 4-7)

- Acetaminophen/oxycodone combination (Percocet)
- Acetaminophen/hydrocodone combination (Vicodin)
- Immediate or sustained release oxycodone
- When the maximum tolerated or recommended dosage is reached, or pain is unresponsive, proceed to step 3 interventions.

STEP 1 Mild Pain (rating 1-3)

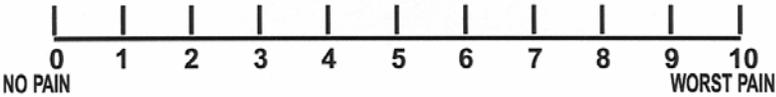
- Acetaminophen or an NSAID (e.g. ibuprofen)
- When the maximum tolerated or recommended dosage is reached, or pain is unresponsive, proceed to step 2 interventions. Opioids in low doses may be useful for mild pain.

OPIOID SIDE EFFECT MANAGEMENT	
Constipation	Senokot-S or Pericolace 2 tabs bid. May increase to 4 tabs bid. If no BM in 2 days add a laxative (Dulcolax, Milk of Magnesia or Lactulose). Lactulose effectiveness is dose related. Start at 4 tbsp. q 4 hrs until BM, especially when constipation is opioid related.
Nausea/Vomiting	Compazine 10 mg po q 6 hr PRN or 25 mg suppository PR q 6 hr PRN. May add Ativan 0.5mg q 6 hr po/sl, PRN or Reglan 10 mg po qid. If oral route cannot be tolerated or is ineffective, check with MD for alternative routes. Scopolamine TD patch is effective for opioid related nausea q 72 hrs.



CANCER PAIN MANAGEMENT REFERENCE CARD

The Southern California Cancer Pain Initiative
 c/o City of Hope National Medical Center
 1500 E. Duarte Road, Duarte, California 91010
 Phone: 626-256-4673 Ext. 63840 • Fax: 626-301-8941
 Email: sccpi@coh.org



CANCER PAIN MANAGEMENT REFERENCE CARD - SIDE 2

MANAGEMENT PRINCIPLES

1. Use a multi-drug approach. Combine Opioids with non-opioid adjuvants.
2. Opioids should be limited to the agonist drugs. See Equianalgesic Chart below. Avoid Meperidine (Demerol) and the mixed agonist-antagonist opioids (e.g. Stadol, Nubain, Talwin).
3. Cancer pain is chronic in nature and requires, with the rare exception, both scheduled and rescue dosing. Scheduled dosing will maintain even serum drug levels and provide consistent relief. Rescue dosing should be available on an as-needed basis and can be increased or decreased depending on its effects. Frequent rescue dosing requires a change in the scheduled long acting drug dose.
4. Base the administration schedule on the analgesic's duration of effect. If possible, use sustained release opioids for scheduled dosing and always use immediate release opioids for rescue dosing.
5. A non-invasive route is preferred. For pain that is severe and escalating, it may be necessary to provide intravenous analgesics until the pain is managed. If oral, rectal, or transdermal dosing is no longer practical or appropriate, continuous subcutaneous or intravenous infusions are indicated.
6. Take into account the equianalgesic differences of the various routes of administration. The first pass effect of hepatic metabolism requires higher oral opioid dosing than parenteral dosing. When changing from oral to parenteral or when changing opiates, allow for individual differences, and then titrate dose.
7. Manage opioid side effects aggressively. Be mindful that patients never become tolerant to the constipating effects of opioids.

DRUG	DOSAGE FORM/STRENGTHS	DURATION	EQUIVALENCE							
			IM/SC/IV Morphine	ORAL Morphine						
Morphine	Immediate Release Tablets MSIR - 15, 30 mg	q 3-6 hrs	10 mg	30 mg						
	Sustained Release Tablets MS Contin - 15, 30, 60, 100, 200 mg (1) Oramorph SR - 15, 30, 60, 100 mg (1) Avinza - 30, 60, 90, 120 mg (2) Kadian - 20, 30, 50, 60, 100 mg (1, 2)	q 12 hrs q 12 hrs q 24 hrs q 24 hrs								
	Oral Liquid MSIR Oral Solution - 2 mg/ml, 4 mg/ml MSIR Oral Concentrate - 20 mg/ml Roxanol Concentrate - 20 mg/ml	q 3-6 hrs q 3-6 hrs q 3-6 hrs								
	Suppository Rectal Morphine Sulfate (RMS) - 5, 10, 20, 30 mg	q 4 hrs								
	Hydromorphone	Tablets Dilaudid - 2, 4, 8 mg			q 3-6 hrs	1.5 mg	7.5 mg			
		Liquid Dilaudid - 2 mg/ml Dilaudid HP - 10 mg/ml			q 3-6 hrs q 3-6 hrs					
		Suppository Dilaudid - 3 mg			q 6-8 hrs					
		Oxycodone			Immediate Release Tablets Oxy IR - 5 mg Roxicodone - 5 mg, 15 mg, 30 mg Oxycodone/Acetaminophen (3) Percocet - 5/325, 7.5/325, 10/325 mg (3) Roxicet - 5/325, 5/500 mg (3)			q 3-4 hrs q 3-4 hrs q 3-4 hrs q 4-6 hrs q 3-4 hrs		20-30 mg
					Sustained Release Tablets (1) Oxycontin - 10, 20, 40, 80 mg			q 8-12 hrs		
	Liquid Roxicodone - 1 mg/ml, 20 mg/ml OxyFAST - 20 mg/ml				q 3-4 hrs q 3-4 hrs					
Fentanyl Transdermal	Skin Patch (4) Duragesic - 25, 50, 75, 100 mcg/hr		q 48-72 hrs	100 mcg patch q 2-3 days = 66 mg IV Morphine q 24 hrs OR 2.7 mg IV Morphine q 1 hr	100 mcg patch q 2-3 days = 200 mg Oral Morphine q 24 hrs OR 33 mg Oral Morphine q 4 hrs					
	Oral Lozenge (5) Actiq - 200, 400, 600, 800, 1200, 1600 mcg		---	---	---					
Methadone (6, 7)	Tablet Dolophine - 5, 10 mg		q 4-12 hrs	10 mg acute 2-4 mg chronic	20 mg acute 2-4 mg chronic					
	Liquid Generic Methadone - 1, 2 mg/ml		q 4-12 hrs	1-2 mg	2.5-5 mg					
Hydrocodone	Hydrocodone/Acetaminophen Tablets (3) Vicodin - 5/500 mg Vicodin ES - 7.5/750 mg Lorcet or Vicodin HP - 10 mg/650 mg Lortab - 2.5/500 mg, 5/500 mg 7.5/500 mg, 10/500 mg Norco - 5/325 mg, 7.5/325 mg, 10/325 mg	q 4-6 hrs q 4-6 hrs q 4-6 hrs q 4-6 hrs q 4-6 hrs q 4-6 hrs		Vicodin 5 mg/500 mg = 9 mg Oral Morphine						
	Hydrocodone/Ibuprofen Vicoprofen - 7.5/200 mg	q 4-6 hrs								

1. Do not crush or chew tablets. 2. Capsules may be opened and granules sprinkled on food or placed in NG tube. 3. Dose in 24 hrs, limited to maximum acetaminophen 4000 mg. 4. Do not cut patch. Must be in contact with skin. 5. Onset 5 minutes; not recommended for opioid naive patients. 6. Accumulates with repeated dosing, requiring decreases in dose size and frequency, especially on days 2-5. 7. May wish to titrate on a q 8 hr schedule.

NOTES: • Butorphanol (Stadol), Meperidine (Demerol), Nalbuphine HLC (Nubain), Pentazocine (Talwin) and Propoxyphene (Darvon, Darvocet) are not recommended for the management of cancer pain.

Mod. 10/04 t

Complimentary Alternative Medicine (CAM) - Physical Interventions, Cognitive - Behavioral Interventions

PHYSICAL INTERVENTIONS

Acupressure Use of finger and hand pressure over specific points on the body to relieve pain and discomfort and to influence the function of internal organs and body systems. Various approaches are used to release tension and restore the natural flow of energy in the body.

Acupuncture is an ancient method for relieving pain and controlling disease, used in China for thousands of years. Acupuncture is an invasive procedure that involves insertion of needles at various points in the body to relieve pain. It is based on an ancient Chinese theory that two opposing forces, yin and yang, move along meridians in the body. When they are out of balance, pain and illness result. There are about a thousand acupuncture points along these meridians, each of which correspond roughly to hypersensitive areas in muscle and connective tissue. The theory posits that pain is relieved when the correct point is stimulated or prolonged pressure is applied. Acupuncture may also release endorphins and stimulate large nerve fibers to “close the gate” in the spinal cord to pain impulses. It appears to be effective for some patients with chronic pain.

Side effects risks are low and can include:

1. Post-needling pain, bleeding, bruising and local skin reactions.
2. Dizziness or fainting,
3. Rarely, organ damage can occur with deep needling techniques.
4. Infection because of inadequately sterilized needles is a hazard; disposable needles are recommended.
5. Acupuncture is not recommended for patients with serious blood clotting problems.
6. Pregnant women should use acupuncture with caution.

Breath Work/ Deep Breathing for relaxation In this simple technique, the patient uses controlled breathing and focuses his or her attention on the act of breathing only. To begin, breath slowly and diaphragmatically, allowing the abdomen to rise slowly and the chest to expand fully. One can learn to eliminate stress, improve vitality and expand awareness. This may shift attention away from the source(s) of pain.

Comfort measures such as clean, smooth sheets, soft, supportive pillows, warm blankets, and a soothing environment have been used by nurses throughout history to relieve pain and suffering. These measures may be difficult to provide in the noisy, mechanized healthcare facilities of today- they are important to the mental and physical health of clients.

Hydrotherapy is the use of water, ice, steam, and hot and cold temperatures to maintain and restore health. Treatments include full body immersion, steam baths, saunas, colonic irrigation, and the application of hot and/or cold compresses.

Heat Therapy can reduce pain, especially of muscle tendon or spasm. Some patients with other types of pain may benefit. Applications can come in the form of hot packs, hot water bottles, moist compresses, electric heating devices, chemical or gel packs carefully wrapped to prevent burns.

Heat therapy can:

1. Increases the flow of blood to the tissues
2. Dilates blood vessels
3. Increases oxygen and nutrient delivery
4. Decreases joint stiffness /improves muscle elasticity
5. Should be applied for 15-20 minutes
6. Patients may also submerge the effective part in warm water.
7. Avoid heat to radiation therapy skin and tissues.
8. Pregnant women should not utilize methods that subject the fetus to prolonged heat.

Deep heat delivered by short wave or microwave diathermy, or ultrasound can be used in treatment of pain. Deep heat treatments should be used with caution in patients with active cancer and not delivered to an active cancer site.

Cold Therapy: Cold sources should be sealed to prevent dripping, flexible to conform to the body, and adequately wrapped to prevent irritation or damage to the skin. Application can come in the form of ice packs; ice water soaked towels or chemically prepared gel packs.

Cold therapy can:

1. Decreases blood vessels at the surface.
2. Can relieve pain of muscle tension or spasm.
3. Can reduce swelling.
4. Other types of pain may benefit also.
5. Should be applied for 15-20 minutes.

Massage can be a useful addition to a pain management program, especially for patients who are bedridden. Muscles can be stroked, kneaded or rubbed in a circular motion. A lotion can reduce friction on the skin. Massage is not recommended in cases of swollen tissue. It should be used in addition to, and not instead of, exercise by patients who can walk. Muscles can be stroked, kneaded or rubbed in a circular motion. A lotion can reduce friction on the skin. Massage is not recommended in cases of swollen tissue. It should be used in addition to, and not instead of, exercise by patients who can walk.

Massage can:

1. Stimulate blood flow
2. Relax muscles that are tight or in spasm
3. Promote a feeling of well-being

Non-Invasive Stimulatory Approaches- Transcutaneous electrical nerve stimulation (TENS) is a method of applying a gentle electric current to the skin to relieve pain. TENS works by stimulating large nerve fibers to close the “gate” in the spinal cord. It also may stimulate endorphin production. TENS may be used for acute postoperative pain or for chronic conditions, such as low back pain, phantom limb pain, and neuralgia. Studies have shown that it can be effective in certain cases of chronic pain.

Patients describe the sensation of TENS as buzzing, tingling or tapping. Pain relief usually lasts beyond the period when current is applied. TENS can become less effective at relieving pain over time. TENS is usually safe and well tolerated, however, it is not recommended on inflamed, infected or otherwise unhealthy skin, over a pregnant uterus (except for obstetric pain relief), or in the presence of a cardiac pacemaker.

Progressive Muscle Relaxation. In this technique, developed in the 1930s, patients contract and then relax, muscles throughout the body, group by group. Progressive muscle relaxation can help patients learn about the tension in their body and the contrast between tense and relaxed muscles. The coach suggests or the client internally thinks to locate an area of muscle tension, contract the muscles in that area and then relax them. As the subject relaxes, pain perception and anxiety diminish. This is at times done systematically, toe to head.

Repositioning Frequent changing the position of the patient and/or the affected limb is essential. Position change and movement are well-known pain-relieving interventions, which relieve muscle spasm and provides a degree of pain relief. Nurses need to offer these important pain-relieving interventions frequently.

Biofeedback Therapy

Biofeedback is a method of treating chronic pain and other stress-related conditions. It uses an electric device to gather information about physical responses and report them back to clients. The information goes to the biofeedback machine by way of electrode sensors placed on the person's skin. It is displayed as visual signals on a monitor. As clients watch these signals, they learn to control their responses. Biofeedback is a method in which people learn to reduce their body's unproductive responses to stress, and thus decrease their sensitivity to pain. Children are particularly quick to learn from biofeedback. In biofeedback, electrodes are placed on the patient's skin at various points to measure:

1. Muscle Tension- contraction of a muscle causes electrical activity
2. Temperature- blood flow determines temperature of hand and feet
3. Heart Rate
4. Diaphoresis (sweating)

Patients watch the monitor and listen to the tones measuring their stress indicators. They use these as a guide in learning to release tension throughout their body.

ENERGY BASED THERAPIES

Healing Touch is an energy-based therapeutic approach to healing. Touch is used to influence the energy system, affecting physical, emotional, mental and spiritual health and healing. The goal of treatment is to restore harmony and balance, promoting self-healing.

Touch for Health: A science of energy-balancing encompassing aspects of applied kinesiology, acupressure, massage and nutrition to maximize physical and emotional health. Touch for Health emphasizes the uniqueness of the individual, and uses measurement of muscle strength as a biofeedback mechanism to determine the unique needs of the individual.

Reiki: The use of hands and visualization to direct energy to various parts of the body to facilitate healing and relaxation. Reiki can promote mental, emotional, physical, and spiritual balance.

COGNITIVE-BEHAVIORAL INTERVENTIONS

Aromatherapy We have the capability to distinguish 10,000 different smells. Use of essential oils extracted from plants and herbs are used to treat physical imbalances, as well as to achieve psychological and spiritual well-being. Scents are inhaled into the nose and enter through cilia (fine hairs in the nasal lining) into the limbic system (the part of the brain that controls our moods, emotions, memory and learning) Oils can be inhaled, applied externally, or ingested.

Distraction diverts the attention of individuals away from painful stimuli. When people focus on something that gives pleasure, they are less likely to feel acute pain. This phenomenon occurs because the reticular activating system briefly inhibits the awareness of pain. Distraction works best for short acute pain, such as a needle stick. However, it is important to remember that distraction does not work for chronic, long-term pain.

Distraction can be utilized in many forms:

1. Listening to music (either recorded or live), the radio or stories
2. Singing, Reading, Watching TV, Playing hand held video games or puzzles
3. Talking to family or friends at bedside or on the phone

Guided Imagery In this technique, the patient is directed or coached, by another person following a script or imagination, to focus on the pleasant thoughts being offered, for example; the sound of waves gently hitting a sandy beach. In this type of imagery, the senses are used to maximize the experience- such as smelling the flowers, seeing the beautiful blue water, feeling the sand on your feet and hearing the sea gulls. The purpose of the exercise is to provide an experience of relaxation and relief from stress and pain.

Imagery is a technique, in which patients focus on pleasant thoughts, for example waves gently hitting a sandy beach. One variation is to think of an image that represents the pain (such as a hot, blazing concrete sidewalk), then imagine it changing into an image representing a pain-free state (a pretty, snow-covered forest).

Meditation In this technique, practiced routinely in Asia, is a method of relaxing and quieting the mind to relieve muscle tension facilitate inner peace. The aim is to empty his or her mind of thoughts, focusing instead on the sensation of breathing and the rhythms of his or her body. There are numerous forms of meditation.

Relaxation Exercises are useful to reduce anxiety, decrease muscle tension, and lower blood pressure and heart rate. An induced state of altered consciousness gives individuals a sense of control and peace of mind.

<u>SIMPLE RELAXATION INTERVENTIONS</u>	<u>COMMENTS</u>
<p>Jaw Relaxation Techniques</p> <ul style="list-style-type: none"> • Let your lower jaw drop slightly, as though you were starting a small yawn • Keep your tongue quiet and resting on the bottom of your mouth. • Let your lips get soft. • Breathe slowly, evenly, and rhythmically: inhale, exhale, and rest • Allow yourself to stop forming words with your lips and stop thinking in words <p>Relaxation Exercises</p> <p>Clench your fists and breathe in deeply and hold it a moment</p> <ul style="list-style-type: none"> • Breathe out slowly and go limp as a rag doll • Start yawning <p>Peaceful Past</p> <p>Something in your past may have brought you peace and comfort. You may be able to draw on those experiences to bring peace and comfort again</p>	<p>Effective in reducing mild to moderate pain and as an adjunct to analgesic drugs for severe pain.</p> <p>Use when patients express an interest in relaxation.</p> <p>Requires 3-5 minutes of staff time for instruction.</p>

Spiritual Support and Belief Systems Spiritual leaders are another potential source of support for patients. Religions are patterns of thought and action that typically include belief systems, devotional rituals, organizational structures, and faith in a mystical power. Belief systems are organized patterns of thought regarding the origin, purpose, and place of humans in the universe. These systems seek to explain the mysteries of life and death, good and evil, health and illness. Typically, belief systems include an ethical code of conduct about how people should relate to the world and its inhabitants. Often, however, people develop their own belief systems, independent of organized religions.

Stress Management Any therapy or educational practice with the objective of decreasing stress and enhancing one's response to the elements of life that cannot be changed. This broad category may include bodywork, energy work, visualization and counseling.

Reframing is a pain/ stress management technique that teaches patients to monitor negative thoughts and images and replace them with positive ones. Patients can learn to have a more positive outlook by recognizing some counterproductive thought patterns, such as:

- Blaming, in which the individual avoids taking responsibility.
- "Should" or "must" statements, which imply that someone has failed to live up to an arbitrary standard.
- Polarized thinking, in which everything is black or white, with no shades of gray.
- Catastrophizing, in which the person imagines the worst possible scenario then acts as if it will surely come true.
- Control fallacy, in which the person sees him or herself as completely controlled by others (or controlling everything).
- Emotional reasoning, in which the individual believes that what he or she feels must be true.
- Filtering, in which people focus on one thing (such as pain) to the exclusion of any other experience or point of view.
- Entitlement fallacy, in which individuals believe they have the right to what they want.

Patient Controlled Analgesia (PCA) / Patient Controlled Epidural Analgesia (PCEA)

PCA/PCEA TIP SHEET 8/06

No PCA by proxy – Only the patient pushes the button!

PCA

Every 2 hours x 24 hours, then every 4 hours until discontinued

1. RESPIRATORY RATE
2. BLOOD PRESSURE
3. HEART RATE
4. PAIN SCORE
5. SEDATION LEVEL

PULSE OXIMETRY – continuous X 12 hrs

PCEA

Every hour x 12 hours, then every 2 hours X 12 hours, then every 4 hours until discontinued

1. RESPIRATORY RATE
2. BLOOD PRESSURE
3. HEART RATE
4. PAIN SCORE
5. SEDATION LEVEL

PULSE OXIMETRY – continuous X 12 hrs

MOTOR/SENSORY

1. Every 2 hrs for 8 hrs
2. Every 4 hrs and prior to each ambulation until epidural D/C
3. For patients on anticoagulation, continue assessment X 24 hrs after epidural D/C

Sedation Scale

All sleeping patients must be awakened to assign level 1-4

1 = Awake and alert

2 = Slightly drowsy, easily aroused

3 = Frequently drowsy, arousable, drifts off to sleep during conversation

4 = Somnolent, minimal or no response to physical stimulation

Document at the end of the shift on the MAR:

Mg or Mcg of pain med received

How many mg of Morphine was given?

How many mg of Dilaudid was given?

Volume Infused X Concentration

mls infused X 1 mg per ml

Example:

12 mls volume infused X 1 mg/ml = 12 mgs morphine

Volume Infused X Concentration

mls infused X 0.2 mg per ml

Example:

12 mls volume infused X 0.2 mg/ml = 2.4 mgs dilaudid

OPIOID EQUIVALENCIES

Many of these equivalencies are rough estimates, but have worked well for our patients.

- The conversion of oral to parenteral morphine **varies widely** from patient to patient.
It can run **from 2:1 to 6:1**, depending on how much oral morphine makes it into the blood after the liver pass.
- Remember that drugs reach steady state after five half-lives. Therefore, **steady state can be reached in a day or less with morphine**, but five or more days with methadone.

<u>DRUG</u>	<u>DOSAGE EQUIVALENTS</u>	<u>DURATION of ANALGESIA</u>	<u>PLASMA HALF-LIFE</u>
<u>MORPHINE</u>	60 mg. oral or rectal immediate release	4-7 hours	2-3.5 hours
	60 mg. oral sustained release	8-12 hours	4-7 hours
	20 mg. parenteral (IV, SC)	4-6 hours	2-3.5 hours
<u>FENTANYL</u> (Duragesic)	25 mcg transdermal patch	48-72 hours	
<u>HYDROMORPHONE</u> (Dilaudid)	12-15 mg. oral or rectal	4-5 hours	2-3 hours
	4-5 mg parenteral	4-5 hours	2-3 hours
<u>METHADONE</u>	40 mg. to start, oral 4-8 mg. long-term	3-24 hours	24-36 hours

One conversion formula recommends a 4:1 morphine to methadone ratio if the total daily dose of morphine (or equivalent dose) is 100 mg or less, 8:1 for morphine doses from 100 to 300 mg a day, and 12:1 over 300 mg a day. Others recommend even higher ratios at the high doses – 20:1 or 30:1. We have had an occasional patient go from very high doses of morphine (over 300 mg a day) to very low doses of methadone (10-20 mg a day) with good pain control.

<u>OXYCODONE</u> (Percocet, Tylox, Oxycontin)	40-60 mg oral immediate release	3-5 hours	
	40-60 mg sustained release	8-12 hours	
<u>HYDROCODONE</u> (in Vicodin, Lortab)	60-120 mg. oral	4-8 hours	
<u>CODEINE</u>	240 mg. oral	4-6 hours	3 hours
NOT RECOMMENDED (but you might have to convert from it)			
<u>MEPERIDINE</u> (Demerol)	600 mg. oral	4-6 hours	3-4 hours
	150 mg parenteral	4-5 hours	3-4 hours
Creates normeperidine	TOXIC metabolite	12-16 hours	

Not recommended, especially in the elderly

PROPOXYPHENE

(Darvon, Darvocet) ineffective (no stronger than aspirin or acetaminophen), and can accumulate and produce neuroexcitatory effects or dizziness in older persons

PENTAZOCINE may lead to confusion and agitation

Sources: Carol Scot, M.D. – Hospice 2005

UNIPAC Three: Assessment and Treatment of Pain in the Terminally Ill, 2nd Edition, American Academy of Hospice and Palliative Medicine, 2003

Cecil Textbook of Medicine, 22nd Edition, 2004

Goodman and Gilman The Pharmaceutical Basis of Therapeutics, 8th Edition

BARRIERS TO THE ASSESSMENT AND TREATMENT OF PAIN

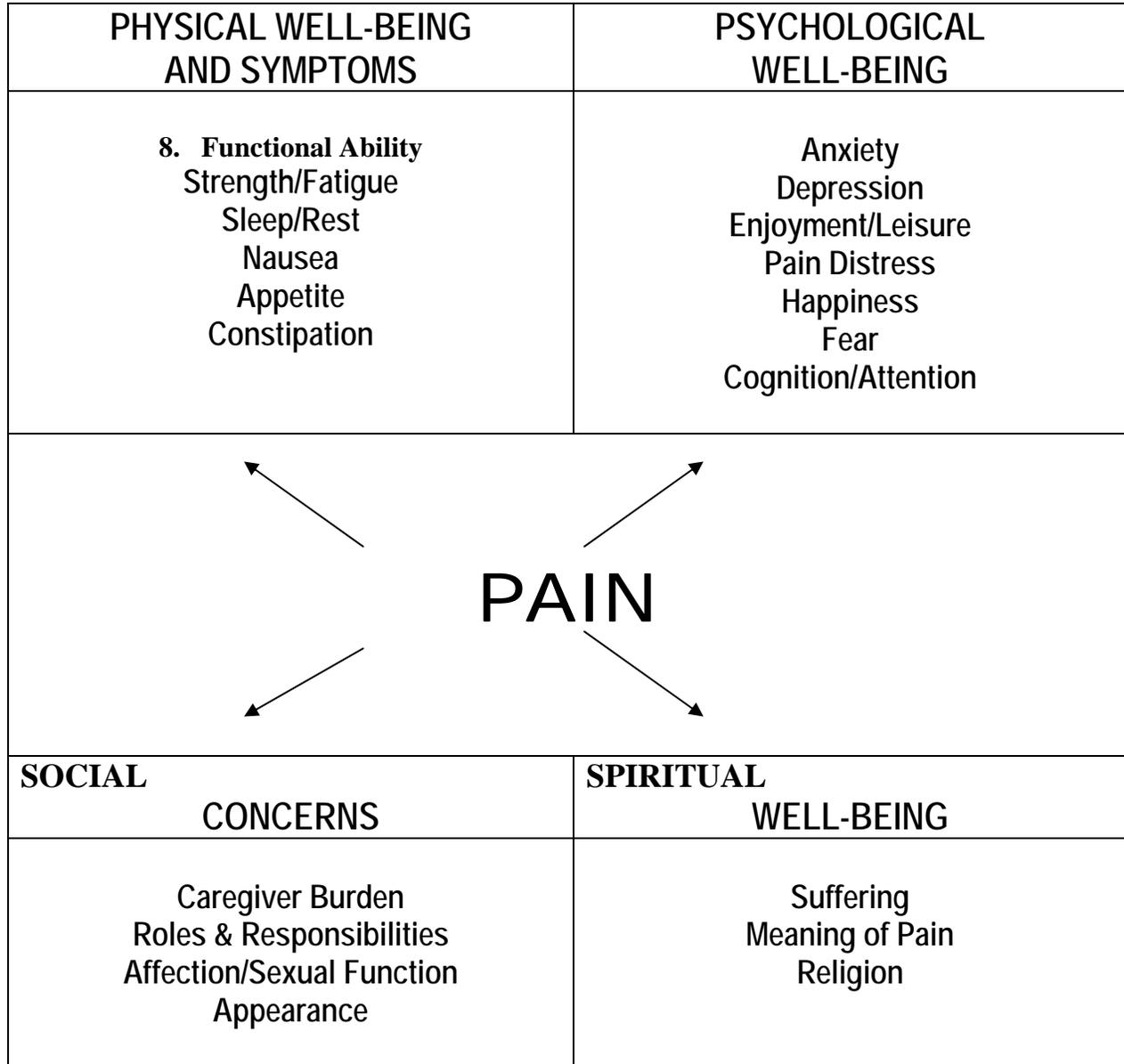
MISCONCEPTION	CORRECTION
1. The best judge of the existence and severity of a patient's pain is the physician or nurse caring for the patient.	The patient is the authority about his or her pain. The patient's self-report is the most reliable indicator of the existence and intensity of pain.
2. Clinicians should use their personal opinions and beliefs about the truthfulness of the patient to determine the patient's true pain status.	Allowing each clinician to act on personal beliefs presents the potential for different pain assessments by different clinicians, leading to different interventions from each clinician. This results in inconsistent and often inadequate pain management. It is essential to establish the patient's self-report of pain as the standard for pain assessment.
3. The clinician must believe what the patient says about pain.	The clinician must accept and respect the patient's report of pain and proceed with appropriate assessment and treatment. The clinician is always entitled to his or her personal opinion, but this cannot be allowed to guide professional practice
4. Comparable noxious stimuli produce comparable pain in different people. The pain threshold is uniform.	Findings from numerous studies have failed to support the notion of a uniform pain threshold. Comparable stimuli do not result in the same pain in different people. After similar injuries, one person may suffer moderate pain and the other severe pain.
5. Patients with a low pain tolerance should make a greater effort to cope with pain and should not receive as much analgesia as they desire.	A stoic response to pain is valued in this society and many others. Research shows that clinicians often do not like patients with a low pain tolerance. However, imposing these values on the patient and withholding analgesics is inappropriate.
6. There is no reason for patients to hurt when no physical cause for pain can be found.	Pain is a new science, and it would be foolish of us to think that we will be able to determine the cause of all the pains that patients report.
7. Patients should not receive analgesics until the cause of pain is diagnosed.	Pain is no longer the clinician's primary diagnostic tool. Symptomatic relief of pain should be provided while the investigation of cause proceeds. Early use of analgesics is now advocated for patients with acute abdominal pain.
8. Visible signs, either physiologic or behavioral, accompany pain and can be used to verify its existence and severity.	Even with severe pain, periods of physiologic and behavioral adaptation occur, leading to periods of minimal or no signs of pain. Lack of pain expression does not necessarily mean lack of pain.
9. Anxiety makes pain worse.	Anxiety is often associated with pain, but the cause and effect relationship has not been established. Pain often causes anxiety but it is not clear that anxiety necessarily makes pain more intense.
10. Patients who are knowledgeable about opioid analgesics and who make regular efforts to obtain them are "drug seeking" (addicted).	Patients with pain should be knowledgeable about their medications, and regular use of opioids for pain relief is not addiction. When a patient is accused of "drug seeking," it may be helpful to ask, "What else could this behavior mean? Might this patient be in pain?"
11. When the patient reports pain relief after a placebo, this means that the patient is a malingerer or that the pain is psychogenic.	About one third of patients who have obvious physical stimuli for pain (e.g., surgery) report pain relief after a placebo injection. Therefore placebos cannot be used to diagnose malingering, psychogenic pain, or any psychologic problem. Sometimes placebos relieve pain, but why this happens remains unknown.
12. The pain rating scale preferred for use in daily clinical practice is the VAS.	For patients who are verbal and can count from 0 to 10, the NRS pain rating scale is preferred. It is easy to explain, measure, and record, and it provides numbers for setting pain-management goals.
13. Cognitively impaired elderly patients are unable to use pain rating scales.	When an appropriate pain rating scale (e.g., 0-5) is used and the patient is given sufficient time to process information and respond, many cognitively impaired elderly can use a pain rating scale

REASONS FOR GOOD PAIN CONTROL

- Pain increases the risk for infection since it depresses the immune response.
- Pain decreases gastrointestinal motility.
- Pain can cause atelectasis and hypoxemia.
- Pain inhibits rehabilitation.
- Pain can lengthen hospital stay.
- And pain decreases patient satisfaction – increases anxiety and irritability.

PAIN IMPACT ON THE DIMENSIONS OF QUALITY OF LIFE

(Ferrell, Rhiner, Cohen & Grant, 1991)



PAIN INTERNET RESOURCES

General Pain Information:American Pain Society<http://www.ampainsoc.org>American Pain Foundation<http://www.painfoundation.org>American Chronic Pain Association<http://www.theacpa.org/>Mayday Pain Project<http://www.painandhealth.org/>The National Foundation for the Treatment of Pain<http://www.paincare.org/>American Academy of Pain Management<http://www.aapainmanage.org/index.php>MayoClinic.com Pain Management Center<http://www.www.mayoclinic.com/findinformation/diseasesandconditions/index.cfm>International Association for the Study of Pain<http://www.iasp-pain.org/>Pain and Policy Studies Group<http://www.medsch.wisc.edu/painpolicy/>**Medical Center Pain Sites:**Massachusetts General Hospital, Boston<http://www.massgeneral.org/painrelief/>MD Anderson Cancer Center, Houston<http://www.mdanderson.org/topics/paincontrol/>Beth Israel Medical Center, New York<http://www.stoppain.org>Memorial Sloan-Kettering Cancer Center, New York<http://www.mskcc.org/mskcc/html/474.cfm>City of Hope, Duarte, CA<http://www.cityofhope.org/prc>OncoLink, University of Pennsylvania-Abramson Cancer Center<http://www.oncolink.upenn.edu>

Care giving Information:

Caregiver.com

<http://www.caregiver.com/>

Children of Aging Parents

<http://www.caps4caregivers.org/>

National Family Caregivers Association

<http://www.nfcacares.org/>

National Adult Day Services Association

<http://www.nadsa.org/>

National Association of Professional Geriatric Care Managers

<http://www.caremanager.org/>

American Association for Caregiver Education

<http://www.caregivered.org/>

American Society on Aging

<http://www.asaging.org/>

American Geriatrics Society Foundation for Health in Aging

<http://www.healthinaging.org>

Cancer Pain Information:

American Society of Clinical Oncology-People Living With Cancer

<http://www.peoplelivingwithcancer.org/>

American Alliance of Cancer Pain Initiatives

<http://www.aacpi.wisc.edu/index.htm>

Cancer-Pain.org

<http://www.cancer-pain.org/index.html>

National Cancer Information Service

<http://cis.nci.nih.gov/>

American Cancer Society

<http://www.cancer.org>

National Cancer Institute (NCI)

<http://www.nci.nih.gov>

NCI — Coping with Cancer Pain

<http://www.nci.nih.gov/cancerinfo/coping/>

National Coalition for Cancer Survivorship

<http://www.canceradvocacy.org>

<http://www.oncolink.upenn.edu/>

Arthritis Pain Information:

Arthritis Foundation Pain Center

<http://www.arthritis.org>

Johns Hopkins: Arthritis News

<http://www.hopkins-arthritis.org>

National Institute of Arthritis and Musculoskeletal and Skin Diseases

<http://www.niams.nih.gov/>

Arthritis Resource Center at HealingWell.com

<http://www.healingwell.com/arthritis/>

Back Pain Information:

MedlinePlus — Back Pain Center

<http://www.nlm.nih.gov/medlineplus/backpain.html>

American Academy of Orthopaedic Surgeons — Patient Information

<http://orthoinfo.aaos.org/>

Neurology Channel — Back Pain Center

<http://www.neurologychannel.com/backpain/>

The Bone and Joint Decade/WHO

<http://www.boneandjointdecade.org/>

AIDS & HIV Information:

AEGis: The HIV Daily Briefing

<http://www.aegis.com>

Johns Hopkins AIDS Service

<http://www.hopkins-aids.edu>

National AIDS Treatment Advocacy Project

<http://www.natap.org>

Sickle Cell Anemia Information:

Sickle Cell Society

<http://www.sicklecellsociety.org/>

Sickle Cell Disease Association of America

<http://www.sicklecelldisease.org>

The Sickle Cell Information Center

<http://www.scinfo.org>

Information Center for Sickle Cell and Thalassemic Disorders

<http://sickle.bwh.harvard.edu/wlcm.html>

Fibromyalgia Information:

American Fibromyalgia Syndrome Association, Inc. (FMS)

<http://www.afsafund.org>

Fibromyalgia Network

<http://www.fmnetnews.com>

National Fibromyalgia Association

<http://fmaware.org/>

Reflex Sympathetic Dystrophy Syndrome Information:

Reflex Sympathetic Dystrophy Syndrome Association

<http://www.rsds.org>

RSDHope

<http://www.rsdhope.org/>

Canadian RSD Network

<http://www.canadianrsd.com/>

End-of-Life Care Information:

Compassion in Dying

<http://www.compassionindying.org/>

Partnership for Caring

<http://www.partnershipforcaring.org>

National Hospice and Palliative Care Organization

<http://www.nhpco.org>

SEARCH MEDICAL RESOURCES:

Medlineplus

<http://www.nlm.nih.gov/medlineplus/>

A service of the U.S. Library of Medicine and the National Institutes of Health, MEDLINEplus offers extensive information from the NIH and other sources on over 600 diseases and conditions, as well as a medical dictionary and encyclopedia.

ClinicalTrials.gov

<http://clinicaltrials.gov/>

Provides regularly updated information about federally and privately supported clinical research in human volunteers. ClinicalTrials.gov gives you information about a trial's purpose, who may participate, locations, and phone numbers for more details.

PubMed

<http://www.ncbi.nlm.nih.gov/PubMed/>

A service of the National Library of Medicine, PubMed provides access to over 12 million MEDLINE citations from medical and scientific journals dating back to the mid-1960's.